GEF

Global Environment Facility

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Chief Executive Officer
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April 17, 2001

Dear Council Member:

The World Bank, as the Implementing Agency for the project *Indonesia: Western Java Environment Management (WJEMP),* has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with World Bank procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in March 2000 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by the World Bank satisfactorily details how Council's comments and those of the STAP reviewer have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

M. T. El-Ashry

cc: Alternates, Implementing Agencies, STAP

THE WORLD BANK/IFC/M.I.G.A.

OFFICE MEMORANDUM

DATE: April 11, 2001

TO: Mr. Mohamed El-Ashry, CEO/Chairman, GEF

FROM: Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 34188

SUBJECT: **INDONESIA: Western Java Environment Management Project (WJEMP)**
Final Council Review/CEO Endorsement

1. Please find attached the final Project Appraisal Document for the above-mentioned project for review by the Secretariat staff prior to circulation to the Council and your final endorsement.

2. The program remains fully consistent with the objectives and scope of the proposal that was approved by the Council on March 8, 2000. Unfortunately due to the fluid political situation in Indonesia, it has taken approximately one year longer than foreseen to deliver the project. The appraisal was carried out in November/December 2000; negotiations are scheduled for April 18-20, and Board presentation is set for May 31, 2001. The lending instrument remains an APL in three tranches.

Evolution of Project and Program since Intersessional Work Program Review

3. WJEMP's GEF Objectives. The program supports the GEF objective of reducing methane generation and therefore greenhouse gas (GHG) emissions. This will be accomplished by supporting increased composting of the organic fraction of municipal solid waste instead of dumping it into landfills. Composting will reduce GHG emissions by (a) avoiding the production of methane gas from anaerobic decomposition of organic waste; and (b) producing a useful agricultural input that reduces the need for synthetic fertilizers (which contribute significant GHG emissions through their production). The GEF goal of the nine-year program is to assist in developing a commercial level composting industry. In addition to addressing methane generation in landfills, the project could potentially reduce ground water contamination and improve soil conditions by effectively removing organics from the waste stream. *For APL1, the GEF-related goal is to form the basis for reducing GHG emissions by establishing commercial scale compost production* [refer to Section A].

4. *Project Consistency with GOI Priorities*. The GEF Council inquired about WJEMP's consistency with the Government's priorities. WJEMP is fully consistent with GOI priorities as expressed in the most recent CAS of February 2001, which emphasizes three pillars: sustaining economic recovery and promoting broad-based growth, building

national institutions for accountable government, and delivering better public services to the poor. The proposed project substantially contributes to both the second and third objectives. WJEMP will promote more efficient service delivery by local governments. The environment will be improved in the participating urban areas mostly by improving solid waste management, but also by defining programs for managing and reducing industrial and medical waste. The project's environmental performance will be monitored systematically through the annual "State of the Environment" reports, which will be publicly disseminated and discussed. Campaigns to increase public awareness of environmental issues as well as technical assistance to strengthen local institutions figure prominently in the project design. Assistance to waste-pickers (including waste collectors in residential and industrial areas) will contribute towards the larger target of poverty reduction [refer to Sections B1, B2 and C3].

5. *Government Commitment*. BAPPENAS (the National Development Planning Agency), the Ministry of Settlements and Regional Development (known by the Indonesian acronym, *Kimpraswil*), the provinces of DKI Jakarta and West Java, and the sixteen local governments currently participating in the project have been working with the Bank since 1996 – before the crisis, throughout it, and beyond – to develop this project. The highly participatory process used to define the project scope has ensured that the development priorities of the participating local governments are adequately reflected. The proposed activities have remained high priority to the local governments which have all entered into Memoranda of Understanding with Kimpraswil [refer to Section D4].

6. *Project Complexity.* The GEF Council expressed concern about the project's complexity. During the period between pre-appraisal and appraisal, Bank management also raised this concern. In response, the team has reduced the number of components to three, and has scaled back the scope of the first tranche of the APL to a technical assistance loan of US$10.86 million. Thus APL1 is now designed to set the policies, build implementation capacity at the local level, and draw up detailed engineering designs before entering the major construction phases planned for APL2 and APL3 [refer to Sections Summary page, B4, C1, Annex 1 and 2] .

7. *Encouraging Private Sector Competition*. The Council inquired about the project's means of encouraging private sector competition in waste management. Ways of encouraging private sector competition will be explored in APL1. For example, a detailed plan will be prepared to outline how the GEF compost funds will be channeled to compost producers. A boost for the demand for compost is being considered by DKI and Bandung city by entering into a multi-year contract for the procurement of compost. In addition, the TA, "Improved Solid Waste Management Services and Feasibility Study for East Serang (Kab. Serang 3-1), one of the key points in the terms of reference is to "examine the potential role of the private sector to support improved waste management throughout Serang." The results of this TA will be disseminated to the other participating local governments [refer to Sections B4, C3].

8. *Local Participation in Early Stages*. Local participation was a hallmark of the preparation of this project, and this will continue during implementation. Compost

activities have been promoted by community groups and environmental NGOs. The involvement of these groups will be maintained in the composting activities to both assist with the public awareness campaign and with market development, and to provide inputs to compost producers on any potential concerns neighboring residents or compost users may have. To further disseminate information, a Compost Advisory Team, already rooted in an association of compost specialists, will be established, and bi-annual international trade fairs will be held. Lastly, environmental education will be introduced into the school curriculum in conjunction with the ongoing Bank-funded West Java Basic Education Project [refer to Section E6].

9. *Monitoring and Evaluation***.** The project incorporates two types of monitoring: (a) routine reporting carried out through normal GOI channels (progress reports, Bank supervision, audit reports, etc.); and (b) project-specific monitoring through (i) impact data collected by local schools as part of the PMU assistance contracts, (ii) the compost advocacy team, (iii) advisory boards at landfills, (iv) annual public reviews of the "State of the Environment" reports mentioned in para. 10 below. Data collection will be integrated with the Environmental Awareness and Environmental Education TAs. Measurable indicators will be defined and disseminated through a TA provided under the Overall Urban Environment Management component [refer to Sections C4 and Annex 2].

10. *Information Dissemination*. The Council mentioned that an information dissemination campaign would be an attractive addition to the project. The Bank concurs completely. Under component 1 (overall environmental management), the annual "State of the Environment" reports to be produced by each local government, will be disseminated and discussed in "Urban Forums" with the public. These reports would highlight the local government's performance in arresting and reversing environmental deterioration. The public's environmental awareness will be increased through a number of campaigns and by involving local school children in the monitoring process [refer to Sections C2, C4, E6 and Annex 2].

Secretariat Requirements.

11. *First Year Report*. The GEF Council requested a report within the first 12 months of effectiveness presenting four specific items. The items and the Bank's responses follow [further details in Annex 2]:

(a) *Outline of initial success in the compost credit delivery mechanism including the flow of funds*. Under the Solid Waste Management component there is a TA for the "Design and GEF Grant Mechanisms for Compost" (Ref: Pusat 3-7). The terms of reference (TORs) for this TA include preparation of a detailed description of the compost credit delivery mechanism, the flow of funds, and auditing requirements. The TA report will be available approximately nine months after the consultant mobilizes.

(b) *Establishment of an international waste management and composting advisory board and national research team within 12 months of*

effectiveness. Establishment of this international advisory board and research team is part of the TORs for the same TA as in (a) above.

(c) *Outline a national and international dissemination program of GEF-supported activities*. This is also part of the TORs of the above TA contract.

The Government of Indonesia, through the Bank, will provide the requested reports based on (a) – (c) above as soon as they become available.

12. *Triggers for Phases 2 and 3*. During appraisal, it was found that the compost production levels proposed in the February 2000 review were overly ambitious for the specified timeframe of six years. The overall program as now designed covers nine years (approximately 3 years per APL). Compost production targets are 60,000 tons in APL1, 300,000 in APL2 and 600,000 for APL3, for a total production of 960,000 tons. This translates into a 6 million tons of CO2 discharge avoided, at an average estimated cost per ton of US$1.80. Addition triggers include (a) the convening of international workshops on compost and its role in municipal waste management before APL2 and APL3; and (b) for APL3, the Jabotabek and Greater Bandung Waste Management Corporation will have been established prior to APL2 and will be operational prior to implementation of APL3. The main activity of these Corporation will be to establish regional sanitary landfills in areas, covering some 90% of western Java's waste production [see Section B4].

Bank Responses to Specific Concerns

13. The paragraphs below respond to specific queries from the GEF expressed in the summary of February 9, 2000.

14. *Sustainability of Composting*. The WJEMP solid waste component will transform what is currently a neighborhood activity into an industrial, commercial level activity by marketing the output -- a quality compost -- as an agro-chemical product. APL1 starts off with TA to prepare and establish the GEF-funded compost grant program, establish a technical advisory group and develop a compost marketing program. Under APL2 and APL3 compost production will increase with a goal of producing 960,000 tons over the course of the 9-year program. The project will ensure this supply is of good quality and is produced at a reasonable price. It will increase demand by developing and conducting a marketing campaign targeted at large scale users. During APL2 and APL3, the GEF grant will gradually be phased out, with the view that, at the end of the program, the compost will be sold at market prices to the by-then established market [see Section F1].

15. *Government Decentralization.* Indonesia has just recently passed decentralization laws, but their impact on local governments and the execution of those laws remain unclear. One of the virtues of the APL instrument is that it allows the program to progress at a pace commensurate with the actual pace of effective decentralization. APL1 has no local government borrowing to provide ample time for local governments and the Bank to see how the fiscal decentralization unfolds. The government has agreed

that this project would be implemented under "the old system" so the project's executing agency will be the Ministry of Settlements and Regional Infrastructure. Implementation of APL2 and APL3 will very likely be delegated to the participating local governments [see to Section C4].

16. *Waste Collection Reforms.* The risk of switching from public to private waste collection is considered moderate not least because past performance by local governments has been less than desirable. The performance of local governments in solid waste collection will be improved by having the public sector focus on poorer residential collection and handing over commercial/industrial waste collection to the private sector. The local governments will collect revenues by charging license and tipping fees from the private haulers. In fact, one the triggers for APL2 is: "local governments' solid waste net revenues should be increased by 20% from tipping fees and private waste hauler license fees." Local governments' ability to assess and collect these fees will be strengthened through the TA to the CPSU and eventually through the solid waste corporations. Local governments will further improve their services by cooperating with one another across jurisdictional boundaries (for example by sharing landfills). Ensuring this sort of cooperation will be one of the *raisons d'etre* of the solid waste corporations to be established under APL1 for Jabotabek and Greater Bandung. Local government ownership of these two waste corporations will be achieved by having each of the participating local governments contribute to funding the corporations partially through revenues generated from the transactions [see Sections B2, B3, B4, C2 and Annex 2].

17. *Dangerous Residues*. The United States representative specifically inquired about the measures being taken to adequately test the possible dangerous residues from composting. In the Bank's letter of March 21, 2000, the Bank replied that it agreed that potentially dangerous residues, such as heavy metals, are a serious concern for any program that produces compost for agricultural use. For this reason, the Bank helped Indonesia prepare compost quality guidelines, based on experience with its small-scale compost programs. The proposed project would establish and fund an independent technical committee to randomly test compost quality relative to the guidelines, oversee their enforcement, and assist in market development and quality assurance jointly with the agricultural community. The key to compost quality control will be proper waste separation, i.e., diverting and processing only high quality organics. Indonesia's past experience has shown that quality control of this key step is practical.

18. *Child Labor*. In addition, the US representative requested information about the possibility of using a child labor pool in the separation of organic waste from other waste materials. The Bank agreed that Indonesia should minimize any negative employment impacts of the scheme. To achieve this, most composting workers will be hired from among the waste-pickers. At the collection level, they do not usually include children. However, children are occasionally active at waste dumping sites, despite efforts to reduce this. Facilities receiving the compost grants will be requested to confirm that no children have been employed in collection and composting activities within this grant. Since existing compost plants do not use child labor, and since this is a relatively easy issue to monitor, we are confident that this system will help the Government minimize

the use of child labor in compost production. We confirm that this request has been communicated to the Government of Indonesia.

cc: M/M. King, GEF PROGRAM COORDINATION, Miller, Martinot (GEFSEC); Broadfield (EASES); Johnson, Khanna, Aryal (ENVGM); ENVGM ISC File; Varma, Nielsen, Dasgupta, Hadiwinoto, Hoornweg, Nickerson, Harrison (EASUR), EASUR File

Document of
The World Bank

Report No: 21029-IND

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$ 10.86 MILLION AND

A GEF GRANT IN THE AMOUNT OF SDR xx MILLION

TO THE

REPUBLIC OF INDONESIA

FOR A

WESTERN JAVA ENVIRONMENTAL MANAGEMENT PROJECT

April 6, 2001

Urban Development Sector Unit
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective)

