



Project Completion Report

PCR: INO 25099

BAPEDAL Regional Network Project (Loan 1449-INO) in Indonesia

September 2005

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit – rupiah (Rp)

		At Appraisal (19 April 1996)	At Project Completion (1 July 2004)
Rp1.00	=	\$0.00043	\$0.00011
\$1.00	=	Rp2,325	Rp9,500

ABBREVIATIONS

ADB	–	Asian Development Bank
ADTA	–	advisory technical assistance
AMDAL	–	Analisa Mengenai Dampak Lingkungan (Environmental Impact Assessment)
AusAID	–	Australian Agency for International Development
BAPEDAL	–	Badan Pengendalian Dampak Lingkungan (Environmental Impact Management Agency)
BAPEDALDA	–	Badan Pengendalian Dampak Lingkungan Daerah (Local Environmental Impact Management Agency)
BAPPENAS	–	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
BME	–	benefit monitoring and evaluation
BPS	–	Badan Pusat Statistik (Statistic Centre Agency)
CIDA	–	Canadian International Development Agency
DGRD	–	Directorate General of Regional Development
EIC	–	environmental information center
EIMIS	–	environmental impact management information system
EMS	–	environmental management system
GIS	–	geographic information system
GTZ	–	Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation Agency)
ISO	–	International Organization for Standardization
KAN	–	Komite Akreditasi Nasional (National Accreditation Committee)
MIS	–	management information system
MOE	–	Ministry of Environment
MOF	–	Ministry of Finance
O&M	–	operation and maintenance
PCM	–	project coordination and monitoring
PMO	–	project management office
PMU	–	project management unit
TA	–	technical assistance
TOR	–	terms of reference
VSAT	–	very small aperture terminal

NOTES

- (i) Before 2000, the fiscal year (FY) of the Government and its agencies ended on 31 March. Since 2000, FY ends on 31 December. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2000 ends on December 2000.
- (ii) In this report, "\$" refers to US dollars.

CONTENTS

	Page
BASIC DATA	i
MAP	v
I. PROJECT DESCRIPTION	1
II. EVALUATION OF DESIGN AND IMPLEMENTATION	2
A. Relevance of Design and Formulation	2
B. Project Outputs	3
C. Project Costs	6
D. Disbursements	6
E. Project Schedule	7
F. Implementation Arrangements	7
G. Conditions and Covenants	7
H. Related Technical Assistance	8
I. Consultant Recruitment and Procurement	9
J. Performance of Consultants, Contractors, and Suppliers	9
K. Performance of the Borrower and the Executing Agency	10
L. Performance of the Asian Development Bank	10
III. EVALUATION OF PERFORMANCE	10
A. Relevance	10
B. Efficacy in Achievement of Purpose	11
C. Efficiency in Achievement of Outputs and Purpose	11
D. Preliminary Assessment of Sustainability	12
E. Environmental, Sociocultural, and Other Impacts	13
IV. OVERALL ASSESSMENT AND RECOMMENDATIONS	13
A. Overall Assessment	13
B. Lessons Learned	13
C. Recommendations	14
APPENDIXES	
1. Project Framework	15
2. Summary of Project Outputs	19
3. Project Cost at Appraisal and Project Completion	22
4. Disbursement at Appraisal and Actual	22
5. Implementation Schedule at Appraisal and Project Completion	24
6. Project Organizational Structure	25
7. Compliance with the Loan Covenants	26
8. Technical Assistance Completion Report	33

BASIC DATA

A. Loan Identification

1.	Country	Indonesia
2.	Loan Number	1449-INO
3.	Project Title	BAPEDAL ^a Regional Network Project
4.	Borrower	Indonesia
5.	Executing Agency	Environmental Impact Management Agency
6.	Amount of Loan	\$45 million
7.	Project Completion Report Number	PCR: INO 919

B. Loan Data

1.	Appraisal	
	– Date Started	27 November 1995
	– Date Completed	8 December 1995
2.	Loan Negotiations	
	– Date Started	29 May 1996
	– Date Completed	30 May 1996
3.	Date of Board Approval	27 June 1996
4.	Date of Loan Agreement	17 July 1996
5.	Date of Loan Effectiveness	
	– In Loan Agreement	16 September 1996
	– Actual	16 September 1996
	– Number of Extensions	0
6.	Closing Date	
	– In Loan Agreement	1 October 2001
	– Actual	3 August 2004
	– Number of Extensions	3
7.	Terms of Loan	
	– Interest Rate	Variable
	– Maturity	30 years
	– Grace Period	5 years
8.	Disbursements	

a. Dates

Initial Disbursement	Final Disbursement	Time Interval
1 November 1996	3 August 2004	94 months
Effective Date	Original Closing Date	Time Interval
16 September 1996	1 October 2001	61 months

^a In 2002, the Environment Impact Management Agency BAPEDAL (Badan Pengendalian Dampak Lingkungan) merged with the Ministry of Environment.

b. Amount (\$'000)

Category	Original Allocation	Last Revised Allocation	Amount Canceled	Net Amount Available	Amount Disbursed	Undisbursed Balance
1. Building Facilities	4,500	1,383	3,117	1,383	1,377	6
2A. Office and Training Equipment	6,200	2,755	3,445	2,755	2,755	0
2B. Information Center Equipment	4,500	6,102	(1,602)	6,102	6,110	(8)
3. Training	11,700	3,247	8,453	3,247	2,921	326
4. Consulting Services	5,200	6,678	(1,478)	6,678	6,163	515
5. IDC	7,160	4,799	2,361	4,799	3,997	802
6. Unallocated	5,740	0	5,740	0	0	0
7. Civil Works	0	321	(321)	321	321	0
8. Local Training	0	1,517	(1,517)	1,517	1484	33
Total	45,000	26,802	18,198	26,802	25,128	1,674

IDC = interest during construction.

9. Local Costs (Financed)	
- Amount (\$)	1,484,000
- Percent of Local Costs	8.2
- Percent of Total Cost	3.5

C. Project Data

1. Project Cost (\$'000)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	45,000	23,644
Local Currency Cost	32,000	18,026
Total	77,000	41,670

2. Financing Plan (\$'000)

Cost	Appraisal Estimate	Actual
Implementation Costs		
Borrower Financed	32,000	16,542
ADB Financed	37,840	21,130
Other External Financing	–	–
Total	69,840	37,672
IDC Costs		
Borrower Financed	–	–
ADB Financed	7,160	3,998
Other External Financing	–	–
Total	77,000	41,670

ADB = Asian Development Bank, IDC = interest during construction.
– Not Available

3. Cost Breakdown by Project Component (\$)

Component	Appraisal Estimate	Actual
Building Facilities	4,500,000	1,377,417
Office and Training Equipment	6,200,000	2,754,526
Information Center Equipment	4,500,000	6,110,079
Training	5,200,000	2,920,632
Local Training	0	1,483,999
Consulting Services	11,700,000	6,162,535
Civil Works	0	320,370
Interest During Construction and Commitment Charge	7,160,000	3,997,612
Unallocated	5,740,000	0
Total	45,000,000	25,127,170

4. Project Schedule

Item	Appraisal Estimate	Actual
Date of Contract with Consultants	January 1997	April 1998
Completion of Engineering Designs	–	June 2000
Civil Works Contract		
Date of Award	January 1998	February 2001
Completion of Work	June 2000	December 2003
Equipment and Supplies		
Dates		
First Procurement	September 1997	August 1999
Last Procurement	September 1999	September 2003
Completion of Equipment Installation	June 2000	June 2004
Start of Operations		
Completion of Tests and Commissioning	March 2001	June 2004
Beginning of Start-Up	June 2001	August 2004

– Not Available

5. Project Performance Report Ratings

Implementation Period	Ratings^a	
	Development Objectives	Implementation Progress
From 1 Jan 2000 to 31 Dec 2000	Unsatisfactory	Partly Satisfactory
From 1 Jan 2001 to 31 Dec 2001	Partly Satisfactory	Partly Satisfactory
From 1 Jan 2002 to 31 Dec 2002	Satisfactory	Satisfactory
From 1 Jan 2003 to 31 Dec 2003	Satisfactory	Satisfactory
From 1 Jan 2004 to 3 Aug 2004	Satisfactory	Partly Satisfactory

^a There was no performance rating from 1997 to 1999.

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members ^a
1. Reconnaissance Mission	18 Jan–9 Feb 1994	5	110	a, b, c, d, e
2. Pre-Appraisal Mission	20 Jun–5 Jul 1994	7	105	b, d, f, g, h, i, j
3. Appraisal Mission	23–27 Oct 1995	2	8	k, l
4. Inception Mission	17 Oct 1996	2	2	m, n
5. Portfolio Review Mission	13–28 Apr 1998	11	15	a,b,f,h
6. First Loan Review Mission	30 Oct–13 Nov 1998	2	28	n
7. Second Loan Review Mission	28 Jul–5 Aug 1999	2	8	n, o
8. Spring Cleaning Mission	4–6 Oct 2000	4	8	p, q, r, s, t
9. Third Loan Review Mission	29–31 Mar 2001	1	2	s
10. Fourth Loan Review Mission	25 Feb–2 Mar 2002	2	10	s,t
11. Fifth Loan Review Mission	10–28 Mar 2003	2	36	s,t
12. Special Loan Administration Mission	9–19 Jul 2003	1	7	s
13. Project Completion Mission ^b	16–29 Mar 2005	2	20	s,u
Total			359	

^a a = project economist, b = programs officer, c = institutional specialist/consultant, d = environmental specialist/consultant, e = environmental economist/consultant, f = senior project specialist, g = senior counsel, h = senior project implementation officer, i = financial analyst, j = economist, k = senior investment officer, l = project engineer, m = senior economist, n = programs officer, o = senior programs specialist, p = programs manager, q = senior programs officer, r = senior project implementation specialist, s = senior project officer, t = senior sector specialist, u = natural resources specialist/ staff consultant.

^b The project completion report (PCR) was prepared by H. S. Soewartono, Senior Project Officer

Source: Asian Development Bank.

INDONESIA BAPEDAL REGIONAL NETWORK PROJECT (as completed)



05-2603 JHR

I. PROJECT DESCRIPTION

1. The BAPEDAL Regional Network Project was prepared under technical assistance (TA)¹ financed by the Asian Development Bank (ADB). The Project was designed to (i) establish improved and decentralized environmental management; and (ii) strengthen the capacity of regional environmental institutions through human resource development, up-to-date information centers, and modern and technically advanced communication and networking facilities.²

2. Indonesia's reliance on extractive and primary processing industries significantly challenges sustainable economic development. Rapid economic growth also depletes and degrades natural resources, causing negative impacts on the environment and quality of life—particularly for the poor. The Project's strategy to improve environmental management is based on the recognition that environmental monitoring is a specialized field requiring targeted skill training. To be effective, this training must be carried out by local level agencies with a permanent presence in the field. Local government agencies can respond more quickly to growing public pressure to improve environmental standards in their area of jurisdiction. With this in mind, the Project was designed to assist the Government in decentralizing environmental administration to local government environmental agencies.