Currency Unit = Rupiah
1Rp = US$.0001
US$1 = 10,200

FISCAL YEAR
January 1 December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AMDAL	Environmental Impact Assessment (process)
APL	Adaptable Program Loan
BAPPEDA-I	Provincial Development Planning Agency
BAPPEDA-II	District Development Planning Agency
BAPEDAL	National Environmental Impact Management Agency
BAPPEDALDA Propinsi	Provincial Environmental Impact Management Agency
BAPPEDALDA Kotamadya/ Kabupaten	Municipal/District Environmental Impact Management Agency
BAPPENAS	National Development Planning Agency
BOD	Biochemical Oxygen Demand
Bupati	Chief executive of a kabupaten
CAS	Country Assistance Strategy
CDS	City Development Strategy
CEF	Community Environment Fund
CPSU	Central Program Support Unit
DKI Jakarta	Jakarta Metro Area (Daerah Khusus Ibukota Jakarta)
DGURD	Directorate General of Urban and Rural Development
DPRD	District Council
EA	Environmental Assessment
EMP	Environmental Management Plan
FMS	Financial Management System
GEF	Global Environment Fund
GHG	Greenhouse Gas
GOI	Government of Indonesia
GTZ	German Technical Assistance
IPLT	Wastewater Treatment Plant
IUIDP	Integrated Urban Infrastructure Development Project
JABOTABEK	Jakarta metropolitan area (Jakarta, Bogor, Tangerang, Bekasi)
JIEP	Jakarta Industrial Estate Pulogadung
JUDP3	Third Jabotabek Urban Development Project (Ln. 3246-IND)
Kabupaten	District
Kimpraswil	Director General Urban Development, Ministry of Settlements and Regional Infrastructure
Kota	Incorporated municipality

KIP	Kampung (poor neighborhood) Improvement Program
LACI	Loan Administration Change Initiative
MEIP	Metropolitan Environmental Improvement Project
MoF	Ministry of Finance
MOU	Memorandum of Understanding
NGO	Non-governmental organization
NKLD	"State of the Environment" Report
OECF	Overseas Economic Cooperation Fund (of Japan)
OED	Operations Evaluation Department
O&M	Operations and maintenance
Pemda	Local government
PER	Programmatic Environment Review
PMR	Project management reporting
PROKASIH	Clean rivers program
Propenas	Parliamentary decree
RKL/RPL	Environment management/monitoring plans
Sekwilda	Chief administrative officer - secretary of provincial or local government
TA	Technical assistance
TPA	Solid waste landfill
USAID	United States Agency for International Development
Walikota	Chief executive of a kota
WJEMP	Western Java Environmental Management Project

Vice President:	Mr. Jemal-ud-din Kassum, EAPVP
Country Manager/Director:	Mr. Mark Baird, EACIF
Sector Manager/Director:	Mr. Keshav Varma, EASUR
Task Team Leader/Task Manager:	Mr. Finn Nielsen, EASUR

INDONESIA
WESTERN JAVA ENVIRONMENTAL MANAGEMENT PROJECT

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MAP(S)

INDONESIA

WESTERN JAVA Environmental Management Project

Project Appraisal Document

East Asia and Pacific Region
EASUR

Date: October 17, 2000
Team Leader: Finn Nielsen
Country Manager/Director: Mark Baird
Sector Manager/Director: Keshav Varma
Project ID: P040528
Sector(s): US - Urban Environment, VP - Pollution Control / Waste Management
Lending Instrument: Adaptable Program Loan (APL)
Theme(s): Environment; Urban
Poverty Targeted Intervention: Y

Global Supplemental ID: P068051
Team Leader: Finn Nielsen
Sector Manager/Director: Keshav Varma
Supplement Fully Blended? Yes
Sector(s): US - Urban Environment; VP - Pollution Control / Waste Management

Program Financing Data

APL	Indicative Financing Plan				Estimated Implementation Period (Bank FY)		Borrower
	IBRD US$ m	%	Others US$ m	Total US$ m	Commitment Date	Closing Date	
APL 1 Loan/ Credit	13.97	90.9	1.40	15.37	08/01/2001	12/31/2004	Republic of Indonesia
APL 2 Loan/ Credit	52.60	58.2	37.80	90.40	08/01/2003	12/31/2007	Republic of Indonesia
APL 3 Loan/ Credit	29.56	58.1	21.31	50.87	08/01/2006	12/31/2010	Republic of Indonesia
Total	96.13		60.51	156.64			

Project Financing Data
[X] Loan [ ] Credit [X] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Amount (US$m): $15.38M
The above financing includes $3.12 million from GEF in APL1 in the "Others" category. A total of $10 million is being sought from GEF; the remaining $6.88 million would be disbursed over APL2 and APL3.

Proposed Terms:
Grace period (years): 5
Years to maturity: 20
Commitment fee: 0.75
Service charge: 1.00%

Financing Plan: Source	Local	Foreign	Total
BORROWER	0.89	0.25	1.14
IBRD	8.52	2.34	10.86
LOCAL GOVTS. (PROV., DISTRICT, CITY) OF BORROWING COUNTRY	0.00	0.00	0.00

GLOBAL ENVIRONMENT FACILITY	2.93	0.18	3.11
Financing Gap	0.41	0.19	0.60
Total:	12.75	2.96	15.71

Borrower/Recipient: REPUBLIC OF INDONESIA

Responsible agency: MINISTRY OF SETTLEMENT AND REGIONAL DEVELOPMENT

Address: Jl.Patimura No. 20, Jakarta, Indonesia

Contact Person: Ir. Budiman Arief

Tel: 62-21-72-79-6155 Fax: 62-21-72-79-6155 Email:

Other Agency(ies):

BAPPENAS

Address: Jl. Madiun No. 4-6, 3rd Floor, Jakarta, Indonesia

Contact Person: Prof. Dr. Ir.Herman Haeruman, Deputy V

Estimated disbursements (Bank FY/US$M):

FY	2002	2003	2004					
Annual	1.40	3.82	5.90	2.84				
Cumulative	1.40	5.22	11.12	13.96				

Project implementation period: 2001-2004

Expected effectiveness date: 08/01/2001 **Expected closing date:** 12/31/2004

OCS APL PAD Form: Rev. March, 2000

A. Program Purpose and Project Development Objective

1. Program purpose and program phasing:

As reflected in Indonesia's National "Agenda 21" and supporting parliamentary decrees, the Government of Indonesia (GOI) has embarked on a campaign to reduce environmental pollution. The ultimate goals of the program are to improve living conditions and improve Indonesia's international competitiveness. A critical priority is improving urban environmental management. GOI has elected to initiate its environmental program by focusing first on urban areas in western Java including Jakarta. These areas are home to most of Indonesia's industries and have severe pollution problems which affect a large and dense population. They were also among those hardest hit by the recent economic crisis. The Bank has been requested to assist with a nine-year program to address the local governments' highest priority environmental problems. The proposed program falls within the Bank's Country Assistance Strategy (CAS), which was developed in partnership with GOI. The program will:

a) strengthen institutionally and economically the local, provincial and regional institutions responsible for waste management and environmental control;
b) develop local environmental strategies and plans within the national strategy;
c) increase community awareness and participation in environmental management both at the local government and community levels;
d) improve waste collection and disposal and well as support activities directed at waste reduction, reuse and recycling;
e) improve the environmental conditions of a number specific, high priority localities; and
f) assist in developing a commercial level composting industry through a grant from the Global Environmental Facility (GEF).

The nine-year program will be implemented in three-phase adaptable program loan (APL).

2. Project development objective: (see Annex 1)

The three-year project, APL1, will: (a) lay the strategic framework which will form the institutional and community foundation for sustainable environmental waste management among the participating local and provincial governments; (b) prepare detailed designs for the investments to be implemented during the subsequent two phases; and (c) form the basis for reducing Greenhouse Gas (GHG) emissions by establishing commercial scale compost production.

3. Global objective: (see Annex 1)

The program supports the Global Environment Facility (GEF) objective of reducing methane generation and therefore greenhouse gas (GHG) emissions. This will be accomplished by supporting increased composting of the organic fraction of municipal solid waste instead of dumping it in landfills. Composting reduces GHG emissions by (a) avoiding the production of methane gas from anaerobic decomposition of organic waste; and (b) producing a useful agricultural input that reduces the need for synthetic fertilizers (which contribute significant GHG emissions through their production).

4. Key performance indicators: (see Annex 1)

The performance indicators mentioned in this section apply to APL1 components only.
The key **policy** indicators include the following: (a) successful development and adoption/implementation of: (i) policies on hospital waste management, (ii) landfill advisory committees, (iii) community environment facilities, (iv) Jabotabek Waste Management Corporation, (v) Greater Bandung Waste

Management Corporation with local funding, and (vi) an environmental awareness program; and (b) public review of the annual "State of the Environment" reports.

Key **physical** indicators include: (a) production and marketing of some 60,000 tons of additional quality compost; and (b) establishment of some 1000 plus community environment subprojects, known as "green KIP" projects, through local governments.

A key **social** indicator is assistance provided to some 7000 waste-pickers and collectors.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Document number: 21580 **Date of latest CAS discussion:** 02/08/2001

The CAS of 2001 emphasizes three broad objectives: sustaining economic recovery and promoting broad-based growth, building national institutions for accountable government, and delivering better public services to the poor. The proposed Western Java Environment Management Project substantially contributes to the third objective. WJEMP will promote more efficient service delivery by local governments. The environment will be improved in the participating urban areas mostly by improving solid waste management, but also by defining programs for industrial and medical waste, by monitoring environmental performance systematically, and by carrying out public awareness campaigns and local institutional strengthening. Assistance to waste-pickers (including waste collectors in residential and industrial areas) will contribute towards the larger target of poverty reduction.

1a. Global Operational strategy/Program objective addressed by the project:

The GEF program will reduce greenhouse gases and provide other environmental benefits such as more efficient use of synthetic fertilizers, reduced soil erosion, and more sustainable agricultural practices. The project is fully consistent with the Short Term Climate Change window of the GEF's Operational Strategy. It meets the criteria for such projects in that it is: (a) cost effective (a unit GHG abatement cost of about $1.75 per tonne of carbon equivalent), (b) likely to succeed as shown through previous pilot activities; and (c) one of Indonesia's top priority GHG abatement initiatives as reflected in the Algas Report, pp. 13 and 15, and is strongly supported by the community and local administrators. An independent technical committee will be established to monitor and verify the compost production and GHG emission reductions. This committee will establish Indonesia as a "center of excellence" for both compost production and research.

2. Main sector issues and Government strategy:

The sector is defined here as "urban environment and pollution and waste management". The main issues are:

a) high levels of air and water pollution from many sources, especially solid waste, vehicle emissions, industrial and residential waste water;
b) low public awareness about the health impacts of urban pollution and ways to address it;
c) inadequate enforcement of existing, appropriate regulations and incorrect pricing for services and "violations" of rules;
d) institutional weaknesses at all levels, unclear roles of each level, and thus poor coordination, resulting in poor service delivery;
e) inadequate capital investment to keep up with population and waste growth;
f) low human resource capacity; and
g) insufficient recurrent budgets, linked to poor cost recovery, resulting in inadequate private sector

participation and overall inefficiency.

The main issues in the sector are well studied and documented in the following reports:

Indonesia Environment and Development: Challenges for the Future (Report No. 12083-IND, 1994)

This report provides a comprehensive analysis of environmental challenges facing Indonesia, as well as their causes, impacts, the costs and ways to finance remediation, and a priority action list. The report provides order of magnitude estimates which are sufficient to identify the highest priority issues, namely, water supply and sanitation, solid waste management, vehicle emissions and industrial pollution control particularly in Java.

Private Sector Participation in Solid Waste in Indonesia (Informal Sector Report, 1995)

This report summarizes barriers to greater private sector participation in waste management activities (e.g., lack of technical knowledge, inadequate planning and contract periods being too short) and suggests ways to improve service delivery through the judicious use of private firms, largely through increased competition, accountability and transparency.

Community Based Composting and Recycling Pilot Project (1996)

Through the Fund for Innovative Approaches in Human and Social Development, the Bank carried out six integrated pilots under three Bank urban projects (in Sulawesi, Bali, and East Java). The pilot projects provided many lessons (e.g., the community's enthusiasm and technical feasibility), and were successful in highlighting the potential for community involvement in waste management activities.

Jabotabek Environmental Management Strategy (1995)

Funded by the Third Jabotabek Urban Development Project, this comprehensive report reviewed the causes of environmental degradation in Jabotabek (economic and technical review) and prioritized activities to respond to the environmental degradation. This study was part of a similar exercise (assisted by the UNDP Municipal Environmental Improvement Program) carried out in Kuala Lumpur, Manila, Bombay, Katmandu, and Beijing, and is the basis of this project.

Other Reports

During project preparation, five studies/reports were prepared: (a) Community-Based Solid Waste Management, May 1998; (b) A Rapid Appraisal of Industrial Pollution Abatement in Semarang Indonesia – Issues and Opportunities, September 1998; (c) Review of the Kampung Improvement Program – Evaluation in Jakarta, September, 1998; (d) Evaluation of the Sanitation Component of KIP JUDP3, July 1996; and (e) Assessment of Popular Participation of KIP JUDP3, June 1995. These reviews highlighted the complexity of community involvement in urban environmental activities and the clear need to bridge community demands and local government capabilities. Preparation of the JUDP3 ICR also highlighted the need for local government "ownership" and management of project implementation, as well as the beneficial impact of community involvement.

Two other reports were prepared by the Bank's Environment and Social Unit in 1999: (a) A Review of Landfills in Indonesia, and (b) Environmental Management Plan Implementation in Indonesia: Review of Selected Urban Projects. Both reports highlighted the difficulties in ensuring that landfills are operated properly and recommended greater community involvement and more attention to operations.

3. Sector issues to be addressed by the project and strategic choices:

The project is part of the Government's program to improve the local environments and competitiveness of urban areas and to bring about improved municipal management, greater cost recovery, and reduced environmental contamination. The project will support the shift of decision-making from central government to some of the most capable local governments in Indonesia. The project addresses the local and provincial governments' highest priority environmental problems, as perceived by the local governments and documented in the studies referred to in section 2, above.