3. The Environmental Impact Management Agency (BAPEDAL) was established in 1990 to implement the environmental policy formulated by the Ministry of Environment (MOE), and devoted most of its early years to institutional and policy related developments. From the beginning, BAPEDAL had insufficient qualified and experienced staff and lacked basic facilities, such as environmental databases, environmental information centers (EICs), up-to-date technical reference materials, essential modern and technically advanced equipment, and an industry accreditation and certification system as based on international environmental standards.

4. On 27 June 1996, ADB approved a loan of \$45 million to the Government of Indonesia for the Project. The objectives were to (i) establish institutional capacity at the regional level, set environmental standards, improve environmental awareness, and provide environmental management and support services; and (ii) strengthen BAPEDAL through human resources development at the regional and national levels. The rationale for the Project was to support strengthening of public sector management, institutional efficiency, and greater delegation to and involvement of local institutions, private sector, and beneficiary organizations.

5. The Project's scope included the following interrelated components: (i) establishing a network of four regional BAPEDAL offices, including necessary human and technical resources; (ii) developing human resources by providing technical, managerial, and administrative courses for selected BAPEDAL staff at the regional and national levels; (iii) setting regionally appropriate environmental quality standards and pollution limits for different sources of pollution in each of the four regions; and (iv) establishing appropriate management information systems (MIS) and networks in the regional offices, including databases linked to the national database in Jakarta, public education and demonstration facilities for promoting environmental awareness, and certification and accreditation systems.

¹ ADB. 1992. *Technical Assistance to the Republic of Indonesia for Establishment of BAPEDAL Regional Network Project*. Manila.

² ADB. 1996. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Indonesia for the BAPEDAL Regional Network Project*. Manila.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

6. The Project was consistent with ADB's 1994 country operational strategy for Indonesia,³ which aimed to improve productivity by raising the international competitiveness of Indonesian products on an environmentally sustainable basis. The country operational strategy emphasized (i) support for institutional strengthening and policy improvement, (ii) management and conservation of natural resources, and (iii) control of pollution and rehabilitation of the environment. It recognized that strengthening of regulatory, enforcement, and planning mechanisms—particularly at the local level—was the key to sound environmental management.

7. The Project was consistent with the Government's development strategy for the environment, which had four important goals: (i) provide a legal basis for different regulatory processes, (ii) develop human and institutional capacities, (iii) create policies conducive to environmental sustainability and market-based incentives, and (iv) enhance community involvement to better understand the environment. To achieve these goals, the Government called for (i) strengthening of BAPEDAL's institutional capacity through human resources development and provision of basic facilities, (ii) establishment of four regional BAPEDAL offices, (iii) creation of a local BAPEDAL network, and (iv) provision of technical support to the local network via regional BAPEDAL offices.⁴ In 2000, MOE shifted the focus of regional BAPEDAL offices from environmental management and information dissemination to promoting environmental cleanliness, and selecting and rewarding clean districts and towns. This hampered development of the regional offices and resulted in uncertainties about the purpose and utilization of project facilities.

8. The feasibility study conducted under the TA (footnote 1) recommended the establishment of three regional BAPEDAL offices: (i) Region 1 (western Indonesia) in Jakarta, (ii) Region 2 (central Indonesia) in Surabaya, and (iii) Region 3 (eastern Indonesia) in Ujung Pandang. At appraisal, the number of regional offices was increased to four to make their operations more manageable (see Map):

- (i) Region 1 (Bali, West and East Nusa Tenggara provinces) in Denpasar, Bali;
- (ii) Region 2 (all Sumatra provinces) in Pekanbaru, Riau;
- (iii) Region 3 (all Sulawesi, Maluku, and Irian Jaya [now Papua] provinces) in Ujung Pandang (now Makassar); and
- (iv) Region 4 (all Java and Kalimantan provinces) in Jakarta.

9. Regions 3 and 4 cover very large areas with significant environmental issues⁵ and their regional offices are unable to deliver optimum guidance. To improve environmental management in these areas, MOE has established a new regional office in Balikpapan for all Kalimantan provinces on 4 July 2005, and is planning to establish another two regional offices: (i) Jayapura, Papua (for all Papua and Maluku provinces) and (ii) Yogyakarta (for Java provinces), expected to be established by 2010 .

³ ADB. 1994. *Country Operational Strategy*. Manila.

⁴ Presidential Decree No. 77. November 1994.

⁵ Forest fires, uncontrolled illegal logging, and mining are major environmental concerns in Sulawesi, Kalimantan, and Irian Jaya.

10. The Project planned to set regionally appropriate environmental quality standards and pollution limits. This was not fully accomplished because MOE set national quality standards, which will be adjusted as required at the provincial and district—rather than regional levels—based on economic development and the extent of significant environmental concerns at each level. However, the Project developed the methodology that is being used as one of the tools to set such standards at the provincial and district levels.

11. In addition to the project components, the project design provides sufficiently flexible terms of reference for project consultants to assess actual requirements for regional networks, environmental databases, and EICs during implementation. The consultants then recommended the computer and communication networks and specifications, identified relevant software, and suggested library reference and video materials. Project staff, with assistance from consultants, undertook a comparative analysis of similar systems in other countries to choose a suitable model for Indonesia. Technically advanced equipment was procured for the four regional offices (and some provinces and districts) to handle large databases and transfer of information between MOE and regional offices. However, following installation of this equipment, it became increasingly obvious that government staff at all levels had difficulties in using the facilities as designed because of their complexity and high operation and maintenance (O&M) cost. Actual demand for such equipment has also been far below expectations and this may jeopardize the sustainability of some of the installed communication link equipment; particularly the very small aperture terminal (VSAT) satellite network stations,⁶ as its O&M cost is relatively high.

B. Project Outputs

12. The Project substantially achieved the physical targets set at appraisal, with significant delays in implementation (Appendix 1). The Project also provided VSAT, geographic information system (GIS), and MIS facilities to seven provincial BAPEDALDA (Local Environmental Impact Management Agencies); and GIS and MIS facilities to 14 districts BAPEDALDA. A summary of project outputs under each component is in Appendix 2. During project implementation, no land acquisition was required, since buildings were constructed in rehabilitated government buildings or on government-owned land. MOE confirmed that these buildings and lands were not being used by non-titled settlers.

1. Establishing a Network of Four Regional BAPEDAL Offices

13. Region 1 (Pekanbaru): The provincial government of Riau provided a three-storey building on 3,000 square meters (m²) in Pekanbaru. Building facilities were provided under the Project, including partitions, generator sets, a water treatment plant, mechanical and electrical equipment, and office equipment. The office was designed for 250 people but only 68 staff are currently assigned to it, because of limited workload. The Project also installed MIS and GIS equipment in provincial BAPEDALDA offices in Riau and South Sumatra and district BAPEDALDA offices in Kampar, Siak, Kota Palembang, and Lahat.

14. Region 2 (Denpasar): The provincial government of Bali constructed a new three-storey building on about 2,500 m² in Denpasar. It was completed in 2000. Redesign of the building interior was carried out under the Project, in addition to provision of all building facilities and office equipment. A total of 72 staff support the office operation although the capacity of the building is significantly higher. No provincial or district BAPEDALDA offices in Region 2 were

⁶ Ground stations using satellite transponders for transmission of data, and voice and video signals.

provided with MIS or GIS equipment under the Project because they were not ready to operate the facilities.

15. Region 3 (Makassar): A new four-storey building was constructed on about 7,000 m² in Makassar. The civil works were financed from the ADB loan at the Government's request, due to a shortage of counterpart funds during the 1998 financial crisis. A total of 70 staff are assigned to the office although its capacity is about 250 people. The Project also installed MIS and GIS equipment in the provincial BAPEDALDA office of South Sulawesi and in the district BAPEDALDA offices of Gowa and Kota Makassar.

16. Region 4 (Jakarta): The regional BAPEDAL office, staffed by 45 people, is located in MOE. The Project also supported provincial BAPEDALDA offices in Central Java, East Java, East Kalimantan, and South Kalimantan; and district BAPEDALDA offices in Banjarmasin, Malang, Kota Pekalongan, Pekalongan, Kutai Kartanegara, Kota Baru, Samarinda, and Surabaya.

2. Human Resources Development and Training

17. An appraisal assessment provided a profile of required skills and long- and short-term training needs, including overseas and in-country training. The proposed programs included doctorate degrees (PhD), master's degrees, and short-term overseas and domestic courses. Because of the Asian financial crisis in 1998, the Government decided to concentrate on short-term training and dropped the proposed doctorate degree program. The low achievement rate of short-term courses was attributed to similar training being provided by other development aid agencies,⁷ while underachievement in master's degrees was caused by a slow candidate screening process (Table 1).

Table 1: Summary of Training at Appraisal and Project Completion

Training Description	At Appraisal (no. of persons)	At Completion (no. of persons)	Achievement Rate (%)
Doctorate (PhD) Degrees	10	0	0
Overseas Master's Degrees	40	28	70
Overseas Short-Term Courses ^a	400	271	68
Domestic Short-Term Courses ^b	1,500	965	66
Total	1,950	1,264	51

GIS = geographic information system, MIS = management information system, VSAT = very small aperture terminal.

^aThe overseas short-term courses included training by the VSAT supplier in Canada for 12 persons.

^bThe domestic short-term courses included on-the-job training by GIS/MIS suppliers and consultants for 222 persons.
Source: Project Completion Report of the Ministry of Environment.

18. **Overseas Master's Degree Programs.** These programs were intended to ensure that selected key MOE staff have the knowledge, understanding, and skills expected of environmental professionals to make operational decisions and give technical advice to senior officials. These programs were carried out in Australia, United Kingdom, and United States.

⁷ Institutional development and training to district BAPEDALDA offices was provided by the Australian Agency for International Development (AusAID) for Bali, West Nusa Tenggara, and Bali; German Technical Cooperation Agency (GTZ) for Kalimantan, Sumatra, and Java; and Canadian International Development Agency (CIDA) for Sulawesi, Maluku, and Papua.

Master's degree programs included (i) social policy and planning in developing countries, (ii) environmental control, (iii) global climate change, (iv) environment and development, (v) human resources studies, (vi) environmental engineering and project management, (vii) ecology and economics, and (ix) sustainable waste management. Most of the staff that participated in these programs now occupy higher positions in MOE than before the overseas master's degree. The overseas program was reported to have substantially improved their knowledge.

19. **Overseas Short-Term Courses.** These programs were intended to give practical environmental knowledge to key MOE staff with experience in environmental and database system management. Four courses were conducted: (i) environmental law enforcement (the Netherlands), (ii) sustainable urban development and planning (Australia), (iii) environmental management (Germany), and (iv) public management and good governance (Australia). Staff from MOE, regional BAPEDAL offices, and BAPEDALDA provincial offices participated in the training. A training program on VSAT satellite network station implementation and O&M was conducted in Canada as part of the supply and installation contract.

20. **Domestic Short-Term Courses.** Staff of MOE, regional BAPEDAL offices, BAPEDALDA provincial and district offices, universities, and nongovernment organizations participated in these courses: (i) fire suppression and forest management, (ii) coastal zone and land management, (iii) product life cycle analysis, (iv) advanced GIS for decision makers, (v) mangrove zone conservation, (vi) rural environmental management, (vii) project management, (viii) environmental law compliance, (ix) pollution control and management, and (x) social empowerment and public participation in environmental management. The courses also included several workshops provided by suppliers of various applications.

3. Setting Regionally Appropriate Environmental Quality Standards and Pollution Limits

21. The Project was expected to prepare appropriate environmental quality standards and pollution limits for various sources of pollution in each region. However, this was determined to be inappropriate as the large regions showed major variations in environmental quality standard requirements. Therefore, the Project developed the methodology and guidelines to set environmental quality standards and pollution limits at the sub-regional level. MOE, and provincial and district BAPEDALDA are currently using this methodology to develop environmental quality standards.

4. Establishment of Environmental Database Management Systems, Computer Networks, and National Accreditation and Certification System for Industries

22. **Environmental Database.** The Project established an environmental database management system and EIC in each regional BAPEDAL office. EICs are functioning well and include modern up-to-date public libraries, meeting and audio-visual training rooms, and permanent ecosystem and other environmental displays in exhibition galleries. The environmental database management systems, communication systems, and computer networks include (i) MIS computers and local area networking, (ii) MIS and GIS data software, (iii) VSAT and satellite network equipment, and (iv) buses for display and exhibition of environmental material.

23. **Accreditation and Certification Program.** The purpose of this program was to establish an accreditation and certification system based on ISO 14000.⁸ The Project developed a system for industries and other organizations to qualify to meet these standards. In 2000, the Government transferred responsibility for the environmental impact management accreditation and certification program from MOE to the National Accreditation Committee (KAN),⁹ which is currently implementing the program.

5. Developing a Master Plan for Establishing BAPEDALDA

24. The Master Plan for establishing BAPEDALDA was prepared under an advisory TA (ADTA) attached to the Project. The final report of the Master Plan was submitted to ADB in September 1997 (paras. 36–37).

C. Project Costs

25. At appraisal, the total project cost was estimated at \$77.0 million, of which \$45.0 million were foreign exchange costs and \$32.0 million local currency costs. The ADB loan of \$45.0 million was to finance the entire foreign exchange costs (58% of total project cost). The Government was to finance the entire local currency costs.

26. The actual project cost at completion was \$41.7 million, of which \$23.6 million were foreign exchange costs and \$18.1 million local currency costs. As a result of several partial cancellations of loan proceeds,¹⁰ ADB financed \$25.1 million (60% of total project cost).

27. The 46% cost underrun was mainly caused by substantially lower costs for building facilities, equipment and materials, and training (Appendix 3). The cost underrun for procurement of building facilities, equipment and materials which were mostly imported and the prices were less affected by the excessive depreciation of Rupiah during the financial crisis, suggests a lack of thoroughness in preparing appraisal estimates.

D. Disbursements

28. Total ADB disbursements amounted to \$25.1 million or 94% of the revised loan amount of \$26.8 (Appendix 4), all of them made through direct payments. Disbursements in the early years were slow, because of long delays in the recruitment of consultants, low absorptive capacity of the institutions concerned as a direct result of the Asian financial crisis, and delays in delivering the high-tech equipment.¹¹ At the original loan closing date of 1 October 2001, total disbursements had reached only \$8.7 million. The remaining \$16.4 million was disbursed during the extended loan period up to 3 August 2004.¹²

⁸ Environmental management standards for industries, established by the International Organization for Standardization (ISO).

⁹ Government Regulation No. 102. 2000.

¹⁰ In 1998, following a country portfolio review, ADB cancelled portions of the loan amounting to \$5.9 million and approved financing of civil works (\$0.3 million) to construct the EIC in Makassar, and local training (\$1.5 million). Further partial loan cancellations were made in 2003 (\$10.7 million) and 2004 (\$1.6 million), reducing the loan amount to \$26.8 million. The final cancellation of \$1.7 million was made at loan closing in August 2004.

¹¹ The VSAT supplier's bankruptcy caused major problems in meeting technical requirements and delivery schedules.

¹² The loan closing date was extended three times for a total of 34 months. The last two extensions from 1 October 2003 to 3 August 2004 were mainly related to the VSAT equipment (para. 28).

E. Project Schedule

29. At appraisal, the Project was expected to be completed by October 2001. Project implementation was substantially delayed because of (i) the Asian financial crisis; (ii) protracted recruitment of consultants; (iii) frequent changes of decision makers, including ministers, and project staff; and (iv) lack of experience of project staff with procurement procedures. Implementation was finally completed in July 2004 and the loan closed on 3 August 2004, 34 months beyond the original closing date, with the last 10 months devoted principally to the VSAT equipment installation and associated training program (Appendix 5).

F. Implementation Arrangements

30. The Executing Agency of the Project was BAPEDAL, which reported to MOE from project inception until January 2002, when government ministries were reorganized.¹³ MOE's agencies, including BAPEDAL, then became an integral part of MOE's line organization. A deputy minister in MOE became responsible for monitoring environmental management and public empowerment in the regions, with an assistant deputy assigned to manage the regional BAPEDAL offices.

31. A project steering committee was established in March 1998. The committee was chaired by the BAPEDAL executive director, with the Director of Natural Resources and Environment in the National Development Planning Agency (BAPPENAS) as the secretary, and the Director for Environmental Management in the Directorate General for Regional Development in the Ministry of Home Affairs as a member. A technical coordinating team, chaired by the Bureau Chief for Planning and Foreign Cooperation, MOE, as Project Director, was established to provide direction during project implementation.

32. In November 1998, the Project Management Office (PMO) was established in Jakarta, more than 2 years after loan effectiveness. The PMO was poorly staffed, with only one permanent staff member, which was its head. Different directorates within MOE were responsible for overseeing project components. This hampered and delayed project implementation, particularly at the tendering and contract award stages. Frequent changes in the decision makers—including ministers, project directors, and project managers—worsened the situation. The central BAPEDAL office made decisions, with limited delegation to the regional offices—which did not have clearly defined tasks—leading to complications and delays. The project organization structure is in Appendix 6.

G. Conditions and Covenants

33. The Loan Agreement included a total of 28 project-specific covenants (Appendix 7). Only one covenant was not met (preparation of a benefit monitoring and evaluation [BME] report), and seven covenants were only partly complied with: (i) O&M budgets were inadequate, (ii) installed facilities and vehicles were not insured, (iii) quarterly reports were not submitted on time; (iv) broken equipment was not repaired on time, (v) "polluter pays" principle was adopted in environmental legislation, but not enforced on a regular basis, (vi) midterm review was not conducted, and (vii) project management was replaced frequently.

¹³ Presidential Decrees Nos. 2 and 4. 7 January 2002.

H. Related Technical Assistance

1. Project Preparatory Technical Assistance

34. A feasibility study was prepared for the Project in 1992 under the TA (footnote 1). The TA was expected to lead to a project that would establish an effective system of environmental monitoring and enforcement of environmental quality standards in selected priority provinces and districts for the sustainable use of the natural resource base. Its objectives were to (i) prepare a detailed development and operational plan for 8–10 provincial offices and about 10 BAPEDAL district offices, and (ii) assess the feasibility of a project to implement the proposed development and operational plan for selected priority offices. The scope of work focused on reviewing and evaluating government plans to expand BAPEDAL into a regional network of offices, and determining potential investment in high-priority BAPEDALDA provincial and district offices, which were not covered by bilateral assistance.

35. The output of the TA was a project preparation report to establish a BAPEDAL regional network within 7 years. The TA identified three regional offices; selected high, moderate, and low priority provinces to be involved in the Project; and made recommendations for institutional and human resources development. The TA also identified project risks related to (i) nature of relationship between central BAPEDAL and regional offices, (ii) lack of donor coordination, (iii) legal mandate, (iv) lack of provincial support, (v) spontaneous formation of district BAPEDAL, and (vi) self financing of some project components. The project design focused on two risks: (i) lack of a legal mandate to ensure the long-term viability of environmental administration in Indonesia, and (ii) inadequate revenue to ensure adequate O&M of project facilities. Complementary World Bank assistance to MOE addressed the legal mandate risk by providing recommendations on appropriate legislative changes, while the upward trend in the growth of government revenue was expected to minimize the risk of insufficient O&M budget. Overall, the TA adequately addressed project needs and the consultants met the terms of reference.

2. Advisory Technical Assistance

36. The main objective of the ADTA¹⁴ attached to the loan was to help the Government (i) prepare a master plan for establishing local environmental institutions, (ii) examine ways to ensure the financial sustainability of the new institutions, and (iii) prepare an outline for a possible externally funded investment project. During Phase I, nine working papers were prepared on the establishment of BAPEDALDA. These papers were instrumental in the preparation of the Phase I Master Plan Report, which was finalized in September 1997. Phase II was devoted to preparation of an investment project using a sector loan approach based on the analysis of six pilot subprojects. The final Phase II Report was submitted in February 1998.

37. The TA was carried out when the country was undergoing significant changes in the sociopolitical arena. New regional autonomy laws, calling for devolution of fiscal responsibilities to local governments, were introduced soon after its completion. These changes disrupted the establishment of BAPEDALDA and resulted in inadequately trained staff and under-funded local government institutions. Nevertheless, the outputs of the TA are still valid and the recommendations of the Master Plan should be implemented. The TA was considered highly relevant at the time of appraisal and is still relevant today. Although its sustainability and institutional development impacts are uncertain—mainly due to the regional autonomy policy—

¹⁴ ADB. 1997. *Master Plan for Establishing BAPEDALDA*. Manila.

the TA recommended a sound approach for developing local environmental institutions. Based on its outputs and outcomes, the TA is rated partly successful (Appendix 8).

I. Consultant Recruitment and Procurement

38. Recruitment of consultants and procurement of goods and services were carried out in accordance with ADB's *Guidelines on the Use of Consultants* and *Guidelines for Procurement*. Consultants provided assistance to BAPEDAL in four areas: environmental management services (EMS), project coordination and monitoring (PCM), MIS development, and human resources development. All consultants were recruited through international competitive selection procedures. While EMS consultants were fielded more or less on time, the other three consultant teams were not fielded until 1999, about 30 months after loan effectiveness. Problems with the VSAT equipment supplier (para. 42) caused actual inputs in terms of person-months for MIS development to substantially exceed the appraisal estimate (Table 2).

Table 2: Consulting Services At Appraisal and Actual
(person-months)

Services	Inputs			
	At Appraisal		Actual	
	International	Domestic	International	Domestic
Project Coordination and Monitoring	54	126	34	149
Management Information System	58.5	94.5	122.5	161
Environmental Management Services	25.5	31.5	25.5	32
Human Resources Development	16	–	16	–
Total	154	252	198	342

– Not Available

Source: Project Completion Report of the Ministry of Environment.

39. Only one civil works package was awarded for construction of the regional office in Makassar. It was contracted by the regional BAPEDAL office using local competitive bidding procedures. Procurement of goods and services was carried out by MOE for 61 contracts using international competitive bidding and international shopping procedures.