Inadequate Provision of Municipal Services. Services (e.g., waste collection, transport and disposal) are poorly integrated across agencies and the private sector. There has been insufficient focus on cost recovery, inadequate and inefficient investments, poor operations management and inefficient asset use. With the decentralization of responsibilities for provision of all services to local governments, sustainable provision of these services has come into focus.

Local Government Leadership. Local governments are the key agencies in addressing urban environmental issues but they are easily overwhelmed by the magnitude of environmental problems. Planning is piecemeal: the three levels of government (local, provincial, central) seldom coordinate their plans, nor do the adjacent local governments. Many studies exist but they tend to be driven by the availability of external financing. Communities have little involvement in decision-making or monitoring of the services provided. Policy issues such as incentives, institutional arrangements, implementation capabilities, and proper landfill siting processes are seldom addressed. The project will support local governments, as provincial and national government agencies delegate implementation and enhance their own roles of "assistant" and "regulator" respectively.

Solid Waste Management. The project focuses mainly on solid waste which is a major source of air and water pollution and local flooding. Due to factors such as income growth, lifestyle changes and consumerism, the rate of waste generation is increasing faster than the rate of local population growth, and the composition is changing even faster, compounding waste management problems. Environmental upgrading needs a holistic approach. For example, making incremental improvements in many interrelated areas, such as improving solid waste collection, will have minimal benefits in BOD loadings, if there are not corresponding advancements in sewerage and industrial pollution control.

Composting Viability. Composting can be a less technically demanding option than sanitary landfilling (with methane recovery), land reclamation, or incineration and should provide a cost effective way to deal with a part of the growing waste stream. The GEF funding supports the piloting project to scale up the production of compost from a neighborhood activity to a industrial commercial level with marketing as an agro-chemical product.

4. Program description and performance triggers for subsequent loans:

APL1 – August 31, 2001 to December 31, 2004

Program Area. From the outset, participation was open to all local government units in western Java and Jakarta. During preparation, some local governments withdrew for various reasons. Sixteen local governments, under three provinces including DKI Jakarta, are participating in the program. These include: five cities under DKI Jakarta, Bandung City and District, Bekasi City and District, Bogor City, Cilegon City, Cirebon City and District, Depok City, Serang District, and Tangerang City.

APL1 - August 31, 2001 to December 31, 2004

1. Overall Urban Environmental Management

- Development of provincial and local environmental strategies;
- Development and implementation of an environmental awareness program;
- Preparation of a sewerage scheme to improve the quality of the Cikapundung River in Bandung City;
- Preparation of a Cilegon/Serang 'Emergency Response Plan' for potential large scale industrial accidents;
- Staff training;
- Engagement of local communities in decision-making in environmental management including community consultations in connection with the issuance of the annual 'state of the environment' reports, and establishment of a landfill advisory board for each existing landfill/waste dump;
- Review and improvement of the curriculum for environmental education in the public school system; and
- Development of a medical waste strategy and preparation of implementation proposals.

2. Solid Waste Management

- Development of the organizational structure for the Jabotabek and Greater Bandung Waste Management Corporations, and establishement of the organizations;
- Preparation of feasibility studies for landfills and preparation of waste management plans, including environmental impact assessments and remedial plans (AMDALs);
- Establishment of small-scale, community-based composting pilot plants, provision of assistance to small-scale producers; preparation and establishment of a GEF-funded compost grant program; establishment of a technical advisory group, and development of a compost marketing program;
- Development of compost facilities in Jakarta (100 tons per day minimum) including environmental assessments, financing plans, detailed engineering design, and marketing assistance program; or engagement by DKI Jakarta in a multi-year contract for procurement of 100 tons per day of good quality compost from the market. Development of plans and designs for a landfill at Kopilihur (Cirebon); and
- Preparation of an assistance program for waste-pickers (both at landfills and collectors in the cities) and development of a community-based solid waste management program for waste reduction through reuse, reduce and recycle ("3Rs").

3. Community and Private Sector Participation

- Preparation of an industrial waste/effluents minimization/disposal program;
- Revision of the design of the plans for the wastewater treatment plant in the Jakarta Industrial Estate Pulogadung (JIEP) to include wastewater from neighboring residential areas, preparation of a environmental impact assessment (AMDAL), detailed design, and preparation of management and financing plans;
- Preparation of a scheme to improve waste from small and medium-size tofu (tahu) processing industries in Jakarta.

<u>Requirements (triggers) to proceed with APL2</u>

a) Jabotabek Waste Management Corporation and Greater Bandung Waste Management

Corporation have been established and the operations funded partially by the revenues generated from the transactions;

b) Local Public Advisory Boards established for all landfills (TPAs) funded by the project through grants to the local governments;

c) The funding arrangement between the central government and local and provincial governments has been established for APL2 and APL3 activities, including the ratio of grant/counterpart matching fund levels;

d) The local governments' solid waste net revenues increased by 20% from tipping fees and private waste hauler license fees;

e) Waste management master plans for Jabotabek and Bandung regions have been updated, agreed and publicly vetted. AMDALs (consistent with World Bank environmental assessment requirements) and clear operating plans exist for all operating and proposed TPAs (landfills);

f) Annual "State of the Environment" (NKLD reports) reports by each local government and the provinces of Banten and West Java have been prepared by project; and

g) At least 60,000 tons of quality, certified compost produced and sold.

In order to proceed to APL2 at least 50% of participating local governments must have met the above conditions. Any local government not meeting the above "triggers" would not be eligible to proceed to APL2. Appraisal of APL2 will take place about 20 months into APL1.

APL2 – January 1, 2004 to December 31, 2007

Construction of new TPAs (landfills);
Conversion of vehicles to liquid petroleum gas;
Implementation of hospital waste management strategy (part 1);
Construction of industrial waste water treatment facilities;
Procurement of solid waste management equipment;
Assistance to small and medium-sized industries for pollution reduction;
Phase 2 development community environment facilities; and
Continued technical advisory support.

Requirements to proceed with APL3

a) Jabotabek Waste Management Corporation operating (operations funded by revenues);

b) Local governments' solid waste revenues increased by 60% from tipping fees and private waste hauler license fees;

c) Public Advisory Boards for all TPAs (funded by local governments) have continued their advisory functions from APL1. Public discussions of landfill operations at District Councils (DPRD);

d) The annual "State of the Environment" reports continue to be published and publicly discussed;

e) Any new communities wishing to join the program must meet all conditions of APL1 and APL2; and

f) At least 300,000 tons of quality, certified compost produced during APL2.

APL3 – January 1, 2007 to December 31, 2010

APL would be similar to APL2 with an additional focus on proper management of facilities built in APL 1 and APL2. APL3 would require greater cost recovery, private sector participation, and contribution by

local governments. Finally, APL3 would broaden the experiences gained under APL2 by opening the participation to a greater number of local governments, provided they meet the conditions of APL2.

C. Program and Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

APL1 is largely focused on making managerial improvements, ensuring adequate planning and community participation, and carrying out detailed engineering design of subsequent components, particularly for landfills (TPAs), wastewater treatment and septage treatment facilities (IPLTs). As APL1 "sets the stage" for APL2 and APL3, efforts were made to minimize the loan size of APL1 and maximize policy development. In addition to broad-based policy reforms, e.g., annual community-vetted environmental reporting, public advisory boards, regional waste disposal options, and compost support, some activities with tangible and immediate environmental benefits are also included in APL1.

The GEF component has three parts. The first is compost grants administered by the Environmental Management Agency (Bapedal). About US$1,250,000 would be provided as grants to the producers of additional compost from municipal solid waste in the project area. The second part, for about $300,000, would be used to provide independent reviews of compost quality, production levels, and to assist in marketing. The third part includes provision of US$1.1 million to support production of an additional 100 ton/day of high qulity compost. A total of $10 million has been approved by GEF, to be disbursed in approximately equal parts in APL1, 2, and 3.

Component	Sector	Indicative Costs (US$M)	% of Total	Bank financing (US$M)	% of Bank financing	GEF financing (US$M)	% of GEF financing
1. Overall Urban Environmental Management	Urban Environment	7.07	46.0	6.43	0.0	0.00	0.0
2. Solid Waste Management	Pollution Control / Waste Management	3.12	20.3	2.83	0.0	0.00	0.0
3. Community and Private Sector Participation	Other Environment	1.75	11.4	1.59	0.0	0.00	0.0
4. Composting Support-GEF	Urban Environment	3.42	22.3	0.00	0.0	3.11	100.0
Total Project Costs		15.36	100.0	10.85	0.0	3.11	100.0
Total Financing Required		15.36	100.0	10.85	0.0	3.11	100.0

2. Key policy and institutional reforms supported by the project:

The key policy and institutional reforms supported by the project are: (a) improved cost recovery and prioritization for solid waste services, with a special focus on privatization of commercial services (local public agencies to concentrate on residential solid waste collection, especially in poor areas, or contract these services to private companies); (b) establishment of the Jabotabek and Greater Bandung Waste Management Corporations; (c) strengthened compost marketing associations to increase composting and better integration with the agricultural community (with GEF assistance); (d) establishment of provincial and local environmental strategies; and (e) preparation of annual plans ("State of the Environment" reports) for participating communities that highlight last year's achievements and next year's goals.

3. Benefits and target population:

The project will generate the following benefits: (a) environmental benefits, through improved solid waste collection and disposal; wastewater treatment; reduced waste discharges form industries; (b) health benefits through reduced risk of exposure to illnesses caused by improper waste disposal; (c) institutional reforms, through increased efficiency in waste management and disposal, greater accountability at the local level as a result of more active community participation and involvement of the private sector. Increased production and agricultural application of compost will reduce the waste to be landfilled and increase soil productivity and crop yields and by reducing use of other fertilizers. It will also reduce GHG emissions.

About 15% of the program's 30 million urban population, or 4.5 million, are poor and are often the most affected by sub-standard municipal services. These are considered the key beneficiaries. In addition, specific targeted efforts will be provided for about 350,000 people through programs for waste-pickers and poor communities in coastal settlements.

4. Institutional and implementation arrangements:

Key implementation rests with the participating local governments. Central government support will be provided mainly for coordination and monitoring, plus assistance with legislative and policy changes, and some grant financing. Since the tasks under this project transcend any single ministry, the Ministries of Finance, Home Affairs, Environment, Industry, Settlement and Regional Development, and BAPPENAS (the National Planning Agency) established a Steering Committee to oversee project issues at the central government level during project preparation. After project effectiveness, the role of this Steering Committee will change to a review committee for implementation, with more project implementation responsibility delegated to local governments. The Review Committee, supported by the Central Program Support Unit (CPSU), which would represent DKI Jakarta, West Java Province, Bappedal (Environmental Impact Control Agency), and the Ministry of Settlement and Regional Development, would review each local government's annual environmental report. Banten Province is not represented in the CPSU at start-up because it was established an a province only during appraisal, and its cadre was not identified. As and when it has achieved the capacity to operate at normal strength, its representation will be reviewed. These reports would be compiled by the CPSU and made publicly available. The CPSU will provide assistance to the local governments and would implement the central government components. Each local government will implement the sub-projects in its jurisdiction. A management committee for each local government will be headed by the chief administrative officer (Sekwilda) and report to the city chief executive (walikota) or distict chief executive (bupati) and the DPRD. Responsibility for managing the project will be assigned to an existing committee responsible for similar activities. If none exist, one shall be established for this purpose.

The compost grants will be administered through a relatively simple program whereby compost producers are provided rebates upon proof of production (submission of receipts which are randomly audited). Bappedal (Ministry of the Environment) will oversee this activity. The project will support the establishment of a Compost Advisory Team with roots in an already established association of compost specialists. This team will randomly test compost quality and verify the independent audit reviews of compost use (e.g., field checks). They will also assist with market development and disseminate the results. The nascent compost (and vermi-compost) marketing association will be assisted, as will independent, local NGOs to provide community education and verification of composting activities. It is planned that an international bi-annual composting trade fair and conference will be held in Indonesia.

Monitoring and Evaluation Arrangements:

The CPSU will be responsible for overall project monitoring based on reports from each local government's project management units (PMU); contract status would be monitored monthly. These results will be summarized every six months and presented to the Review Committee. Every year, an "Environmental Update" will be prepared by the Review Committee. This document will be composed of the "State of the Environment" reports prepared by all participating local governments. The Environmental Update will be publicly discussed at an annual workshop, to which the media, community representatives, political leaders, and government staff will be invited. The discussions will include a summary of how local environments are improving or deteriorating.

Project impact data will largely be collected by local secondary schools (as part of the PMU assistance contracts). Collection of this data will be integrated with the Environmental Awareness and Environmental Education subcomponents. The project's Review Committee will also take an active role in disseminating lessons across participating governments. For centrally implemented components, the Directorate General of Urban Development within the Ministry of Settlement and Regional Infrastructure, will be responsible for monitoring project accounts (in addition to consolidating local government accounts). Bappedal will be responsible for reviewing and monitoring progress of technical studies and GEF funds allocation.

Within six months of the closing of the project, the CPSU would furnish an implementation completion report to the Bank, reviewing project achievements against objectives, including costs incurred and benefits derived, as well as the performance and contribution of all parties associated with project execution. Bank headquarters and resident office staff would jointly supervise project implementation twice a year. A mid-term is not foreseen as the project lasts only three years and triggers will ensure that only well performing units will be included in the second APL. As APL1 and APL2 are planned to overlap by one year, appraisal for APL2 is planned only 18 months into the implementation of APL1.