J. Performance of Consultants, Contractors, and Suppliers

40. In view of the complex nature of the Project, in particular the new technology and networking systems that were to be introduced, the critical role of international and domestic consultants in assisting BAPEDAL and the newly established regional and provincial offices was recognized at appraisal, and appropriate provisions were made. PCM consultants assisted with project management, coordination and monitoring, preparation of bidding documents, financial management, and reporting. They were given additional responsibility to prepare a new government policy, and programs for public empowerment and good governance in environmental management. EMS consultants initiated strategic planning, prepared a plan to develop national and regional environmental quality standards and pollution limits, developed a concept for a national accreditation and certification system, and prepared designs of modern

audiovisual equipment and libraries for regional BAPEDAL offices. MIS consultants developed MIS concepts, prepared MIS bidding documents for seven packages, and conducted GIS on-the-job training.

41. The consultants were effective in helping BAPEDAL meet its responsibilities. However, there was a lack of commitment by PCM consultants to produce regular progress reports and develop a BME system. MIS and EMS consultants demonstrated adequate capacity to introduce networking systems and provided on-the-job-training to regional BAPEDAL office staff. There was adequate knowledge transfer between the consultants and core BAPEDAL staff during project implementation. The contract period of the MIS consultants was extended until the loan closing date to supervise the installation and commissioning of the VSAT equipment. Overall, the consultants' performance is rated satisfactory.

42. Performance of contractors and suppliers was also generally satisfactory with the exception of the VSAT equipment supplier. The delivery of the equipment was delayed for 12 months, because the supplier went bankrupt and there was a need for company restructuring and contract reassessment. In addition, the supplier did not provide timely after-sales service.

K. Performance of the Borrower and the Executing Agency

43. The Borrower, the Ministry of Finance (MOF), generally provided adequate budget allotments for the Project—in particular, for building construction. When funds were scarce after the outbreak of the Asian financial crisis, MOF was proactive in asking ADB to finance construction of the regional BAPEDAL office in Makassar and fund some local training. MOF also proposed cancellations of surplus loan proceeds in a timely manner. For these timely interventions, the performance of the Borrower is rated satisfactory. By contrast, the performance of the Executing Agency—BAPEDAL and later MOE—was below expectations. This was mainly because of slow decisions on building facilities and delays in procurement and installation of VSAT equipment. Frequent changes of project staff also contributed to the overall implementation delay and significantly increased the person-months and cost of consultants. MOE's change in the focus of the regional BAPEDAL offices had a negative impact on their development (para. 7). The performance of the Executing Agency is rated partly satisfactory.

L. Performance of the Asian Development Bank

44. ADB fielded nine missions during project implementation but omitted to carry out the important midterm review, during which implementation of the ADTA recommendations could have been discussed with the Government. There was also poor communication between ADB and MOE during the first 3 years of project implementation. ADB should have insisted that MOE establish a BME system and address the delayed submission or lack of progress reports. Although ADB made efforts to accelerate implementation, the Project was completed 33 months behind schedule. Once the problems in procurement of the VSAT equipment became known, ADB and MOE should have taken the decision to engage the MIS consultants on an intermittent basis. The performance of ADB is rated partly satisfactory.

III. EVALUATION OF PERFORMANCE

A. Relevance

45. Both at appraisal and completion, the Project was relevant to the Government's and ADB's strategies, policies, and priorities on implementing good environmental governance and

ensuring the environmental sustainability of economic development. The Project was timely and formed an integral part of Indonesia's decentralization of environmental impact management.¹⁵ The Project may not be considered highly relevant at this time because of lack of clear guidance from MOE to regional BAPEDAL offices on how to operate project facilities effectively. In particular, from 2001 to 2004, regional offices mainly focused on capacity building of regional governments in sustainable development (*Bangun Praja* program), with most resources dedicated to selecting and rewarding regional governments that were successful in promoting environmental cleanliness in their districts and towns (*Adipradja* program).

46. By the end of 2005, regional offices are expected to revert to their original functions as MOE's representative offices. They will be the center of regional environmental management with responsibility for monitoring and evaluation of environmental impact management policies, providing technical advice and guidance to local governments, and coordinating and reporting on environment-related activities. Overall, the Project is rated relevant in enhancing the environmental sustainability of economic development.

B. Efficacy in Achievement of Purpose

47. The Project contributed to the establishment of environmental management agencies in the regions. It was implemented as conceived and met the output targets set at appraisal. It established four regional BAPEDAL offices, facilitated environmental networking among them, developed environmental databases and EICs in the regions, strengthened MOE through human resources development, and prepared a master plan for establishing BAPEDALDA at the provincial and district levels. The Project also prepared methodology for setting environmental quality standards and pollution limits, and enhanced public environmental awareness by providing access to modern reference libraries and environmental exhibitions.

48. While project outputs have been delivered, the project outcome—in terms of meeting the development objectives of providing environmental management and support services in the regions—is still uncertain, as project facilities have not yet generated substantial benefits. Regional BAPEDAL offices have been given a low priority, as they are only one of many programs under MOE's Deputy Minister for regional development and capacity building. A new ministerial decree which was issued in June 2005,¹⁶ requiring regional offices to report directly to the Minister of Environment. This provides the basis of a more significant role for regional offices and increase their responsibility as MOE representatives in the regions. With the new decree and adequate O&M budget from 2005 onwards, use of project facilities is expected to improve and reap increased benefits. Overall, the Project is rated less efficacious in meeting its objectives.

C. Efficiency in Achievement of Outputs and Purpose

49. As noted at appraisal, the Project does not lend itself to economic or financial analysis. Consequently, its efficiency cannot be measured directly by economic and financial internal rates of return. Despite the substantial achievement of project outputs, the implementation period was 150% longer than the original schedule. Provision of high technology such as the VSAT equipment was delayed significantly and the technology may become outdated within a short period. Some project facilities were over-designed for the actual requirements of the regional offices. Overall, the Project is rated less efficient in achieving its objectives and outputs.

¹⁵ Environmental impact management was devolved to local governments under Laws Nos. 22 and 25 (1999) on regional autonomy.

¹⁶ Ministerial Decree No.1. 2005.

D. Preliminary Assessment of Sustainability

50. The sustainability of regional BAPEDAL offices—in particular their effect on local communities and role in environmental management and protection—depends on reverting to their role as MOE representatives in the regions (para. 46). Currently, the offices and their equipment are underutilized, and the equipment is in a state of disrepair due to lack of maintenance and damage caused to the operating systems by computer viruses. O&M budgets are low because they are based on estimated needs prior to project implementation. Until recently, budget increases were not allowed, pending a re-inventory of the facilities, including high-technology equipment. The re-inventory was completed in April 2005 and MOE is committed to allocating sufficient funds for O&M in 2005.¹⁷

51. The average number of staff at the regional offices is about 70, well below the building capacity of 170–250. Staff numbers are expected to increase gradually in line with the future mandate of the regional offices.

52. The critical concern is that the installed equipment—involving high-technology applications such as VSAT satellite network stations—needs well-trained staff to operate it and is relatively expensive. Both equipment and databases will have to be upgraded regularly to reflect rapid technological advances and changes to ecosystems and landscapes.

53. From the outset, networking between MOE and BAPEDAL's regional, provincial, and selected district offices was marginal at best; and VSAT equipment utilization was low. Most of the trained staff seemed unfamiliar with simple problem solving of the VSAT network stations operation. The equipment was expected to be used for efficient long-distance communication through fax, phone and data transmission via satellite but this has not materialized because of chronic technical problems, and inadequate protection of the facilities, which made the computers susceptible to viruses. Although MOE bore maintenance costs for equipment at provincial BAPEDALDA offices for 2 years, MIS and GIS have been neglected by all concerned. The situation has worsened because some trained staff have been reassigned to new positions or have resigned,¹⁸ creating a lack of institutional memory and loss of technical abilities. The Project tried to advance environmental management by installing high-technology computers and communications systems in the regions when they were not ready for such systems.

54. The regional BAPEDAL offices have not prepared a suitable program to use the EICs or mobile and permanent exhibitions. Libraries are occasionally used as sources of information for BAPEDALDA offices and by the general public and universities, but are still significantly underutilized. The sustainability of the EICs will depend on finding enough clients—both government and private citizens—who appreciate the benefits of their use. However, these facilities require sustained funding for their continuation and expansion over time. There is also a need for a socialization program to promote the availability and benefits of EICs to existing and potential clients. Local government support and continued participation in the VSAT network must also be encouraged. Unless there is an improvement in the support and clear mandate of the regional offices, the facilities provided under the Project are less likely to be sustainable.

¹⁷ The O&M budget for each regional BAPEDAL office is Rp400 million in 2005, excluding the annual satellite lease charge. The budget will be increased by 15% per year and is considered adequate to cover the O&M cost.

¹⁸ In provincial BAPEDALDA offices in Semarang and Surabaya.

E. Environmental, Sociocultural, and Other Impacts

55. The Project is expected to promote the environmental sustainability of economic development in Indonesia through regionalization and institutional strengthening of BAPEDAL. The impacts on the environment will be positive because MOE and regional, provincial, and district offices have suitable tools to exercise their environmental management responsibilities more effectively—sophisticated equipment, MIS and GIS systems, EICs, reference material, and skilled resources.

56. The Project also supports and encourages public empowerment and the development of better environmental governance. With the establishment of EICs and libraries, the public can understand the environment and its ecosystems better, and avail of improved means to articulate community environmental concerns. The environmental, sociocultural, and other impacts were assessed as moderate.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

57. Based on the assessment of its relevance, efficacy, efficiency, sustainability, and other impacts evaluated in this report, the overall performance of the Project is rated partly successful.

B. Lessons Learned

58. **Project Costs.** The project cost was substantially overestimated at appraisal, as evidenced by the 46% cost underun and the surplus loan proceeds of almost \$20 million, or 44% of the original loan amount. ADB and its consultants should be more thorough in preparing cost estimates, especially for non-standard projects of this type.

59. **Human Resources and Institutional Development.** The environmental sector requires significant investment in regional human resources and institutional development. Organizational structure and the focus of regional offices should be clearly identified, strengthened, and evaluated prior to deciding which facilities should be installed.

60. **Project Management.** Frequent replacement of project directors, managers, and staff negatively affected implementation. It appears that MOE selected management staff based on technical expertise rather than project management experience. The technical tasks were numerous and time consuming, so they should have been performed with input from short-term specialists. Projects of this type should be headed by well-qualified experienced project managers, who dedicate most (if not all) of their time to management, with technical staff seconded as required. In addition, consultants should demonstrate a positive commitment to knowledge transfer to create a pool of skilled staff within the agency to lead future projects.

61. **Highly Complex Equipment.** When designing projects relying to a large extent on information technology, the requirement for modern and highly sophisticated technical equipment such as GIS and VSAT satellite network stations should be carefully assessed, given high O&M costs.¹⁹ Unless there are technical and financial means to upgrade the facilities to keep pace with technological developments, such equipment may become quickly outdated. In

¹⁹ The annual satellite lease charge by Satelindo, a national service provider, amounts to \$175,000 per year for the four regional BAPEDAL offices.

addition, databases that require technical as well as statistical input—physical features of maps for GIS overlays or demographics—are time consuming and costly to maintain.

C. Recommendations

1. Project-Related

62. MOE should provide clear operational guidance, mandates, and budgets to regional BAPEDAL offices. Annual work programs should be prepared and sufficient budget allocated to carry out these programs. Regional offices should have a suitable human resources program to retain qualified and trained staff. EIC facilities, such as auditoriums, libraries, and mobile exhibitions, should be fully utilized and devoted to dissemination of environmental awareness. Regional offices should cooperate with local universities and schools. Promoting the “Green School” concept should be one of their main activities to familiarize children with good environmental governance from early on.

63. Regular short-term MIS and GIS training should be conducted to establish a pool of trained personnel. Maintenance contracts should be continued by the supplier to keep MIS and GIS equipment in good condition and ensure upgrading of the facilities and software/data as required.

64. By December 2005, MOE should prioritize making VSAT satellite network stations operational, at least between MOE and regional BAPEDAL offices, before expanding coverage to provinces or districts.

65. If a project performance audit report is to be prepared, the mission should be fielded no earlier than 2007 to provide a more reliable evaluation of the Project’s impacts on (i) environmental management at the regional and provincial level, (ii) success of public environmental awareness programs, (iii) ability to network between MOE and regional offices using the sophisticated communications equipment, and (iv) fulfillment of the new mandate by regional BAPEDAL offices.

2. General

66. The following recommendations are made for future environmental projects in Indonesia:

- (i) After 2–3 years, ADB should consider assistance to MOE for a new project based on the Master Plan for Establishing BAPEDALDA that was prepared under the ADTA (para. 36). The findings and recommendations in the master plan are still valid, as the environmental agencies at the provincial and district level need strengthening to carry out their responsibilities.
- (ii) ADB should not consider the inclusion of highly sophisticated technical or communications equipment unless adequate O&M and upgrading are ensured.
- (iii) Agencies established for the sole purpose of environmental protection and management are the responsibility of the Government. They should be staffed with trained personnel and given sufficient budget to provide the required services. These agencies, whether national or local, should not be expected to seek funding independently to finance their operations.

PROJECT FRAMEWORK

Design Summary	Performance Indicators/Targets	Project Inputs	Outcomes
<p>Goal To ensure environmental sustainability in Indonesia's economic development.</p> <p>Purpose (i) Establish regional institutional capacity for setting regional environmental standards, improving environmental awareness, and providing regionalized environmental management and support services. (ii) Strengthen Environmental Impact Management Agency (BAPEDAL) through human resources development.</p>	<p>Regional environment preserved sustainable levels throughout Indonesia.</p> <p>Regional environmental standards set and environmental impact management institutions established for improving environmental awareness and providing decentralized support services.</p>	<ul style="list-style-type: none"> ▪ Establishment of four BAPEDAL regional offices. ▪ Provision of consultants to formulate regional environmental standards methodology, conduct community awareness campaign, and train regional staff. 	<p>The Project contributed to the establishment of environmental management agencies in the regions. It established environmental regional networks, strengthened the Ministry of Environment (MOE) through human resource development, established methodology to set regional environmental standards and pollution limits, established environmental databases and information centers in the regions, and prepared a master plan for establishing Local Environmental Impact Management Agencies (BAPEDALDA) at the provincial and district levels. It is highly likely that the Project has influenced the Government to achieve the wider goal of improving environmental management at local levels. Further observation would be required to ensure environmental sustainability in national economic development .</p> <p>Regional institutional capacity for setting regional environmental standards was established, improving environmental awareness. However, the Project has not fully provided regionalized environmental management and support services.</p>

Design Summary	Performance Indicators/Targets	Project Inputs	Outcomes
(ii) Human resources development	<ul style="list-style-type: none"> ▪ About 50 persons completing master's and doctorate degrees overseas ▪ About 395 persons completing short technical/managerial courses overseas ▪ About 1,480 persons trained as trainers 	<ul style="list-style-type: none"> ▪ Training needs assessment was developed by an international consultant in consultation with MOE. ▪ Identification of appropriate candidates. 	<p>A total of 28 MOE staff completed master's degrees, 271 staff completed overseas short courses on various environmental subjects, and 965 staff completed domestic short courses. Doctorate degree programs were dropped because the Government decided to concentrate on short-term training. Trained staff is now assigned in various positions in MOE, and provincial and district BAPEDALDAs. Training for VSAT implementation did not provide substantial outcomes to MOE, as VSAT was not properly maintained.</p>
(iii) Regional environmental quality standards and pollution limits.	<ul style="list-style-type: none"> ▪ Regionally responsive environmental quality standards prepared for each of the four regions. ▪ Regionally appropriate pollution limits for various sources of pollution prepared for each region. 	<p>Environmental Management System (EMS) Consultants</p>	<p>The Project delivered environmental quality standards methodology and pollution limits guidelines, associated with an implementation plan for MOE, regional BAPEDAL offices, and provincial and district BAPEDALDAs.</p>
(iv) Environmental monitoring and awareness (a) Environmental databases	<p>Regional databases (interlinked nationally) covering regional environmental standards, existing environmental conditions, and regional pollution limits.</p>	<p>Management Information System (MIS) consultants, MIS equipment, trained staff, willingness of BAPEDALDA to operate the system, and clear guidance from MOE to utilize the system.</p>	<p>Regional databases have been interlinked regionally and with selected provinces and districts. However, the facilities were rarely used due to lack of clear guidance from MOE. The facilities have not delivered substantial outcomes.</p>
(b) Environmental information centers	<p>Regional environment information centers (integrated nationally) to disseminate environmental information to government agencies, nongovernment organizations, and</p>	<p>Office space for information centers, trained staff, and EMS consultant inputs.</p>	<p>Four modern libraries have been established in four regional offices, and published public information reports. Several seminars promoting environmental awareness and environmental ethics have been conducted.</p>

Design Summary	Performance Indicators/Targets	Project Inputs	Outcomes
(c) Accreditation and certification program	<p>the community at large.</p> <p>Accreditation and certification system based on ISO 14000 environmental management standards established.</p>	EMS consultant inputs	<p>The Project provided some recommendations for accreditation and certification system to the industrial community based on ISO 14000, and Standard Environmental Management. However, though the Project prepared the requirements for industry to meet ISO 14000, MOE does not have the authority to make such recommendations for any particular industry. Therefore, the system was never implemented by MOE. The system guidelines that were developed are available for the National Accreditation Committee (KAN).</p>

ADB = Asian Development Bank, ADTA = advisory technical assistance, BAPEDAL = Environmental Impact Management Agency, BAPEDALDA = Local Environmental Impact Management Agency, EMS = Environmental Management System, ISO = International Organization for Standardization, KAN = National Accreditation Committee, MIS = management information system, MOE = Ministry of Environment.

SUMMARY OF PROJECT OUTPUTS

No.	Items	Outputs
1.	Regional Office Buildings	Four regional office buildings were established in 4 regions: Region1: Pekanbaru, Riau Region 2: Denpasar, Bali Region 3: Makassar, South Sulawesi Region 4: Jakarta
2.	Building Facilities and Office Equipment	Building facilities and office equipment have been provided to the 4 regions: 1. Working station and building interior 2. Diesel generating set 3. Electrical system 4. Air conditioning system 5. Waste water treatment plant 6. Fire protection system 7. Data communication cabling 8. Furniture
3.	Environmental Impact Management Information System Hardware Network Software Data Applications Operation Manuals	39 servers, 99 computers, 11 laptops, 38 printers, 32 UPS, 27 scanners, 26 cameras, 4 projectors, 11 PABX/IP, 1 fiber optic cable, 23 intranet connections, and 4 miscellaneous items. 11 LAN and 11 VSAT network equipment at 4 regional offices and 7 provincial BAPEDALDAs. Windows 2000 operating systems throughout new installations, and compatible database, GIS and operational software for all regional offices, 7 provincial and 14 district BAPEDALDAs. 220 Landsat 7 satellite imagery. Indonesia wide base and thematic maps showing urban, forest, mangrove, coral reef, wetlands, grassland, and cleared areas. BPS 2000 census data; water, air, and forest fire monitoring data; and other sample data. 13 user applications for personal records, AMDAL reports, laws and regulations, public information, pollution watch, library catalogs, organizational structure, intranet system, water and air pollution. 6 operation manuals for operating EIMIS equipment.

4.	Environmental Information Centers Libraries Audio Video Training Rooms Exhibitions Training and Inspection Vehicles	4 networked libraries (including equipment and furniture); 11,400 books; journals and audio-videos in four regional offices. 4 audiovisualrooms and furniture in four regional offices. 4 static environmental exhibitions and 5 custom-built mobile exhibition vehicles (including AV equipment and display facilities, and staff accommodation, with local transport motorbike). 8 minibuses to seat 8 people (2000 cc, automatic transmission petrol) and 8 buses to seat 24 people with AV equipment.
5. 5.1	Human Resources Development Overseas Master's Program Group I Group II Group III Group IV	<ul style="list-style-type: none"> ▪ Environmental Management and Policy Program at Renselaer Polytechnic Institute, USA ▪ Environmental Management at: <ul style="list-style-type: none"> o Florida Institute of Technology, USA o Indiana University/Purdue University, USA o Clemson University, USA ▪ Soil Management and Conservation, Agriculture Sciences, International Economics, and Environmental Studies, at University of Adelaide, Australia ▪ Environmental Sciences, Environmental Studies at Yale University, USA ▪ Civil and Environmental Engineering, at University of Michigan, USA ▪ Earth and Environmental Resource Management at University of Southern California, USA ▪ Social Policy and Planning in Developing Countries at London School of Economics, UK ▪ Environmental Monitoring and Management, Ecological Economics at University of Bradford, UK ▪ Human Resources Development Studies at University of Manchester, UK ▪ Sustainable Waste Management, Environmental Engineering and Project Management, Geographical Information Systems, Ecological Economics, at University of Leeds, UK

5.2	Overseas Short-Term Courses 1. Environmental Policy Formulation and Implementation 2. Environmental Law Compliance 3. Information Based Spatial Planning and Claims Analysis for Decision support 4. Environmental Pollution Management	Internationale Weiterbildung und Entwicklung, Germany. Internationale Weiterbildung und Entwicklung, Germany. Internationale Weiterbildung und Entwicklung, Germany. Thailand Environmental Institute, Thailand
5.3	Domestic Short-Term Courses 1. Environmental Pollution Control and Management (Region 1) 2. Environmental Pollution Control and Management (Region 2) 3. Environmental Pollution Control and Management (Region 3) 4. Environmental Pollution Control and Management (Region 4) 5. Project Management 6. Microsoft Windows 2000 Network and Operating System 7. Microsoft Windows 2000 Network Infrastructure 8. Various Training of Trainers	Riau University, Riau Udayana University, Denpasar, Bali Hasanuddin University, Makassar, South Sulawesi Padjadjaran University, Bandung, West Java University of Indonesia, Jakarta Metrodata Edukasi Informatika, Jakarta Metrodata Edukasi Informatika, Jakarta Various Domestic Training Providers.

AMDAL = Environmental Impact Assessment, BAPEDALDA = Local Environmental Impact Management Agency, BPS = Statistic Centre Agency, EIMIS = environmental impact management information system, GIS = geographical information system, LAN = local area network, PABX/IP = private automatic branch exchange/internet protocol, UPS = uninterruptible power supply, VSAT = very small aperture terminal.