Financial Management System:

A Financial Management System (FMS), satisfying the Bank's requirements under OP/BP 10.02 and the LACI (Loan Administration Change Initiative) standards, will be established under the project. The project accounting system and procedures will follow the government's accounting system. The PMUs will be responsible for maintaining the accounting records (under the supervision of the CPSU), on a cash basis, and for keeping all the supporting documents for annual audits. Consolidated project accounts will be prepared by the CPSU for the annual audit, and the audit opinions shall be submitted to the Bank within six months after the end of each FY.

A manual documenting the FMS and procedures shall be adopted prior to loan effectiveness. The manual will include control, accounting and disbursement procedures, project management reporting (PMR), and auditing arrangements (detailed in Annex 6).

A Special Account in the amount of US$ 1.0 million, will be in the custody of DG Budget, MOF, and will be held in Bank Indonesia.

The Bank financial management specialist assessed the financial management system, including disbursement, audit arrangements and human resources capacity at the national, provincial and district levels and found that they met the Bank's requirements after implementation of the agreed action plan.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

This project began as a solid waste improvement program following the recommendations of the Jabotabek Environmental Management Strategy, carried out under the Third Jabotabek Urban Development Project (Ln. 3246-IND; closed FY00). The study was expanded to include other key urban areas of West Java (Bandung, Serang and Cirebon). All government parties were adamant that the project should include the more difficult provision of "environmental management". Community consultation during Phase 1 of project preparation reinforced the desire for a comprehensive response to urban environmental issues. The task team agreed to this broader scope, provided that the majority of implementation would be by local governments, that the DPRD, Mayor/District Chief(Walikota/Bupati), his/her staff, and the local community, would be both more empowered to respond to environmental issues, fairly monitored and held accountable for implementation results. It was agreed not to finance the number one environmental priority, i.e., removal of lead from fuel, as this cannot be done at the local level. (Legislative controls are being pursued to remove lead from fuel.)

Limiting the project to Jabotabek**.** This project's geographic scope was initially limited to Jabotabek. However, during preparation, the benefits of broadening the project's geographic scope emerged. *Firstly*, Jakarta's two neighboring provinces, West Java and the newly created Banten, have some of Indonesia's worst environmental problems. Given the close environmental links between Jabotabek and its neighbors, significant, measurable improvements can be made only by tackling all three jurisdictions simultaneously. *Secondly*, by including the two provinces, their overall willingness to implement tough policy reforms is raised. *Thirdly*, the inclusion of these additional areas brought support to examine nationwide policies such as including waste minimization measures and environmental awareness into school curriculums, and it enabled a more senior Steering Committee than would otherwise have been possible. *Fourthly*, by expanding the scope, the project can potentially demonstrate both the complexities and practical responses to making environmental improvements at the neighborhood level for the rest of the country.

Limiting the project to solid waste collection and disposal was deemed too narrow. The key issues in the solid waste sector are not so much related to investment requirements, but rather management and policy initiatives such as sharing disposal facilities, phasing out local government collection of waste from businesses, and increasing revenue collection and transparency. Local governments are more likely to undertake policy changes if they are incorporated into a larger strategy. Furthermore, improving solid waste management practices alone would not have a significant impact on the urban environment: waterways would still be polluted from sewage and air quality would still be poor from vehicle emissions.

Limiting implementation to one government agency. The project could be executed by a sole central government agency. This arrangement was deemed impractical because issues of urban environmental management and pollution reduction must be tackled at the local level for maximum benefit. As Indonesia is currently decentralizing, it was agreed that this project presented a golden opportunity to work with newly empowered local governments. The provincial governments of DKI Jakarta and West Java and their local agencies are among the most capable provincial governments in Indonesia. The provincial governments are capable of performing oversight functions of local governments within their jurisdictions. The Banten Province was established early in 2001 and has therefore no prior experince but the local governments under the new province do have the experience.

Other donor participation. Many agencies are active in this sector, with some 60 donor-funded waste

management pilot projects underway in the project area. The Japan Bank for International Cooperation (JBIC) is financing a large-scale transfer station in Jakarta; the Asian Development Bank (ADB) a study in Bandung; a Swiss aid small-scale, pilot and long term program in Cirebon; and the German Gesellschaft fur Technische Zusammenarbeit (GTZ) in recycling activities. Numerous activities cannot be coordinated under a single project. The management committees established in each local government will be responsible for coordinating all these activities, and it was decided that this project would include a strong component to strengthen the local governments.

Project as Specific Investment Loan (SIL). This project was originally designed as a SIL with a total project cost of approximately US$300 million and a five-year implementation period. However, the APL was deemed more appropriate for several reasons: (a) Bank support to making measurable and sustainable improvements in urban environment management will require a long-term partnership with government. The APL's format is well suited for this purpose; (b) the APL enables grate emphasis on development "software" requirements before "hardware" investments are made; (c) the APL enables the Bank and GOI to assess progress and make design changes before proceeding with subsequent phases; (d) decentralization is an important GOI objective, and the APL enables the Bank to engage the participating local governments in urban environmental issues in a flexible manner over time; and (e) the participating local governments and the Ministry of Finance prefered the smaller loan sizes and commitment fees in this era of budget constraints.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
-Improve provision of basic urban services, especially in low income communities; -Strengthened environmental protection	Third JABOTABEK Urban Development Project (JUDP3)	S	S
Municipal service provision	Various decentralized Urban Projects (e.g. BUIP, EJBUDP, SIJUDP, KUDP, Second Sulawesi UDP, Municipal Innovations LIL)	S	S
Institutional Strengthening	Bappedal Assistance	S	S
Teacher Training	West Java Basic Education	S	S
Other development agencies			
ADB	Bandung UDP Botabek UDP		
JBIC	Jakarta Transfer Station		
Swiss Government	Cirebon Urban Assistance		
USAID	Private Sector Activities		
GTZ	Small-scale Composting		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

Similar projects such as JUDP 3, provide important lessons: (a) working with DKI Jakarta is considered difficult by the neighboring, less affluent and less powerful municipalities; (b) the Jabotabek Environmental Strategy (funded under JUDP 3) is technically very good, but its implementation strategy had the least amount of stakeholder involvement and follow-through compared to the other five Metropolitan Environmental Improvement Projects (MEIP) cities (Kuala Lumpur, Manila, Bombay, Katmandu, Beijing - based on an internal Bank review). A clear lesson is that stakeholder involvement, local institutional ownership and meaningful and sustained dialogue is critical for the long-term success of environmental projects in Indonesia.

These findings were corroborated by OED's impact evaluation report entitled, "Enhancing the Quality of Life in Urban Indonesia: The Legacy of Kampung (Village) Improvement Program", (Report 14747-IND) which found that targeted urban sector development can have a very positive impact on low income areas and that the majority of residents experienced environmental improvement through neighborhood programs. This came about largely when local governments acted as facilitator, and a respectful partnership was established between the local government and civil society. Project assistance to Bappedal also highlights the need for the involvement of other stakeholders to enhance agency accountability and to help sustain minimum operating fund requirements (moving away from a "project-to-project" operating style).

Integrated Urban Infrastructure Development Projects (IUIDP) have had considerable success in improving municipal service delivery; however they are not appropriate for technically complex investments and those that span several administrative jurisdictions, or require a greater than five-year planning horizon. Furthermore, the development effectiveness of the investments is critically dependent on the existence of appropriate sub-sector policies. The ongoing Bali Urban Infrastructure Project (Ln. 4155-IND) is providing useful input on the establishment of regional waste management corporations, and the process of government consultation has been incorporated.

A clear lesson has emerged from the ongoing Second Sulawesi Urban Development Project (Ln. 4105-IND). The objective of infrastructure development is being met, but the objective of improved "urban management" remains difficult to deliver through an investment project. This is mostly due to two broad issues: (a) DG Urban Development (and its predecessor DG Cipta Karya) and the local government's prime focus is often on awarding contracts; and (b) longer term and broader institutional changes need better municipal management, e.g., adequate pay based on measurable output, connecting community wants and ability to pay, working partnerships that transcend single departments or local governments. Although management improvements are more difficult to achieve and measure than infrastructure development, improvements are possible and are already accruing to local governments that show leadership. *These skills and attitudes are transferable.*

Six small scale composting facilities were previously established in Indonesia through World Bank grants. They verified that composting is a practical waste management option and highlighted the need for larger scale marketing programs, and inclusion of avoided waste disposal collection and disposal costs to ensure sustainability. Similarly, the Bank hosted an international workshop in 1998 to explore ways in which urban waste could be integrated with agricultural needs (also see the Report by Michael Sanio, Reuse of Urban Waste for Agriculture: An Investment Program for Progressive Action, May 1998, Wasting Waste Conference).

4. Indications of borrower and recipient commitment and ownership:

GOI has consistently emphasized environmental improvement as a development objective in previous Repelitas (five-year plans) and investment projects. Indonesia is a recognized leader in developing innovative environmental management programs, e.g., the Clean Rivers Program (PROKASIH), the Presidential Clean City Award (Adipura), the multi-agency anti-air pollution program known as "Blue Sky", and the industrial environmental pollution rating. The launch of WJEMP by central and local governments indicates that implementation and day-to-day management will be given a greater focus in the next decade.

GOI's increased concern about the deteriorating air quality and the impact of lead in vehicle emissions led to the launching of a plan to phase out lead in fuels by 1999; however, the financial crises has delayed this plan.

An important indication of commitment is the relatively lengthy preparation process that this project underwent. Public workshops were held, advertisements placed in newspapers, and a thorough two-stage stakeholder consultation process undertaken. However, once a firm commitment was given (i.e., political conditions improved) progress improved. Recent meetings, both with the public and local government staff and leaders (including local councils) have been productive and refined the project to mesh with recent developments. Project preparation has been seriously impacted by (a) the regional economic crisis, (b) transfer of overall responsibility for the program from BAPPENAS to DGUD, (c) three major reorganizations of DGUD in one and a half years, the latest in January 2001, and (d) staffing uncertainties in participating agencies. However throughout this period there was a consistent determination to continue with the project and provide tangible improvements to urban environments as soon as possible.

All levels of the government, and increasingly importantly, local communities, support composting. Environmental groups consistently encourage the government to adequately incorporate composting into the waste management system.

5. Value added of Bank and Global support in this project:

The Bank is well positioned to assist GOI in meeting the objectives of the proposed project. The broad scope, and multi-jurisdictional nature of this project require a concerted and long term effort - with investment finance, assistance in practical management methods, and complementary research activities. Under the Bank-supported Bandung City Development Strategy (CDS) the city identified overall environmental quality improvement as a priority and the project will benefit from the collaborative involvements by the community, and various bilateral and multi-lateral agencies (e.g., World Bank, ADB, JBIC, USAID and GTZ) under the city's coordination.

The Bank has considerable experience in urban environmental management in Indonesia, as well as international experience; both of which will be required to maximize the impact of this project. The Bank is also active at all three levels of government, all of which should be involved in the project. The Bank's widespread presence in Indonesian urban areas will allow relatively rapid replication of successful components.

The Bank is also able to provide an integrated approach to municipal management activities. For example the project has two main subcomponents (environmental education and compost marketing) incorporated within other existing Bank- financed projects such as the West Java Education Project and the West Java Rural Development Project (training of farmers in appropriate use of fertilizers and compost).

The Bank will assist GOI in establishing international linkages between secondary schools for the design and monitoring of the project's performance indicators to ensure that they are relevant.

Assistance from the GEF will help Indonesia establish itself an internationally reknown "center of excellence" for composting application and research, in addition to large scale exploration on how best to make composting an integral component of an overall municipal waste management strategy. The GEF funds will make it possible to further reduce GHG emissions as well as to provide an incentive to establish a better overall waste management system. GEF support is essential to (a) overcome the barriers to the world's first large-scale GEF supported composting program - particularly its start-up costs and perceived risks, and (b) support independent scientific monitoring, evaluation, and dissemination to demonstrate the system's global and local benefits and cost-effectiveness and thus promote its replication. Contact has been established with a successful compost marketing operation in India, and the project will explore this operation during the first year. Each local government will keep account of their earned carbon credits for the amount of compost produced. The Bank will during project implementation assist GOI to find markets for these credits..

The Bank will endeavor to bring international experience into the project. One such example being the replication of a successful waste-picker assistance program in Brazil. A simple concept in Brazil, where poor families are paid scholarships (*Bolsa Escola*) to keep children in school, should be readily transferable to Indonesia. The transfer of this knowledge will be both ways and Indonesia should be able to export some of its composting acumen. The project will also facilitate the establishment of an international panel of compost/waste management experts to provide assistance to Indonesia and help transfer technically sound information.

E. Summary Project Analysis (Detailed assessments are in the project file, see Annex 8)

1. Economic (see Annex 4):

● Cost benefit NPV=US$ million; ERR = 20 % (see Annex 4)
○ Cost effectiveness
○ Incremental Cost
○ Other (specify)

Annex 4 provides a general economic analysis for the three-phase nine-year program. APL1 establishes policies through studies, prepares feasibility studies and detailed designs for infrastructure to be implemented in APL2 and increases devolution for the provision of municipal environmental services to local governments. The studies and reviews are intended to provide environmental management strategies to serve as a basis for future development to improve the efficiency of overall service delivery and therefore have significant economic rates of return. Well designed policies and improved management capacities should be able to increase service delivery efficiencies by at least 30%. Improvements start already in APL1 where key studies will be awarded to consultants selected through quality and cost-based assessments of competitive proposals unlike past practices where consultants were generally engaged through nontransparent processes with poorly defined deliverables and on time-based contracts.

As many as 4.5 million people (the urban poor) could benefit from the proposed nine-year program through improvements to local environments. Although a single project cannot hope to alleviate all of western Java's urban pollution, the proposed program will provide tangible benefits through: (a) improved solid waste collection and disposal; (b) improved public health; (c) increased economic growth including employment generation both within participating industries and local neighborhoods; (d) improved municipal management; and (e) enhanced environmental awareness.

Improved solid waste management will reduce localized flooding, water and vector-borne ailments, and respiratory problems associated with particulate air pollution. Enhanced private sector involvement in solid waste management will increase overall efficiency and enable local governments to concentrate on residential collection, especially in poorer neighborhoods. Programs to assist waste-pickers and collectors will improve their health, economic opportunities and overall quality of life. Local and national economies will be strengthened through assistance to participating small and medium-sized industries.

Wherever possible, costs and benefits will be quantified in monetary terms. Economic analyses with cost-benefit reviews (on a with and without basis) will be conducted for all solid waste and environmental management components in excess of US$100,000. The benefits associated with environmental improvements are difficult to quantify due to factors such as improved quality of life and reduced mortality. It may be necessary to carry out a least-cost analysis for some of these components.

The GEF incremental cost analysis shows a baseline case cost for treatment of 700,000 tons of waste at $25/tonne (total cost $17.5 million - see Annex 4). The GEF alternative, i.e., composting, is estimated at $27.5 million. GEF funds have been approved to offset the incremental cost of $10 million. The average unit GHG abatement cost is $1.75/tonne of carbon equivalent. This is far below the $10/ton upper GEF limit and highlights the potential replicability of this option as both a cost effective municipal waste management option and global GHG emission reduction program.

2. Financial (see Annex 4 and Annex 5):

NPV=US$ million; FRR = % (see Annex 4)

APL1 1 comprises policy, strategy development, institutional strengthening, preparation of detailed designs for the physical implementation during the APL2. Hence, a financial analysis is not applicable for APL1. However, a financial analysis was carried out for the program based upon data obtained from recently completed urban environmental projects.

The exact ratio of loan versus grant from central to local government for the remaining period of the program is still uncertain; however, this will be resolved during APL1, where the financing issue has already been decided. Funds for environmental education, innovations in solid waste management, and project management will be provided through grants from the central government. Community environmental facilities would receive grants and loans on terms to be determined during the second year of the project.

Cost Recovery: Inadequate levels of operation and maintenance funds for solid waste operations are the most debilitating problems in the sector, and policy initiatives being promoted by this project will further increase O&M requirements. However, current levels of solid waste collection and disposal practices are in the local governments' views unacceptable. Through introduction of the Jabotabek and Bandung Waste Management Corporations, more efficient waste disposal is anticipated. The increased costs for this will be largely borne by tipping fees, which will mainly come from commercial establishments. Detailed operational and cost recovery policies will be finalized in APL1 for application in APL2 and 3. Cost recovery analyses will be completed for all components over US$ 100,000 except environmental education.

Fiscal Impact:

There is financial uncertainty within Indonesian local governments as new decentralization laws have been passed, but their impact and execution remain unclear. APL1 has no borrowing requirements for local governments and will provide local governments time to see how the new fiscal decentralization

unfolds. The environmental awareness campaign will inform the public about the importance of good environmental management and waste disposal practices, and why tariff increases are necessary for urban service delivery.

Flow of Funds: The normal funding channels for local government finance will be followed. No additional channels or agency changes will be involved. The Bank will support simplification of the procedures and will not participate in the clearing of disbursements of funds to and at the local government levels.

The recent change in the government fiscal year impacts on the timing of availability of budgets in the involved government agencies. This has been reflected, in the implementation and financing plans.

3. Technical:

During project preparation all the proposed sub-projects were reviewed. All except the consultancy to assess the compost market and identify a compost grant "window", are well tried technical studies for which experiences are well documented. Most local government units have prior experience with these types of consultancies. With the increased local ownership and local government responsibility, and with close support from the CPSU, no particular problems with the implementation of the consultancies is anticipated. The compost market assessment consultancy will require particular attention and supervision by both CPSU and the Bank.

4. Institutional:

4.1 Executing agencies:

The project is being implemented during the transition from the former centralized administration to the new decentralized administration where local governments will be taking over the technical and financial resposnibilities for the development of their area of jurisdiction. The Government agreed that implementation should be done under "the old system" which would give the Ministry of Settlement and Regional Infrastructure the role of executing agency.

4.2 Project management:

In recognition of the transitional nature, the Ministry established the CPSU as a support unit rather than as an executing organization and the former steering committee as a review committee. The Bank has reviewed the implementing institutions' skills and capacities and has made specific recommendations regarding the training to be provided prior to loan effectiveness. With that training and regular updating of skills and repetition of courses for new staff, these implementing units, with the support of the CPSU, will have the capabilities to implement the project successfully.

4.3 Procurement issues:

The procurement capacity assessment concluded that with the training recommended in the assessment report, the implementing units would be able to handle the procurements under project. The asessment report is on the project's file.

4.4 Financial management issues:

An assessment of the detailed financial management system prepared by D.G. Urban Development was found to be satisfactory to the Bank. The assessment report is on the project files.

5. Environmental: Environmental Category: B (Partial Assessment)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

As part of program preparation over 500 interviews were carried out with a wide range of stakeholders, i.e. all levels of government, NGOs, community groups, the private sector, universities, and development institutions. Public workshops were held and advertisements, explaining the environmental objectives, were placed in local newspapers. A two staged preparation process was used. First, existing information was reviewed and key urban environment needs, specific to each community, were identified. Only after stage 1 was agreed-to by the program Steering Committee did more detailed preparation activities take place. Unique preliminary environmental management strategies for each participating community were prepared, as was an overall policy matrix for improved environmental management.

Both project preparation reviews and previous Country experience confirms that with respect to the urban environment services being targeted by the program, e.g. solid waste management and air and water pollution, the most important requirement is improved management of service delivery. Therefore a three phased adaptable program loan was proposed where APL1 would focus on required policy development and management improvements. These improvements would be a pre-requisite (trigger) *prior* to the construction of any facilities in APL2. Therefore a broader "Programmatic Environmental Review" (PER) was prepared during project preparation, rather than a specific Environmental Assessment for sub-projects.

The PER identified potential environmental impacts in APL2 and APL3 from landfills, hospital waste facilities, compost operations, waste water treatment facilities.

Environmental assessments, consistent with both the Government of Indonesia's and World Bank's requirements, are necessary to ensure that the landfills are safe and that they have adequate operational guidelines. Along with preparing the required EAs, APL1 will assist local governments to prepare credible landfill operating plans, and more importantly provide mechanisms to ensure that they are followed and that the community will help to monitor their progress.

Potential environmental impacts from compost facilities and the quality of compost need to be carefully monitored. The project also proposes to address medical waste management and disposal (to be further refined in APL1 with establishment of the necessary implementation framework and policies). Current practices are woefully inadequate, and Bank supported follow-up activities have to meet all environmental safeguards. A thorough EA and EMP will be completed for any medical waste facility or wastewater treatment plant to be constructed in APL2 or APL3.

5.2 What are the main features of the EMP and are they adequate?

Each facility to be financed by the program (in APL2 and 3) that is identified by the screening process to have potential environmental impacts will require a customized EMP which complies with technical management standards for the type of facility. The EMPs will include community consultations (with advisory boards), establishment of adequate operating budgets and staff capacity, and defined processes for affected stakeholders to raise concerns. Each facility will also require a monitoring and management program, consistent with an Environmental Impact Assessment (AMDAL and RKL/RPL), of relevant environmental indicators, e.g., number of fires, leachate generation, odors for landfills.

The activities being undertaken through this project are typical of local government responsibilities. Project preparation and implementation minimizes "artificiality" and strives to make both the Environmental Assessment and Environmental Management Planning processes a regular feature in all participating local governments. The environmental safeguard activities undertaken should be the same for Bank-financed and non-financed works and services. The extensive community consultation is designed to encourage this.

5.3 For Category A and B projects, timeline and status of EA:

Date of receipt of final draft: April 28, 2000

A Programmatic Environmental Review and model EMP was prepared as part of APL1 preparation. *Each* facility in APL2 and APL3 with potential environmental impacts will require a specific Environmental Assessment with EMP acceptable to both the Government of Indonesia (AMDAL with RPL/RKL) and the World Bank. They will be publicly discussed (through local Councils) in participating communities and will be finalized 16 months prior to APL2 for those activities to be financed in APL2 and 16 months prior to APL3 for activities in APL3.

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

In preparation of the program many stakeholders were consulted, however no specific facilities requiring an EA or EMP were included in APL1. APL1 will provide the time, financing, and political commitment necessary to prepare good EAs and EMPs. The aspect of public consultation needed for these activities is a key component of APL1. Each participating local government will establish an "urban forum" (if one does not yet exist) as well as mechanisms for this group (or a sub-group) to report directly to local councils and political leaders. An annual environmental report (with public a consultation program, e.g. workshops, media advertising, school program) will be produced by each participating community. This is a requirement to move forward to APL2.

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

The program's (three projects) overall goal is to reduce the rate of environmental degradation in participating urban areas. Each project will be evaluated on its contribution to environmental improvement. There are however components within APL2 and APL3 that have the potential to negatively impact the environment (even though they are part of a broader program to provide overall environmental improvement) and they will each require a customized EMP and monitoring program. APL1 will identify these facilities and prepare acceptable EMPs and monitoring regimes *prior* to construction. They will also need to be placed within a publicly agreed-to policy framework and properly financed (particularly operating costs). The screening process for these facilities is outlined in the Programmatic Environmental Review.

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

Women and children bear the brunt of poor urban environments. The key areas for improved solid waste collection will be slums (these areas are traditionally not well served by municipal crews because waste collection from businesses is more lucrative). It is designed that communities organize themselves, and waste is collected from depots/TPs by the local government. Environmental education activities will be targeted at school children and will include relvant activies away from the school. A recent World Bank survey of the poor found that women placed environmental degradation as their second highest priority, while men placed it eighth. This difference would be incorporated into project implementation, e.g. targeted environmental awareness campaigns.

The community must play a pivotal role in the Community Environment Facility. This is still a concern as local governments often prefer to work through known intermediaries. Working with the waste picking community requires sensitivity and sustained contact. Project officers may at times find themselves

mediating between waste-pickers and local government waste management staff. Key to this component will be its ability to enhance mutual respect.

Good solid waste management requires good community relations. Through recent decentralization laws and political turmoil, Indonesia's local governments are undergoing a transformation and both they and the community need to work together. For example JUDP3 tried for 18 months to get DKI Jakarta to accept assistance from the local Rotary Club. Building this trust takes time.

Compost activities have been promoted by community groups and environmental NGOs. These individuals need to be kept involved in the composting activities to both help with community education activities and market development, and provide input to compost producers on any potential concerns neighboring residents or compost users may have.

6.2 Participatory Approach: How are key stakeholders participating in the project?

This project will be participatory throughout all stages of preparation and implementation. Many groups were contacted for their input into project design. Further and sustained discussions are needed in the area of waste pickers and programs and mechanisms within the Community Environment Facility. Public workshops were held in all participating communities and these will continue to be an integral part of project implementation. Another key area will be the work with individual schools - as they will be set up to monitor key project performance indicators.

The agricultural community is a key stakeholder for the widespread use of compost, as is the private sector (potential compost producers and users), community-based organizations and environmental NGOs who have been, and need to continue to be, involved in the production and marketing of compost.

Increased overall participation is structured within the newly evolving local government role. For example, much of the participation will be through the recently empowered DPRDs. The project not only intends to identify and strengthen the mechanics of greater community participation at the local governance level -- not just for environmentally related activities.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

Independent community groups will review each city's annual State of the Environment report and provide input. In order to reduce public concerns over landfills, and to increase the emphasis on management, a local "community advisory board" will be established at each landfill. This group will be empowered to provide input on landfill operating practices directly to the local councils.

The Community Environmental Facility (CEF) has special facilities which will be available to groups of households and NGOs. The detailed institutional arrangement for administering the Fund will be prepared during APL1.

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

The project is structured to fit within and strengthen local government policies and capacities. The onus of implementation for the majority of the project rests with the Mayor/District Chief (Walikota/Bupati) and his or her elected Council. Independent verification is available both through the technical strengths of the Provinces of DKI Jakarta, West Java and Banten and Central Government agencies.

A key Bank priority is improving governance in Indonesia; this project is designed to improve service delivery capabilities of participating local governments. Environmental services are usually the first priority of a well-functioning local government, and generally these services are easier for local residents to understand and see improvements when they occur. The improvements being sought from local governments are consistent with other sectors, e.g. improving contracting practices, community consultation, and service planning.

A pre-requisite for a well-functioning local government is merging institutional arrangements with social development and building mutual trust. "Social development" which needs to occur in parallel with strengthening of local government, would occur in three phases: community awareness, community participation, and community monitoring.

Community awareness will include training programs for government staff and key community representatives (e.g., the local media), a regional Environmental Awareness Campaign, and a school-based program. Annual State of the Environment reports (NKLD) would be prepared and made available to the public - the reports would contain information on contract awards, attainment of performance targets, and general baseline environmental conditions.