PROJECT COST AT APPRAISAL AND PROJECT COMPLETION
(\$'000)

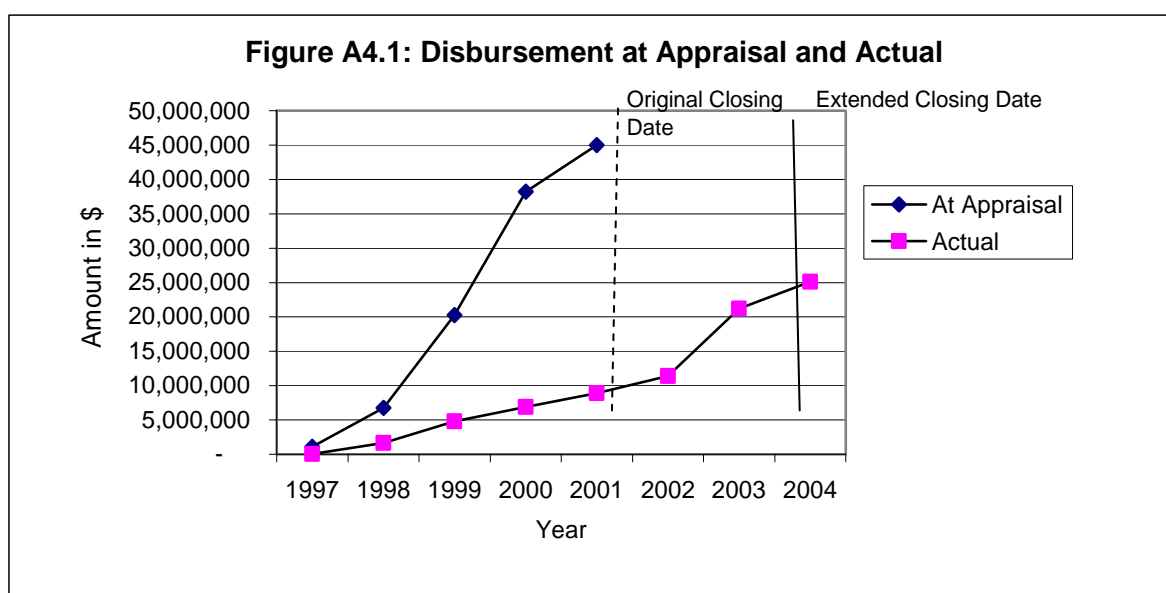
Component	At Appraisal			At Completion				
	Foreign Exchange ADB	Local Cost (ADB)	Local Cost (Government)	Total	Foreign Exchange ADB	Local Cost (ADB)	Local Cost (Government)	Total
Land Acquisition	—	—	5,200	5,200	—	—	5,625	5,625
Civil Works	—	—	12,800	12,800	321	—	8,545	8,866
Building Facilities	4,800	—	1,200	6,000	1,377	—	138	1,515
Equipment and Materials	6,200	—	600	6,800	2,754	—	276	3,030
Office and Training Equipment	4,500	—	400	4,900	6,110	—	611	6,721
Consulting Services	5,200	—	800	6,000	6,163	—	617	6,780
Training	11,700	—	4,000	15,700	2,921	1,484	730	5,135
Base Cost	32,400	—	25,000	57,400	19,646	1,484	16,542	37,672
Physical Contingency	3,240	—	4,500	7,740	—	—	—	—
Price Contingency	2,200	—	2,500	4,700	—	—	—	—
Interest and Commitment Charge	7,160	—	-	7,160	3,998	—	—	3,998
Total Costs	45,000	—	32,000	77,000	23,644	1,484	16,542	41,670

ADB=Asian Development Bank

Source: Asian Development Bank Estimates

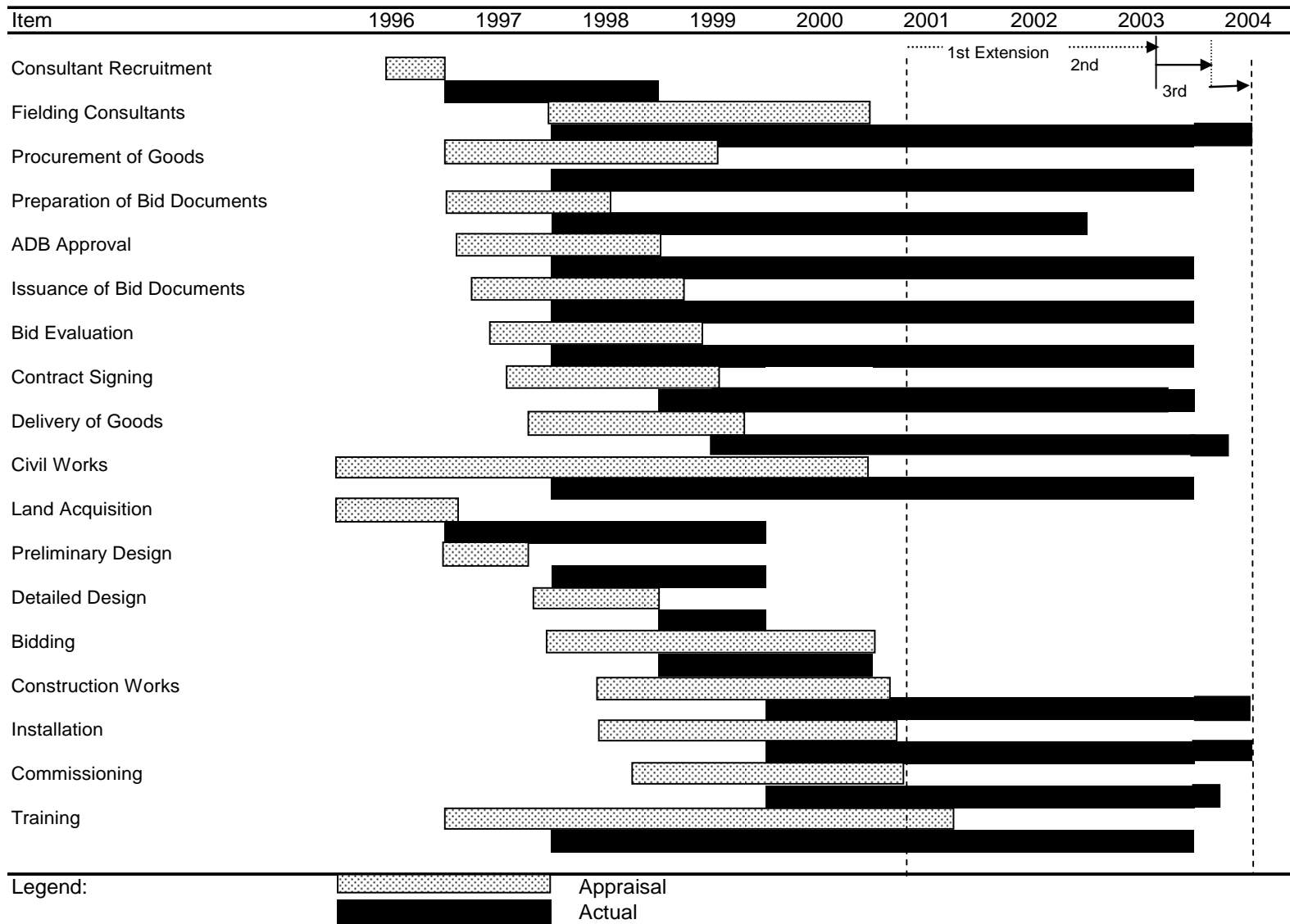
Table A4.1: DISBURSEMENT AT APPRAISAL AND ACTUAL
(\$)

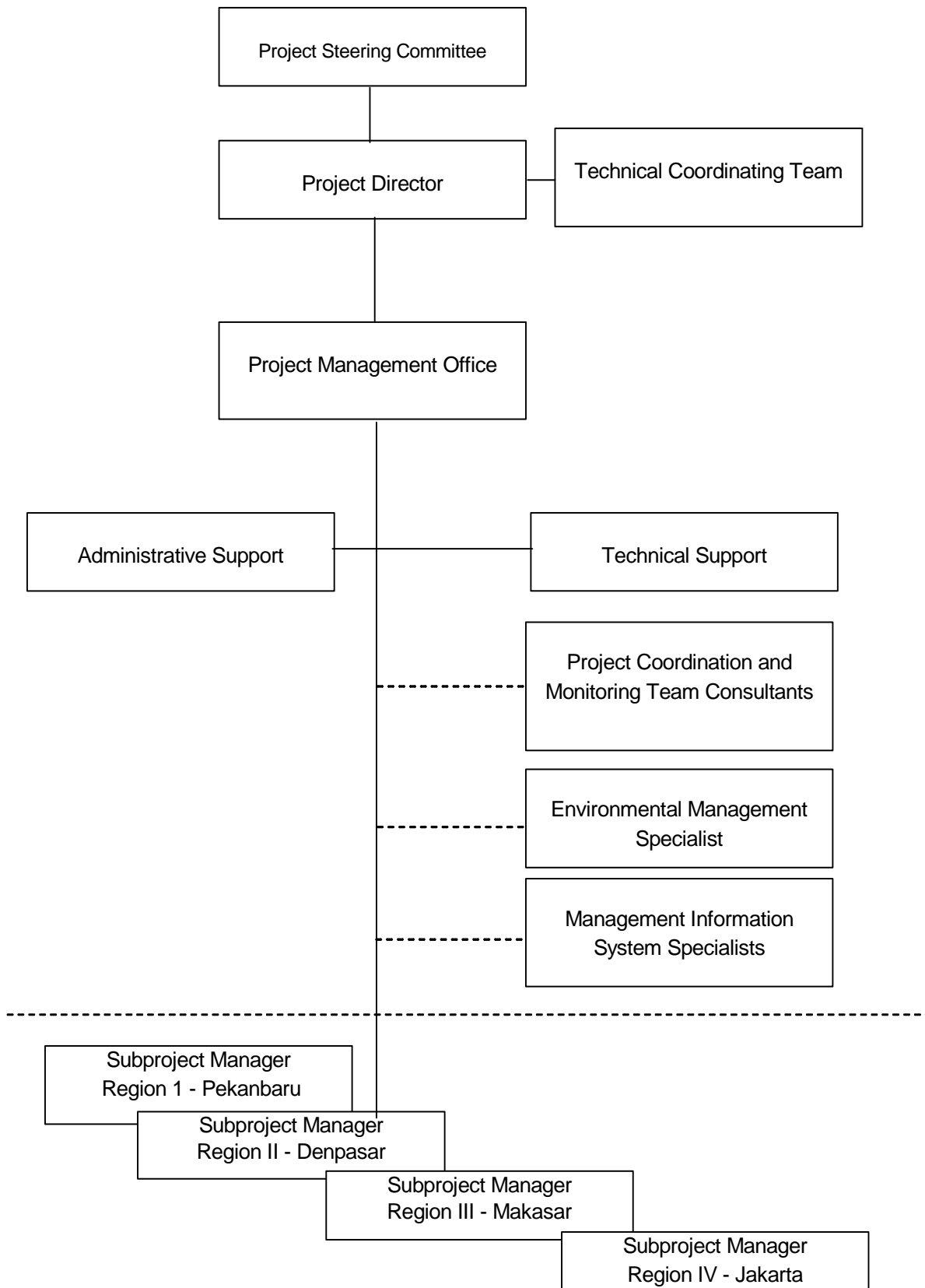
Year	At Appraisal	Actual	
	Cumulative	Yearly	Cumulative
1997	1,089,000	71,193	71,193
1998	6,750,000	1,612,872	1,684,065
1999	20,250,000	3,113,973	4,798,038
2000	38,250,000	2,100,308	6,898,346
2001	45,000,000	1,992,898	8,891,244
2002	-	2,483,273	11,374,517
2003	-	9,838,189	21,212,706
2004	-	3,914,844	25,127,550