Community participation will occur through such activities as landfill site selection and monitoring committees, draft strategies will be commented on by community representatives, e.g., urban forums to be established. The CEF, which starts in APL1, is designed to be managed by and for the community (in APL2 and 3). Community monitoring will be carried out via the annual reporting process, landfill advisory committees (neighboring residents will be asked to monitor adherence to agreed-to operating plans), periodic reporting in the media, and international peer reviews of composting activities. A key monitoring task will be review of procurement activities.

The community will be integrated into ongoing local government functions through workshops, public reports, and public council meetings. The public's institutional role is to increase government accountability and provide assistance to local governments in service provision. The Programmatic Environmental Review (PER) lays out possible mechanisms for public involvement in the provision of local environmental services, however these are neither exhaustive nor prescriptive. Much community consultation already occurs in Indonesia. The project enhances local government's openness for community consultation as well as better defined institutionalized mechanisms for participation.

6.5 How will the project monitor performance in terms of social development outcomes?

Each year a publicly vetted environmental review (NKLD) will be prepared by each participating local government. These will be accompanied by public meetings and media presentations. The social development outcomes will be stated annually and their level of attainment reported. As is already practiced, reports will be compiled and reviewed annually by the Provinces of DKI Jakarta, West Java and Banten and the central government agencies. Independent NGOs and Bank supervision missions will verify reported progress.

7. Safeguard Policies:

7.1 Do any of the following safeguard policies apply to the project?

Policy	Applicability
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	○ Yes ● No
Natural habitats (OP 4.04, BP 4.04, GP 4.04)	○ Yes ● No
Forestry (OP 4.36, GP 4.36)	○ Yes ● No
Pest Management (OP 4.09)	○ Yes ● No
Cultural Property (OPN 11.03)	○ Yes ● No
Indigenous Peoples (OD 4.20)	○ Yes ● No
Involuntary Resettlement (OD 4.30)	○ Yes ● No
Safety of Dams (OP 4.37, BP 4.37)	○ Yes ● No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	○ Yes ● No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)	○ Yes ● No

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.

Within APL1 there are no activities that require an Environmental Assessment. However since the program (i.e. in APL2 and APL3) includes activities that would require EAs a Programmatic Environmental Review (PER) was undertaken as part of APL1 preparation, see Section E5.

There is no involuntary resettlement nor land acquisition in APL1. Land acquisition which may be required in APL2 and APL3 will be prepared during APL1 consistent with Bank requirements.

F. Sustainability and Risks

1. Sustainability:

Sustainability of solid waste management improvements will depend on the ability to increase the funds available for operations and that will be done through greater cost recovery for waste collection, particularly through licensing arrangements with the private sector for collection of business waste, improved collection of tariffs and tipping fees, successful development and operation of the Jabotabek and Bandung Waste Disposal Corporations, and greater transparency of service delivery and associated charges.

Sustainability in management improvement depends largely on the leadership and professionalism shown by local government representatives, as well as commensurate improvements to working environments, e.g. salaries. Another important management area is improved relations between the three levels of government, i.e. central, provincial, and local. During project implementation, especially APL1, all levels of government will be refining their roles, resource allocations, and staff salaries and accountabilities. Sustainability needs to be predicated on a transparent and reliable government structure. Sustainability is also conditional on local governments assuming, and being empowered to assume, responsibility for such activities as waste disposal.

There are no significant technical issues, though care is needed to ensure adequate training and operating budgets and thorough review of medical waste and composting proposals.

Another important role of the GEF funds is to encourage composting on a scale in Indonesia that enables the country to claim to be a world leader in composting.

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective Sector CAS Goals ---------- (from Goal to Bank Mission.) Political support; financing plans can be agreed.	H	Maintain the high level of local government ownership. Relate the success or otherwise to the performance on the CAS Base Case performance by GOI.
Willingness by community to spend time and money on waste management.	M	Maintain the high level of local government ownership.
Willingness by agencies to "commercialize."	M	Increase program's local profile.
Program Purpose ---------- (a) TA or incentives effective (b) Financial support available (c) A single project can have impact	M	(a) Bank supervision to be pro-active and "profesionally heavy" in the first year. (b) Proactive budget planning. (c) Success breeds success. Supervise rigorously from day one to achieve success.
Local governments effectively prepare & maintain reports.	M	Supervision to focus on reporting during first 12 months.
GEF Operational Program ---------- Compost output and cost; monitoring program effective.	M	Several groups responsible for monitoring from different perspectives: technical advisory group, financial intermediary and CPSU.
Project Development Objectives ----------		

Possible to overcome current incentives where pricing is difficult issue in a sector with negative externalities. Increasing public support possible. Support from private sector parties affected. Local govts. able to institute revenue collection and increase charges. Web-site can be maintained and expanded	S M	The GEF grants overcome the initial difficulties. Gradual phasing out of the grant over 9 years would enable the market to stabilize. Awareness campaigns through several media, schools and further accentuation of environment issues in teacher's training. Awareness campaigns and the fiscal realities during the project period will focus local governments on cost and sustainability. (Risk: drop the environmental agenda entirely, by local governments. The involvement of schools in monitoring.
From Components to Outputs Global Environment Objective: Compost production and use can be accurately recorded and monitored at many small production sites. Project components/sub-components Overall Urban Mgmt. Environmental Awareness: Disparate activities within participating communities can be woven into an effective response to urban pollution. Local governments assume key responsibility for urban pollution reduction efforts. Composting Program: Composting can compete with other waste management alternatives and external environmental benefits can be included in overall sustainability review (e.g. against fertilizer subsidies). Program Mgmt. Capacity: Staff capabilities and pride can be improved through targeted training. Quality assistance can be provided and measured.	M M S M	Small producers are keen and will cooperate, especially with the possibility of GEF grants. The financial intermediary has a vested interest in maturing the market for compost. Program and project management being devolved to local governments. Complimentary community environmental awareness programs planned for all stages and locations. GEF assistance will provide incentive to overcome inertia in launching larger scale efforts. Changing approach from waste disposal to production of agrochemical. Thorough review of technical merits of composting completed. Governments given clearly defined responsibilites and performance measurements. Project Support Unit to be staffed by competent and committed staff.

(a) Individual programs maintain Pemda and community ownership. (b) Environment management reports prepared, sustained and adopted elsewhere. (c) Government wants to borrow for in-school education programs. (d) Support for environmental reporting maintained, sufficient community consultation, and quality documents prepared (through a credible process).	M	(a) Continue the close dialogue. (b) Part of the MOUs. Close supervison by CPSU. Participation of educational institutions. (c) Cooperation from children on to parents.
Community & Private Sector Participation, Industrial Waste Water Reduction: Local governments able to work with industry; sufficient commitment to finance and legislate pollution reductions.	M	Pilot activities in APL1 chosen in areas with high support and are relatively modest. Larger scale activities in APL2 and APL3 would not proceed without documented financing and management agreements.
(a) Pilot activities can be well targeted and yield important results. (b) GEF activities can be designed to both benefit local environments and mesh with other similar poverty relief activities. (c) Industries capable to implement, and interested in, pollution reduction programs (with improved profitability). (d) Attainment of consensus possible; industries and government willing to finance these activities. (e) A credible cost -sharing and management program can be developed.	M	Public education campaign to be run by professional and experienced firm. Teacher training to be integrated with the W. Java Basic Education Project. Full appraisal of GEF and environmental mgmt. and education activities prior to inclusion in APL2. Existing "Urban Forums" and newly empowered DPRDs used to promote input and dissemination of annual "State of the Environment" reports. Responsibility for all activities within a local government rests with Walikota/Bupati and Sekwilda. Annual plans to be produced by each city. All local governments to publicly discusss and agree to participation in the project through DPRD resolution. Program would only proceed if cost sharing arrangements, technical issues, and finance aspects resolved in APL1. Involvement of industry associations, independent banking reviews, pollution targets set for each participant.

Solid Waste Management, Municipal capacity for solid waste management: (a) sufficient political commitment and professional capacity to maintain the Corporation (b) sufficient cooperation between local governments, community groups, and DPRDs (c) agreement by stakeholders to finance recommendations--technically appropriate (d) sufficient attention paid to management and finance aspects of landfills (e) sufficient desire to help this group--and that they wanted to be helped.	H	(a and b) Agreement from governments is part of loan effectiveness and support for the policy has been obtained from central and provincial agencies. Private waste haulers are expected to pay licensing fees. (c) Program would not go ahead if this agreement is not in place--requires full appraisal. (d) Prior to any construction, each new, and expanded landfill will require an agreed operating plan (with budget allocations and names of responsible staf). Local communities will be involved in siting and monitoring operations. (e) APL1 activities are relatively modest (pilot activities) and project focus is with local government agencies (a group that has traditionally not been involved in waste pickers assistance programs). GEF assistance as well.
(f) adequate operating budget and competency of key staff; (g) sufficient cooperation between local governments, community groups, and DPRDs; (h) agreement by stakeholders to finance recommendations--technically appropriate; (i) adequate budgets and staff allocated to landfill management; (j) there is sufficient desire and capacity by local governments and communities to enter into large scale composting programs; (k) conditions developed and sustained to enable qualified staff to act more professionally and efficiently.	S	Adequate budgets and on-the-ground results a condition to move from APL1 to APL2 and APL3. Corporation given more autonomy for staff recruitment and salary provision. Partnering Corporation with a similar agency in Australia (or elsewhere). Corporation held accountable for performance. Programs would only go ahead if financing and management agreements in place. Bank organizes procurement training for all levels of government and support from international consultants for procurement processing.
Overall Risk Rating	S	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

3. Possible Controversial Aspects:

Indonesia's recently empowered civil society took an active part in project preparation and will continue to

do so in implementation. Of the 10 NGOs invited to a preparation meeting in April 2000, eight boycotted the meeting, concerned with Indonesia taking on any new external debt.

Landfills, to be constructed in APL2, are a controversial issue. Jakarta ia already experiencing public opposition to existing landfills. Similarly, medical waste disposal facilities, which may be financed in APL2, could be contentious. Activities with waste-pickers should not generate controversy though this has traditionally been a sensitive issue in Indonesia.

G. Main Loan and GrantConditions

1. Effectiveness Condition

1. Each DPRD and province has passed council resolutions (perdas) supporting their participation in the project and agreeing to public consultation and reporting mechanisms. Those which have not, are excluded from APL1.
2. Execution of the GEF grant.
3. GOI has established (a) a CPSU (central government), including representatives from the Provinces of DKI Jakarta, West Java, Bappedal, and D.G. Urban and Rural Development; and (b) Project Management Units for local governments with Year 1 activities, with competent, full-time staff.
4. Project Management Manual covering financial management and procurement procedures, acceptable to the Bank distributed to all participating units.

2. Other [classify according to covenant types used in the Legal Agreements.]

Not Later than October 31, 2001:

1. GOI has authorized an independent agency to evaluate all the "State of the Environment" Reports.
2. Local "Environmental Forums" have been established.
3. GOI has funded and convened an independent advisory committee to monitor compost production and advise on initial GEF grant per ton produced.
4. The Annual "State of the Environment" Report for Year 2000, which are produced by all the local governments during the first quarter of the calendar year, has in participating local governments been discussed, socialized with the general public (all concerned citizens and interested groups) and is easily available for public review.
5. Designated officers from participating local government units with Year 1 activities have participated in project launch workshop(s) which address the sub-project objectives and implementation procedures under the project.

3. Board Condition

1. The bridging consultant is in place andcontracted until the CPSU consultant is deployed.
2. Members of the Central Project Review Committee have been selected.
2. The Bank has received the Government's signed development program letter.

H. Readiness for Implementation

☐ 1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.

☒ 1. b) Not applicable.

☒ 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
☒ 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
☒ 4. The following items are lacking and are discussed under loan conditions (Section G):

1. MOUs from three participating local governments.
2. Executed GEF grant agreement (cannot happen until after the Bank loan has been approved).
3. Project performance indicators, and a mechanism to monitor and report them agreed with the Bank.
4. Official confirmation of the establishment of (a) the CPSU (central government) including representatives from the Provinces of DKI Jakarta, West Java, Bappedal, and D.G. Urban and Rural Development; and (b) Project Management Units (local governments), all with named, competent staff to work full time on the project, if the work requires.
5. Local councils to have passed resolutions supporting their participation in the project and agreeing to public consultation and reporting mechanisms.
6. Confirmation that the bridging consultant in place and members of the Central Project Review Committee have been selected.

I. Compliance with Bank Policies

☒ 1. This project complies with all applicable Bank policies.
☐ 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

Finn Nielsen	Keshav Varma	Mark Baird
Team Leader	**Sector Manager**	**Country Manager**

Annex 1: Project Design Summary

INDONESIA: WESTERN JAVA Environmental Management Project

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Sector-related CAS Goal:	**Sector Indicators:**	**Sector/ country reports:**	**(from Goal to Bank Mission)**
Prevent Environmental Degradation	Solid waste, health, air pollution data; details below	Program Support Unit (PSU) National statistics, schools collected data	Political support; financing plans can be agreed
Well functioning infrastructure services providing adequate services in response to the demands from all strata of the urban community	Service delivery standards	Annual "State of the Environment Report" by each participating locality	Willingness by community to spend time and money on this;
Efficient partnership for public - private - government provision of infrastructure services	Degree of private sector involvement and public consultation	Number of service contracts	Willingness by agencies to "commercialize"
Program Purpose:	**End-of-Program Indicators:**	**Program reports:**	**(from Purpose to Goal)**
Arrest environmental degradation trend in targeted West Java and Jakarta urban areas	Trend analysis with baseline of: solid waste, health, air pollution, Greenhouse gas emissions (i.e. compost production).	PSU Independent monitoring World Bank supervision Interministerial /local agency taskforces	TA or incentives effective Financial support available A single project can have impact.
Increase service delivery capacity	Residential customer satisfaction with waste collection increased from 50% to at least 75%.	Annual State of the Environment Reports	Local governments effectively prepare & maintain reports
GEF Operational Program:			
Demonstrated GHG reduction through sustainable composting operations	Cost-effectiveness of GHG mitigation (not to exceed GEF maximum of US$ 20/tonne)	Independent verification of quantities and cost of waste composted and diverted from landfills. Cost comparison between composting and landfilling.	Compost output and cost; monitoring program effective.