Source: Asian Development Bank Record

IMPLEMENTATION SCHEDULE AT APPRAISAL AND PROJECT COMPLETION



PROJECT ORGANIZATIONAL STRUCTURE

COMPLIANCE WITH THE LOAN COVENANTS

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
1.	The Borrower shall cause the Project to be carried out with due diligence and efficiency and in conformity with sound administrative, financial, engineering and environmental practices.	Loan Agreement Art. IV Section 4.01. (a)	Complied with.
2.	Within BAPEDAL, the Director for Program Development shall be appointed Project Director with overall responsibility for overseeing and facilitating project implementation and ensuring coordination of the Project, the heads of the four regional offices shall be responsible for coordination, implementation and administration of Project activities within their respective regions.	Schedule 6 A.1	<p>Complied with.</p> <p>BAPEDAL's organizational structure has been changed. The Directorate for Program Development was abolished under the new structure, and its function is now carried out by the Bureau for Planning and Foreign Cooperation.</p> <p>Decree of the Head of BAPEDAL No. 65 of 2001 appoints the Head of Bureau for Planning and Foreign Cooperation as Project Director.</p> <p>The heads of regional BAPEDAL are responsible for coordination, implementation, and administration of project activities within their regions.</p>
3.	BAPEDAL shall maintain a Project Management Unit (PMU) responsible to the Chairman of BAPEDAL. The PMU shall comprise a steering committee, a technical coordinating committee and project management office.	Schedule 6 A.2	<p>Complied with delay.</p> <p>Decree of the Head of BAPEDAL No. 65 of 2001 established the PMU consisting of a steering committee, technical coordinating committee, and project management office (PMO).</p>
4.	The steering committee shall be chaired by the Vice Chairman of BAPEDAL and shall include as members: Deputy of BAPEDAL; Bureau Chief of Marine, Aerospace, Environment, Science and Technology, BAPPENAS as secretary; Director of Environmental Management Development of the Directorate General of Regional Development, Ministry of Home Affairs, and the Project Director.	Schedule 6 A.3	<p>Complied with.</p> <p>BAPEDAL organizational structure was changed by Presidential Decree Number 1996 of 1998, which abolished the position of Vice Chairman.</p> <p>Decree of the Head of BAPEDAL No. 65 of 2001 stipulates that:</p> <ul style="list-style-type: none"> • Steering committee is chaired by the Executive Secretary of BAPEDAL • Director of Controlling for Natural Resources and Environment, BAPPENAS, is secretary • Director of Environmental Management Development of the Directorate General of Regional Development (DGRD), Ministry of Home Affairs, and the Project Director, are members of the steering committee

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
5.	The Technical coordinating committee shall be chaired by the Project Director, and the BAPPENAS Bureau Chief of Marine, Aerospace, Environment, Science and Technology shall serve as secretary. The committee shall include the following BAPEDAL staff: the Director for Institutional Development, the Director of Environmental Impact Assessment, the Secretary of BAPEDAL, and the heads of each of the four regional offices.	Schedule 6 A.4	<p>Complied with.</p> <p>A slight modification was made in accordance with the new organizational structure. Decree of the Head of BAPEDAL No. 65 of 2001 establishes a technical coordinating team consisting of:</p> <ul style="list-style-type: none"> • Chairman: Bureau Chief for Planning and Foreign Cooperation, BAPEDAL (also Project Director) • First Secretary: Head of Sub Section for Environment, BAPPENAS • Second Secretary: Head of Sub Directorate for Multilateral Cooperation, Bureau for Planning and Foreign Cooperation, BAPEDAL • Members: <ul style="list-style-type: none"> - Head of General Affairs and Public Relations, BAPEDAL - Head of Human Resources Development, BAPEDAL - Head of Center for Environmental Information, BAPEDAL - Head of BAPEDAL Region I - Head of BAPEDAL Region II - Head of BAPEDAL Region III - Head of BAPEDAL Region IV
6.	The Borrower shall make available, promptly, the funds, facilities, services, land and other resources which are required, in addition to the proceed of the Loan, for the carrying out of the Project and for the operation and maintenance (O&M) of the Project facilities.	Loan Agreement Art. IV Section 4.0	<p>Partly complied with.</p> <p>The Government provided counterpart funds for the Project in a timely manner. Financing of civil works for the construction of the regional BAPEDAL office in Makassar was shifted from the Government portion to ADB. The O&M budget, however, was not provided adequately.</p>
7.	The project management office shall provide management support directly to the Project Director. The staff of the project management office shall include a technical support team and administrative support team.	Schedule 6. A.5	<p>Partly complied with.</p> <p>The PMO was established, but the PMO head and staff were frequently replaced.</p>

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
8.	Without limiting the generality of Section 4.02 of this Loan Agreement, the Borrower shall ensure that all land and buildings required for the Project shall be acquired or made available in a timely manner to ensure that the Project is implemented on schedule.	Schedule 6. A. 6	<p>Complied with.</p> <p>The constructed office buildings are located on government-owned land:</p> <ul style="list-style-type: none"> • BAPEDAL Region 1 (Pekanbaru) received a new building from the Provincial Government of Riau; • Construction of building for BAPEDAL Region 2 (Denpasar) was finished in November 2000; and • Construction of building for BAPEDAL Region 3 (Makassar) was completed in 2003.
9.	The Borrower shall ensure, or shall cause BAPEDAL to ensure, that all additional staff as required for the operation and maintenance of the Project facilities are appointed in a timely manner.	Schedule 6.B.7.b	<p>Complied with.</p> <p>Each regional BAPEDAL office was supported by about 70 staff. The number of staff will increase in accordance with future institutional requirement.</p>
10.	In carrying out of the Project, the Borrower shall cause competent and qualified consultants and contractors, acceptable to the Borrower and the Bank, to be employed to an extent and upon terms and conditions satisfactory to the Borrower and the Bank.	Loan agreement Art. IV Section 4.03 (a)	<p>Complied with.</p> <p>BAPEDAL has recruited consultants as specified in the Loan Agreement. It was noted, however, that the performance of the project coordination and monitoring consultants was less than satisfactory.</p>
11.	The Borrower shall cause the Project to be carried out in accordance with plans, design standards, specifications, work schedules and construction methods acceptable to the Borrower and the Bank. The Borrower shall furnish, to the Bank, promptly after their preparation, such plan, design standards, specifications and work schedules, and any material modifications subsequently made therein, in such detail as the Bank shall reasonably request.	Loan Agreement Art. IV Section 4.03 (b)	<p>Complied with delay.</p>
12.	The Borrower shall ensure that the activities of its departments and agencies with respect to the carrying out of the Project and operation of the Project facilities are conducted and coordinated in accordance with sound administrative policies and procedures.	Loan Agreement Art. IV Section 4.04	<p>Complied with.</p> <p>Based on the Decree of the Head of BAPEDAL No. 65 of 2001, BAPPENAS, the Ministry of Finance, and the Ministry of Home Affairs are involved in project implementation through their representatives in the steering committee and technical coordinating committee.</p>

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
13.	The Borrower shall make arrangements satisfactory to the Bank for insurance of the Project facilities to such extent and against such risks and in such amounts as shall be consistent with practice.	Loan Agreement Art. IV Section 4.05 (a)	Partly complied with. Not all project facilities were insured and BAPEDAL did not conduct regular maintenance of project facilities.
14.	Without limiting the generality of the foregoing, the Borrower undertakes to insure, or caused to be insured, the goods to be imported for the Project and to be financed out of the proceeds of the Loan against hazards incident to the acquisition, transportation and delivery thereof to the place of use or installation, and for such insurance any indemnity shall be payable in a currency freely usable to replace or repair such goods.	Loan Agreement Art. IV Section 4.05 (b)	Complied with.
15.	The Borrower shall maintain, or cause to be maintained, records and accounts adequate to identify the goods and services and other items of expenditure financed out of the proceed of the Loan, to disclose the use thereof in the Project, to record the progress of the Project (including the cost thereof) and to reflect, in accordance with consistently maintained sound accounting principles, the operation and financial condition of the agencies of the Borrower responsible for the carrying out of the Project and operation of the Project facilities, or any part thereof.	Loan Agreement Art. IV Section 4.06 (a)	Complied with. Records and accounts to identify the goods and services and other terms of expenditures were maintained.
16.	<p>The Borrower shall</p> <p>(i) Maintain, or cause to be maintained, separate accounts for the Project;</p> <p>(ii) Have such accounts and related financial statements audited annually in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to the Bank;</p> <p>(iii) Furnish to the Bank, as soon as available but in any event not later than six (6) months after the end of each related fiscal</p>	Loan Agreement Art. IV Section 4.06 (b).	<p>Complied with.</p> <p>(i) Each activity (such as civil works, training, management information system [MIS], and administrative cost) falls under a different account.</p> <p>(ii) Auditing was performed by State Auditors.</p> <p>(iii) Audited project accounts were accepted by ADB.</p>

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
	<p>year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditors' opinion on the use of the Loan proceeds and compliance with the covenants of this Loan Agreement), all in the English language; and</p> <p>(iv) Furnish to the Bank other information concerning such accounts and financial statements and the audit thereof as the Bank shall from time to time reasonably request.</p>		(iv) Submitted on request basis.
17.	The Borrower shall furnish, or cause to be furnished, to the Bank all such reports and information as the Bank shall reasonably request.	Loan Agreement Art. IV Section 4.07 (a)	Complied with delay. Consolidated progress reports were submitted with substantial delays.
18.	Without limiting the generality of the foregoing, the Borrower shall furnish, or cause to be furnished, to the Bank quarterly reports on the carrying out of the Project and on the operation and management of the Project facilities. Such reports shall be submitted in such form and in such detail and within such a period as the Bank shall reasonably request, and shall indicate, among other things, progress made and problems encountered during the quarter under review, steps taken or proposed to be taken to remedy those problems, and proposed program of activities and expected progress during the following quarter.	Loan Agreement Art. IV Section 4.07 (b)	Partly complied with. The PMO did not submit progress reports until 2001.
19.	Promptly after physical completion of the Project, but in any event not later than three (3) months thereafter or such date as may be agreed for this purpose between the Borrower and the Bank, the Borrower shall prepare and furnish to the Bank a report, in such form and in such details as the Bank shall reasonably request, on the execution and initial operation of the Project, including its cost, the performance by the Borrower of its obligations under this Loan Agreement and the accomplishment of the purposes of the Loan.	Loan Agreement Art. IV Section 4.07 (c)	Complied with. The project completion report was received by ADB in August 2004.

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
20.	The Borrower, ADB, and BAPEDAL shall carry out a comprehensive mid-term review of the Project. The review shall identify and address constraints affecting implementation, including policy issues. In addition, the Borrower shall cause BAPEDAL to undertake annual reviews of the Project.	Schedule 6.C.8 and 9	Partly complied with. ADB and BAPEDAL conducted an annual review of the Project. However, the mid-term review was not conducted.
21.	The Borrower shall ensure that BAPEDAL carries out an annual benefit monitoring and evaluation of the Project in accordance with the Bank's Benefit Monitoring and Evaluation: A Handbook for the Bank Staff, Staff of Executing Agencies and Consultants (BME Handbook). Mechanism used to monitor Project progress shall include: quarterly progress reports, annual reports, trainees' back-to-office reports and Bank review missions.	Schedule 6.C.10	Not complied with. An annual benefit monitoring and evaluation of the Project was never carried out during the project implementation period.
22.	The Borrower shall enable the Bank's representatives to inspect the Project, the goods financed out of the proceeds of the Loan, and any relevant records and documents.	Loan Agreement Art. IV Section 4.08	Complied with.
23.	The Borrower shall ensure that the Project facilities are operated, maintained and repaired in accordance with sound administrative, financial, engineering, environmental and maintenance and operational practices.	Loan Agreement Art. IV Section 4.09	Partly complied with. Some equipment (such as geographical information system [GIS] equipment and printers) were out of order and were repaired in a timely manner.
24.	It is the mutual intention of the Borrower and the Bank that no other external debt owed a creditor than the Bank shall have any priority over the Loan by way of a lien on the assets of the Borrower. To that end, the Borrower undertakes (i) that except as the Bank may otherwise agree, if any lien shall be created on any assets of the Borrower as security for any external debt, such lien will <u>ipso facto</u> equally and ratably secure the payment of the principle of, and interest and other charges on, the Loan; and (ii) that the Borrower, in creating or permitting the creation of any such lien, will make express provision to that effect.	Loan Agreement Art. IV Section 4.10	Complied with. Such debt did not exist during project implementation.

No.	Loan Covenants	Reference in Loan Agreement	Status of Compliance
25.	The Borrower shall cause BAPEDAL to submit a detailed training program, including the cost estimates prepared by BAPEDAL in consultation with the training consultants and BAPPENAS, to the Bank for approval prior to implementation.	Schedule 6.D.11	A training need assessment was prepared by the Ministry of Environment (MOE) and approved by ADB.
26.	All BAPEDAL staff undertaking overseas training financed under the Project shall be required to enter into a bond with BAPEDAL requiring the to continue working for BAPEDAL for a reasonable period of time after their return.	Schedule 6 D. 11 (c)	Complied with. A memorandum of agreement was signed by participants prior to training.
27.	The Borrower shall cause the Ministry of Home Affairs to issue, by 31 December 1996, a decree, in form and substance satisfactory to the Bank, covering the legal mandate, structure and functions of BAPEDALDA.	Schedule 6.E.12	Complied with. Provincial BAPEDALDA and some district/municipality BAPEDALDA are established under a Ministerial Decree No. 98 of 1996, and the Government Regulation No. 8 of 2003.
28.	The Borrower shall encourage the effective implementation of the "polluter pays" principle as well as other such economic instruments in all regional environmental programs.	Schedule 6.E.13	Partly complied with. The "polluter pays" principle is adopted in environmental legislation, but the economic instrument is not yet introduced on a regular basis.

ADB = Asian Development Bank, BAPEDAL = Environmental Impact Management Agency, BAPEDALDA = Local Environmental Impact Management Agency, BAPPENAS = National Development Planning Agency, BME = benefit monitoring and evaluation, GIS = geographical information system, MIS = management information system, MOE = Ministry of Environment, O&M = operation and maintenance, PMU = project management unit.

TECHNICAL ASSISTANCE COMPLETION REPORT

Division: IRM

TA No. and Name Advisory Technical Assistance (ADTA) TA 2598-INO Master Plan for Establishing BAPEDALDA		Amount Approved:		\$900,000										
		Revised Amount:		\$900,000										
Executing Agency Ministry of Home Affairs Directorate General of Regional Development (DGRD)	Source of Funding: JSF		TA Amount Undisbursed \$282,366.06	TA Amount Utilized \$617,633.94										
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;"></th> <th style="width: 33%; text-align: center;">Date</th> <th style="width: 33%;"></th> </tr> </thead> <tbody> <tr> <td>Approval</td> <td>Signing</td> <td>Fielding of Consultants</td> </tr> <tr> <td>27 Jun 1996</td> <td>17 Jul 1996</td> <td>14 Apr 1997</td> </tr> </tbody> </table>			Date		Approval	Signing	Fielding of Consultants	27 Jun 1996	17 Jul 1996	14 Apr 1997	Completion Date		Original 30 Jun 1997	Actual 30 Jun 1997
			Date											
Approval	Signing	Fielding of Consultants												
27 Jun 1996	17 Jul 1996	14 Apr 1997												
		Closing Date		Original 30 Jun 1997	Actual 30 Jun 2001									
<p>Description</p> <p>The Environmental Impact Management Agency (BAPEDAL) was established in June 1990 to assist the Government in controlling environmental pollution. In November 1994, Decree No. 77 was issued authorizing BAPEDAL to establish offices at regional, provincial, district, and municipal levels. BAPEDAL was mandated to provide technical support and guidance, and was made responsible for monitoring environmental quality and controlling pollution by enforcing Indonesia's environmental laws and regulations. Under the Asian Development Bank (ADB)-financed BAPEDAL Regional Network Project, the Government established regional offices at Denpasar, Jakarta, Pekanbaru, and Makassar (previously called Ujung Pandang). In many parts of the country, local authorities had established local offices to deal with environmental degradation on an informal basis, producing widely varied organizational structures and functions. The Government was concerned that the efficient administration of environmental regulations and their enforcement at the local level might be seriously impaired in the absence of a coherent master plan for the development of a nationwide network of local offices.</p> <p>Objectives and Scope</p> <p>The main objectives of the advisory technical assistance (TA) was to assist the Government to (i) prepare a master plan to establish local environmental institutions (BAPEDALDA), (ii) examine ways to ensure the financial sustainability of the new institutions, and (iii) prepare an outline for a possible externally funded investment project. The scope included (i) preparing the master plan, on a nationwide scale, to establish local level institutions to monitor environmental quality and control pollution by enforcing environmental laws and regulations; (ii) reviewing the experience of the informally established offices in the cities of Bandung, Samarinda, and Semarang, and examining their legal mandates and structural relationships of various levels of environmental administration; (iii) examining the possible options, such as fees, fines, and other fiscal measures, to ensure the sustainability of future local institutions, and recommending the most appropriate measures; and (iv) providing an outline for an externally funded project for establishing offices in local priority areas.</p> <p>Evaluation of Inputs</p> <p>The TA was based on the strategy of the Government and ADB at the time by identifying the need for appropriate and suitably resourced environmental agencies at the local level. The terms of reference (TOR) for the consultants were clear and the TA provided sufficient funds to carry out the services, although in a relatively short time frame. The consultants fully met the TOR and submitted well-written comprehensive reports. They displayed a good understanding of the complexity of the sector and institutional and regulatory difficulties impeding effective management and monitoring of the environment at the local level. The extensive use of workshops helped promote better understanding and increased ownership of the program by local and central authorities. Supervision of the consultants by DGRD and ADB staff was satisfactory, and the outputs were completed in a timely manner and well within budget.</p>														

Evaluation of Outputs

In only five months, the consultants prepared nine excellent working papers: (i) Review of Environmental Legislation in Indonesia with particular regards to the Establishment and Operation of BAPEDALDA, (ii) Review of Environmental Management in Indonesia, (iii) The Appropriateness of the Roles and Organizational Structures of BAPEDALDA I and II, (iv) The Role and Function of BAPEDALDA, (v) Using Economic Instruments for Environmental Management in Indonesia, (vi) Providing Trained Staff for BAPEDALDA, (vii) Providing Environmental MIS for BAPEDALDA, (viii) Equipping the BAPEDALDA, and (ix) A Schedule for Establishing BAPEDALDA and Financing their Development. These nine working papers were instrumental in the preparation of the Phase I Master Plan, which was discussed at a workshop at DGRD on 10 September 1997 and at a tripartite meeting at DGRD on 18 September 1997, and submitted as the final Phase I and Master Plan Report to ADB on 19 September 1997. At the tripartite meeting, the consultants were instructed to proceed with Phase II and prepare an investment project using the sector loan modality based on an analysis of six pilot subprojects. To develop the investment project, the consultants held a series of workshops and consulted with local authorities to finalize the selection and participation criteria. Based on the TOR, they were instructed by ADB to submit the draft Phase II report by the end of November 1997 and the final proposed investment project, called Strengthening Environmental Management at the Local Level, by mid-January 1998. The final published Phase II Report was prepared in the format of a *Report and Recommendation of the President* and submitted to ADB in February 1998. The project cost was estimated at about \$128 million to be financed by an \$80 million ADB loan. However, no ADB loan was forthcoming and the Government did not implement the six pilot subprojects. The consultants were efficient in carrying out their services, worked well with DGRD, completed all of their tasks as outlined in the TOR, and produced good outputs in the form of working papers, Phase I Master Plan, and Phase II Report. The preparation of the investment project under an ADB loan was unusual, but it was part of the TOR.

Overall Assessment and Rating

The TA was considered highly relevant at the time of appraisal and is still relevant today, given the Government's environmental strategy and desire to strengthen local institutions to perform necessary environmental monitoring and management activities. Implementation of the TA was efficient in terms of both time and costs. The efficacy, sustainability, and institutional development impacts of the TA are uncertain primarily due to difficulties associated with regional autonomy, shortage of human and financial resources, and an unclear mandate from the Ministry of Environment (MOE) for local environmental institutions. Based on the rating criteria adopted by ADB, the TA is rated partly successful.

Major Lessons Learned

The TA was carried out at a time when the country was undergoing significant changes in the sociopolitical arena and when the influence and directions from the central Government to the provincial levels weakened. New regional autonomy laws, including devolved fiscal responsibilities, were introduced, resulting in poorly staffed and funded local government institutions. The outputs of the TA are still valid and could be implemented with only minor revisions. Learning from government difficulties to finance the TA recommendations, ADB should have proactively suggested that the Government utilize the loan surplus fund to implement parts of the TA recommendations.

Recommendations and Follow-Up Actions

The environmental sector, at all levels, continues to be weak in Indonesia. Significant investments are needed in its human resources, together with guaranteed annual funding for operation and maintenance, to carry out MOE responsibilities and duties and, in particular, to develop and strengthen its provincial and district agencies. Staff at the local levels are energetic but get little guidance from MOE and are unable to carry out their responsibilities due to a shortage of resources. Without a significant change in MOE's direction to fully support regional environmental monitoring and management activities, it is doubtful that the intended purpose of the provincial and district agencies will be achieved in the near future.

ADB should continue to dialogue with MOE on the changes needed to have a strong and well-resourced BAPEDALDA, which would then have a trickle-down effect on the effectiveness of BAPEDALDAs.

C

Prepared by H.S. Soewartono

Designation Senior Project Implementation Officer