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Project Development Objective:	**Outcome / Impact Indicators:**	**Project reports:**	**(from Objective to Purpose)**
Establish the institutional framework for implementation of APL2 and APL3 Local governments have reached the trigger points for inclusion in the appraisal of APL2	Policies developed (Jabotabek and Bandung Waste Management Master Plans, hospital waste program, Compost Grant allocation program finalized) Jabotabek Waste Management Corporation established Environmental Awareness program established in at least 80% of participating communities. Community advisory groups established Successful appraisal of APL2	Feasibility studies Detailed designs and operating/management plans Industry workshops Annual local environmental reports New regulations Annual budget Master plan/reports, Council response.	Possible to overcome current incentives where pricing is a difficult issue in a sector with negative externalities. Increasing public support possible. Support from private sector parties affected. Local govts. able to institute revenue collection and increases in charges.
	A minimum of at least one school in each participating community regularly collecting baseline data.	Data regularly inputed into web-site	Web-site can be maintained and expanded
Global Environment Objective:			
Triggers points for appraisal of APL2 reached	60,000 tonnes of organic waste composted and thus diverted from landfills	Independent verification of compost production and use.	Compost production and use can be accurately recorded and monitored at many small production sites.
First Bi-annual International Conference and Trade Fare on Organic Waste Treatment and Marketing	List of participants	Dissemination of report on the conference	

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Output from each Component:	**Output Indicators:**	**Project reports:**	**(from Outputs to Objective)**
Municipal capacity for solid waste management Agreements on policies, institutional arrangements and bidding doccuments for components for components to be implemented during APL2 Operational Public Advisory Boards for Landfills Enhanced professionalism in participating local government units	(a) JWMC established (b) GBWMC established (c) Agreed-to regional Waste Management Master Plans (d) Agreed-to hospital waste program (e) improved revenue collection (f) program in place to assist and include waste pickers in local waste management activities (g) Number of staff trained in each local government unit in relevant diciplines. (a,b,c,e in place within 24 months of APL1 effectiveness)	(a) Articles of incorporation; biannual project reports (b) Master Plans by MTR (c) Master Plan, with policy and finance agreements (d) bi-annual reports and final bid packages (e) bi-annual reports	(a) sufficient political commitment and professional capacity to maintain the Corporation (b) sufficient cooperation between local governments, community groups, and DPRDs (c) agreement by stakeholders to finance recommendations - technically appropriate (d) sufficient attention paid to management and finance aspects of landfills (e) sufficient desire to help this group - and that they want to be helped.
Composting Program being implemented	60,000 tons of compost produced and US$ 3 mill., equivalent, disbursed as grants	Monthly statements compiled quarterly by PSU. Independent confirmation (reports)	Composting can compete with other waste management alternatives and external environmental benefits can be included in overall sustainability review (e.g. against fertilizer subsidies).
Increased Environmental Awareness by local officials and community	Ten schools monitoring environmental data for the Project	Monthly reports by schools compiled quarterly by PSU	Disparate activities within participating communities can be woven into an effective response to urban pollution. Local governments assume key responsibility for urban pollution reduction efforts.
Program developed for Industrial Waste Water Pollution Reduction	Bidding documents prepared for physical implementation under APL2 for first year	Individual reports on each activity - compiled and reviewed by PSU Program presented, with required documentation, to World Bank for APL2 and APL3 appraisal before MTR	Local governments able to work with industry; sufficient commitment to finance and legislate pollution reductions.

Program management capacity in place and staff training program conducted	PSU fully staffed (100%) with the appropriate skills mix. Training program completed (numbers to be provided at appraisal)	Monitored by Pemda (through monthly reports), compiled and verified by PSU (quarterly reports)	Staff capabilities and pride can be improved through targeted training. Quality assistance can be provided and measured.
Project Components / Sub-components: Overall Environmental Management (Urban) (a) strategy and policy development (b) capacity building (c) environmental education (d) program support (e) prepare local and regional environmental management strategies, e.g. Western Java Env. Platform (f) Finalize in-school program for APL2 and APL3. (g) Run public awareness campaign	**Inputs: (budget for each component)**	**Project reports:** (a) Project reports and community consultation documents. Individual reports prepared by Pemda and reviewed by independent NGOs on each pilot activity. Project reports and separate training documents prepared by participants and PSU (a) Project documentation reflecting that program agreed to by every stakeholder and appraised by Bank. (c) Annual preparation of "State of the Environment" reports and independent verification by NGOs.	**(from Components to Outputs)** (a) Individual programs maintain Pemda and community ownership. (b) Environment Management reports prepared, sustained and adopted elsewhere. (c) Government wants to borrow for in-school education programs. (d) Support for environmental reporting maintained, sufficient community consultation, and quality documents prepared (through a credible process).

Solid Waste Management (a) compost grant program (b) technical assistance (c) Greater Bandung & Jabotabek Waste Management Corporations (d) waste management master plans and community advisory boards (e) hospital waste program (f) engineering design and bid packages (g) waste picker assistance (h) Public Advisory Groups for landfills		(a) Invoices for compost sales and compost credit distribution. Random audits. (b) Advisory Board minutes. (c) reports (and minutes of meetings) prepared by the JWMC, government agencies (PMUs), and supervision reports by Bank missions (d) agreed to policies, cost sharing arrangements, and facilities design (e) bid packages, AMDALs and Bank EAs (f) PSU and Bank supervision reports	(a) adequate operating budget and competency of key staff (b) sufficient cooperation between local governments, community groups, and DPRDs (c) agreement by stakeholders to finance recommendations - technically appropriate (d) adequate budgets and staff allocated to landfill management (e) there is sufficient desire and capacity by local governments and community to enter into large scale composting programs. (f) conditions developed and sustained to enable qualified staff to act in a more professional and efficient manner.
Community and Private Sector Participation (a) community assistance, e.g. finalize program for APL2 and APL3 (b) SME assistance (c) pilot activities and industry assistance (d) Finalize industry assistance program for APL2 and APL3 (e) JIEP waste water program		(a) CEF APL2 and APL3 Program agreed to by participating stakeholders and appraised by Bank. (b) Project documents produced by PSU, individually assisted enterprises, business leaders, and trade associations reflecting workshop results and industry performance ratings. (c) Final report reflecting policy agreement by all stakeholders and Bank appraisal. (d) Bid documents and project supervision reports	(a) Pilot activities can be well targeted and yield important results. (b) CEF activities can be designed to both benefit local environments and mesh with other similar poverty relief activities. (c) Industries capable to implement, and interested in, pollution reduction programs (with improved profitability). (d) Attainment of consensus possible; industries and government willing to finance these activities. (e) A credible cost sharing and management program can be developed.

Annex 2: Detailed Project Description

INDONESIA: WESTERN JAVA Environmental Management Project

The environmental deterioration being seen in the urban areas of western Java, which encompasses the provinces of DKI Jakarta, West Java and the newly created Banten Province, is severe and is threatening the longer term environmental sustainability of one of the most economically productive areas of Indonesia. This deterioration is due to rapid population growth, increasing industrial pollution, overexploitation of natural resources, undercontrolled development and poor waste management.

The Government of Indonesia has requested an adaptable program loan in three tranches in order to address this environmental deterioration systematically over the next decade. The proposal from the Government comprises projects to address the highest priority environmental needs, as expressed by the local governments during project preparation. The first tranche, APL1, is a technical assistance project aimed at preparing the foundation for sound environmental management through three components: (a) an overall urban environmental management component; (b) a solid waste management component; and (c) a community and private sector participation components.

Each technical assistance (TA) package described below has an introductory table denoting the name of the TA, the contract number, the implementing agency, the proposed year of start-up, the duration, and the base cost in US dollars. It is followed by a background section, a brief description of the TA's terms of reference, and outputs.

By Component:

Project Component 1 - US$7.07 million

Overall Urban Environmental Management

Introduction. This component consists of a total 21 technical assistance (TA) packages which focus on drawing up environmental strategies for the provinces West Java and DKI Jakarta, and then on drawing up local environmental strategies for the sixteen participating local governments. The component will also: develop a strategic plan for the collection and disposal of medical waste; design and implement public education programs about the importance of a clean environment and what can be done at the local level to improve the urban environment; develop an emergency preparedness program for Cilegon and Serang; carry out feasibility studies related to wastewater treatment; carry out studies to protect and improve local lakes; and strengthen the CPMU.

West Java Province Environmental Strategy				Base Cost (USD) 550,466
Contract	Category	Implementing Agency	Year	Duration (months)
West Java 3-1	TA	BAPEDALDA Tk I	1	15

Background. The most important activity in the Overall Urban Environmental Management component is the preparation of the West Java Environmental Strategy, which will serve as a model for environmental strategies to be prepared by each participating local government. The environmental strategies will provide local governments with a basis and guide for controlling the future development of their jurisdictions. Jakarta is in the process of preparing its strategy. Aside from developing the strategy, urban environmental management will require capacity building and the preparation of frameworks to respond to priority local environmental problems.

The TA will:
(a) collect secondary data and review national urban environmental issues;
(b) analyze selected "State of the Environment Reports" to assess crucial regional environmental problems;
(c) review local urban environmental issues with Bapedalda, other agencies, stakeholders;
(d) present reviews, tailored for each local government, entitled, "Preliminary Statements of Local Urban Environmental Concerns";
(e) identify options for addressing urban environmental issues raised in reports under (d); and
(f) discuss options extensively with communities, universities, research institutes, industry.

Output: Detailed strategy for the province which will serve as a model for the other provinces and local government units

Local Environmental Strategy TAs (Year 2, 12 months duration)

TA & Contract	Implementing Agency	Base Cost (USD)
Kota Bandung (Kota Bandung 3-1)	BAPEDALDA Tk II	76,667
Kabupaten Bandung (Kab. Bandung 3-1)	BAPPEDA Tk II	80,871
Kota Bekasi (Kota Bekasi 3-1)	BAPPEDA Tk II	100,409
Kabupaten Bandung (Kab. Bekasi 3-1)	BP2P	77,161
Kota Bogor (Kota Bogor 3-1)	BAPEDALDA Tk II	114,382
Kota Cirebon (Kota Cirebon 3-1)	BAPPEDA Tk II	73,699
Kota Depok (Kota Depok 3-2)	BAPPEDA Tk II	110,672
Kabupaten Serang (Kab. Serang 3-2)	BAPPEDA Tk II	103,253
Kabupaten Tangerang (Kota Tangerang 3-2)	BAPEDALDA Tk II	48,720

Background. Once the West Java Province Environmental Strategy (West Java 3-1) has been developed, Kota Bandung will prepare its strategy using the West Java strategy as a model. In developing the strategy at the local level, the importance of an iterative process which can gradually improve the final output is recognized. For this reason, the strategy will be developed through consultations with various stakeholders such as community-based organizations, NGOs, universities, government agencies, professional associations and the private sector. The public "Urban Forum" will provide the opportunity, and the "space and time" for civil society to discuss common environmental problems and strategies, and to explore technical, social, and economic options. A key factor for the success of the consultation process is *transparency*. Good databases and easy access to information are vital, as a good strategy is useless if held only by an elite. The implementing agencies for the development of the environmental strategies of the local governments will be the respective technical units of the local government (Bapedalda or Bappeda).

The TA will:
(a) review and prioritize urban environmental issues;
(b) review changes and additions to the regulations governing the environment and proposals for changes;

(c) design a detailed strategy; and
(d) discuss above strategy with various stakeholders.

Output: Detailed strategy and medium and long-term environmental action plan.

DKI Jakarta Environmental Strategy Development				Base Cost (USD) 94,000
Contract	Category	Implementing Agency	Year	Duration (months)
DKI 3-1	TA	BAPEDALDA	2	12

Background: DKI Jakarta is currently preparing its environmental strategy using their own budget using the terms of reference for the West Java Provincial Environmental Strategy.

The TA will:
(a) strengthen and elaborate upon work already completed; and
(b) prepare a strategy of each of the five municipalities (2 million inhabitants each) in Jakarta.

Output: Detailed strategy and a medium and long-term environmental action plan.

Development of a Strategic Plan for the Collection and Disposal of Medical Waste				Base Cost (USD) 420,380
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-1	TA	BAPEDAL	1	15 months

Background. In many cities medical waste from hospitals and clinics is disposed of in an unsafe manner, posing a health hazard for the community. One option is to construct waste disposal facilities which would serve a number of hospitals and clinics. Having a local facility would reduce operating costs, making proper disposal more affordable, and would provide opportunities for the private sector to construct and operate the facilities. Prior to financing any specific medical waste treatment facility, BAPEDAL will study various options. The study will integrate the findings of previous medical waste studies.

The TA will:
(a) identify existing policies, legislation and regulations within BAPEDAL and the Ministry of Health, and make recommendations for modifications and additions;
(b) identify waste sources to be included (hospitals, clinics, veterinarians, etc.);
(c) define the types of waste to be covered;
(d) explore options for collection, storage, transportation and final disposal of medical waste, including the use of existing incinerators or the hazardous treatment facility in West Java;
(e) estimate investment requirements, and determine collection charges according to particular categories of medical waste and types of establishments. This would include a review of disposal costs in order to determine an appropriate fee structure for different types of establishments;
(f) analyze cost recovery and financing options;
(g) define the roles and responsibilities of government agencies, local governments, hospital authorities and other establishments;
(h) prepare training requirements for medical practitioners, including an overseas study tour in southeast Asia;
(i) prepare public awareness requirements (to be conducted in close cooperation with TA contract Pusat 3-3 for the promotion of environmental awareness);

(j) analyze prospects for private sector participation in the management of medical waste collection, storage, treatment, and disposal; and
(k) establish a timetable for implementation of the strategic plan and define the objectives to be achieved in the initial phase (5 years).

Output: A strategic plan based on a 15-year time horizon with a detailed action plan for the first five years; detailed proposals for activities for implementation in APL2 (either publicly provided facilities/services or bidding documents for private sector participation); standard operational manuals based on already existing generalized procedures; identification of land acquisition needs and environmental assessment if the plan is to provide publicly owned facilities.

Management and Technical Advisory Services to Central Program Support Unit				Base Cost (USD) 2,324,397
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-2	TA	DGURD	1	30

Background. As WJEMP's design is innovative, decentralized, and broad in scope, GOI will require additional consultant services especially in the early part of the project (APL1).

The TA will:
(a) assist the CPSU in (i) disseminating information pertaining to APL1's objectives and composition, its targets, and specifications, and (ii) preparing APL2;
(b) support "on-the-job" and formal training programs for government personnel, particularly in the participating local governments and prepare these personnel for more significant implementation efforts in APL2; and
(c) evaluate the capabilities of the concerned implementation units, particularly in the provincial and local governments as they assume their increased responsibilities through regional autonomy.

Developing appropriate skills, systems and procedures for sustainable operation of APL2 and APL3 will be an important factor in the execution of this assignment. Provisional sums have been provided in the contract to enable the CPSU to respond to unforeseen needs for support.

Output: Good performance of local governments; training programs for strengthening local governments; standard documents for sub-projects in APL2 and APL3; preparation of APL2 proposals; personnel training programs; WJEMP management information systems including consolidated project accounts and progress reports

Design, and Implementation Supervision of Environmental Awareness Component				Base Cost (USD) 573,202
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-3	TA	BAPEDAL	1	24

Background. As GOI makes improvements in environmental infrastructure and services and more vigorously enforces environmental law, the public must take a more active role in supporting initiatives in environmental protection and improvement. The environmental awareness campaign will increase public recognition of its potential role in promoting a cleaner, healthier and more attractive urban environment.

The TA will define the strategy, target groups, action plan and mechanisms, and also contribute to establishing a suitable environmental communication forum.

The TA will:
(a) employ the most cost-effective means of communication, using a mix of media, materials, plus group or community activities;
(b) develop methods to monitor the progress and impact of the environmental awareness campaign; and
(c) provide measurable indicators that relate to a baseline condition.

Output: Strategy, action plan and mechanisms to increase public environmental awareness; baseline database on impact of present level of public awareness on a poorly managed urban environment; detailed campaign strategy for implementation, from 2001-2003 and from 2004-2006; management of the implementation of the first phase of the campaign.

Design and Implementation Supervision of Environmental Education Component				Base Cost (USD) 495,242
Contract Pusat 3-4	Category TA	Implementing Agency DIKNAS (Ministry of National Education)	Year 2	Duration (months) 24

Background. The Indonesian public's understanding of the impact of poor waste management is generally low. In addition, decades of non-transparent government mean that people inside and outside government almost completely lack respect for and confidence in environmental rules and regulations. The government wishes to rebuild this confidence from the ground up.

This TA will:
(a) review the curriculum, teaching materials, teachers' skills and classroom facilities;
(b) draw up a guide book for teachers to use in environmental instruction;
(c) design and implement a training program for teachers; and
(d) design a public awareness program for youth.

This TA will be closely related to the environmental awareness campaign in TA contract Pusat 3-3. The implementing agency will be the Ministry of Education, particularly the Directorate of Primary and Secondary Education, and implementation will be managed by the local government, facilitated by this Directorate.

Output: Teachers' guide book on urban environment issues; training courses for teachers; over 3000 teachers trained; public awareness programs aimed at school pupils.

Local Environmental Awareness, DKI Jakarta				Base Cost (USD) 156,301
Contract DKI 3-6	Category TA	Implementing Agency BAPEDALDA Tk I	Year 2	Duration (months) 18

Background. Local environmental awareness building is important in Jakarta because the behavior and activities of the citizens of Jakarta are often emulated by those in the other provinces. The

TA will seek to build local environmetal awareness in DKI Jakarta, to promote a spillover effect in western Java.

The TA will design and implement a program, using the media, events, competitions, exhibitions, etc., to improve environmental awareness of the citizens of Jakarta and to garner strong, broad-based support to act responsibly.

Output: Ratio and TV advertisements, competitions, exhibitions

Cilegon/Serang Emergency Preparedness Program				Base Cost (USD) 503,804
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-5	TA	BAPEDAL	1	24 months

Background. Cilegon, together with the surrounding areas of Kabupaten Serang, is one of the most heavily industrialized areas in West Java. There are approximately 275 active industrial enterprises, of which approximately 147 likely have the potential for industrial disaster such as explosion, fire, chemical spill and/or leakage of hazardous wastes that would threaten the well-being of the surrounding communities. To complicate the situation further, Serang sits on a geological formation that is prone to earthquakes, volcanic eruptions and tsunamis. The potential for industrial disaster in Serang is such that it was selected as one of three Indonesian locations for a special industrial disaster prevention project by UNEP. The **objective** of the Cilegon-Serang Emergency Preparedness Program is to strengthen local preparedness to the point where industries, emergency services, and the local community will be able to collectively respond to industrial emergencies.

The TA will:
(a) review systems and procedures;
(b) review organizational aspects;
(c) create a database for development and dissemination;
(d) encourage community participation; and
(e) design training and institutional strengthening.

The Environmental Impact Management Agency (BAPEDAL) wishes to use this program as a model for similar industrial areas. The TA will work closely with the industry leaders, government officials and services (e.g., fire, police, military, medical and environment), NGOs, and local community leaders.

Output: Detailed assessment of the risks of each industry; information dissemination plans; a five-year emergency preparedness action plan for Cilegon and Serang; detailed simulation training plan; a monitoring plan; financing plan

FS and DED for Treatment of Wastewater Discharges and Improvement of Kesenden Oxidation Pool				Base Cost (USD) 38,333
Contract	Category	Implementing Agency	Year	Duration (months)
Kota Cirebon 3-2	TA	PDAM Cirebon	2	12

Background. Cirebon has a sewerage system serving a population of some 84,000 households or approximately 30% of the total of 280,000. The local government wishes to expand service coverage by

20% or 56,000 households.

The TA will:
(a) review the operations of the existing systems and the Kesenden oxidation plant;
(b) carry out feasibility studies and detailed engineering design to expand coverage to the proposed target; and
(c) design sludge lagoons for the Kesenden site to serve both desludging of the anaerobic cells, and to receive septic tank sludge that is presently discharged in the oxidation ponds with the consequential detrimental impact on treatment performance.

The TA will be required to develop a self-financing project that could be funded during APL2 with cost recovery achieved through sewerage charges paid by existing and new households. The local government will not contribute to the project, but internal subsidies from the water enterprise (PDAM) can be considered. To assist the PDAM during implementation (during which it will be repaying existing loans), consideration will be given to reducing dividents paid to the local government.

Output: Review of Kesenden Oxidation Pond and proposed additions for treatment of septic tank sludge; detailed engineering designs for modifications and expansion of the sewerage system; bidding documents; institutional strengthening

Study for Normalization and Development of Lakes				Base Cost (USD) 203,667
Contract	Category	Implementing Agency	Year	Duration (months)
Kota Depok 3-1	TA	BAPPEDA Tk II	1	12

Background. Located to the south of Jakarta, the town of Depok has a total of 22 small lakes located in almost every subdistrict. Depok functions as a catchment area for part of the Jakarta region. For many years, these small lakes, especially the Dongkelan and Pitara lakes, have provided the surrounding community with a source of income from fisheries, water supply, rain retention basins, recreational areas and a source of unused land. In addition they also serve as a water supply resource for part of Jakarta.

Increasing needs for development land, together with weak law enforcement and low public awareness about pollution control, have resulted areas of the laking being encroached upon by multiple users. This has resulted in uncontrolled exploitation of the lake environment, deteriorating water quality, and reduced storm water retention capacity, the latter which has contributed to more frequent flooding in Jakarta.

In 1999, the local government of Depok established a working committee comprising representatives of various agencies to control, protect and preserve the function of the lakes. The local government intends to develop an integrated water resource management system for these lakes, and to establish and maintain close cooperation between the government, private sector, communities, NGOs, and local schools. The working committee will need strengthening to make it more effective.

The TA will:
(a) review all existing data, and conduct a rapid assessment on the overall existing physical status of the 22 lakes including flora and fauna;
(b) assess the social interactions of the communities living adjacent to the lakes and their potential role in sustainable management of the lakes; and

(c) assess possible adverse impacts of upstream pollution flows coming via the rivers.
(d) identify in detail the existing condition of each lake and the hydraulic inter-linkages (if any) between them;
(e) examine the lake areas, water depths, bank stability, hydraulic control structures, water quality, sedimentation, water usage of local communities, and usage for water supply;
(f) review the current impacts of solid and liquid waste;
(g) assess the role of each lake for storm water retention and control, and for water supply. Where the quality of raw water is affected by liquid and solid waste from neighboring communities, the TA will highlight for priority actions under the implementation program. The TA will coordinate with other local governments to the south of Depok in an effort to reduce pollution coming from the upstream areas;
(h) study the potential economic benefits of the proposed improvement plan; and
(i) give attention to fishing and community-based tourism, and other community-based economic activities.

The proposed improvement plan will be discussed with local communities, NGOs and local schools. To the maximum extent possible, the objectives should optimize the environmental and economic function of the lakes, minimize adverse impacts, and consider the social and cultural needs of the community.

Output: An overall management plan; detailed design for the protection and enhancement of the three largest lakes; program for the local communities' participation in the protection of the lakes

Feasibility Study and Preliminary Engineering Design for Cikapundung River Domestic Wastewater Facilities				Base Cost (USD) 187,263
Contract	Category	Implementing Agency	Year	Duration (months)
Kota Bandung 3-3	TA	BAPEDALDA Tk II	1	12

Background. Bandung's municipal water supply takes in raw water from the Cikapundung River. The water quality of the river has worsened alarmingly, due to uncontrolled discharge of household wastewater. A preliminary study estimated that about 30 liters/sec of domestic wastewater are dumped into the Cikapundung River from the 13 communities (kelurahans) located along its banks. Water quality must be improved by reducing pollution loads.

The study area will cover the river bank communities in the vicinity between Siliwangi Bridge in the north to Sukarno-Hatta Bridge in the south, an area which is not served by the existing network. As the area is located below existing sewer collectors and is densely settled, special attention will be paid to alternative technical solutions and combinations of systems, with close consultation with the beneficiaries.

The TA will:
(a) adopt a participatory planning process where alternative technical solutions, their consequences in terms of land acquisition, pipe alignment, construction phasing, local participation in construction, and cost implications are thoroughly discussed and agreed with the residents. Community-based organizations, NGOs and relevant local government agencies will also participate and assist in the vetting and approval of the proposals;
(b) estimate O&M costs and propose billing rates for connected households; and
(c) assess various alternative options, including the capacity of institutions which could be responsible for operating the system and propose tentative institutional and training plans to ensure

sustainable operations.

Output: Technical and institutional recommendations, preliminary designs, cost estimates, estimated billing rates, a Land Acquisition and Resettlement Action Plan for the recommended systems, the proposed institutional arrangements, an institutional strengthening and training plan, and an action plan with TORs for the next phase.

Feasibility Study, AMDAL and DED for Domestic Wastewater Treatment (IPLT)				Base Cost (USD) 113,145
Contract	Category	Implementing Agency	Year	Duration (months)
Kota Tangerang 3-1	TA	Dinas TPL TK II (Local Sanitation Department)	2	12

Background. The sludge treatment plan capacity in Kota Tangerang is fully exhausted. This TA will prepare the Environmental Impact Monitoring Agency (Bapedalda) of Kota Tangerang to prepare for the implementation of a septic tank sludge treatment plant (IPLT) in the south-east area of the city (Kecamantan Ciledug). The treatment plant is required because the existing facilities of Kota and Kabupaten Tangerang are overloaded. An available site that is owned by the local government will be analyzed for suitability and its impact on the neighboring communities assessed, through an environmental assessment (AMDAL) that will meet national and Bank guidelines.

The TA will review wastewater management needs in neighboring urban areas in Kabupaten Tangerang and also the western parts of DKI Jakarta. The feasibility study will:
(a) review the 1999 Wastewater Master Plan to check the treatment plant demands for 5 and 10-year planning periods, and also to serve a larger area than planned earlier, taking into account the needs to serve a larger area, including other subdistricts in Tangerang that may be served by other treatment plants in the future;
(b) examine areas in southern Kota Tangerang that are prone to flooding and prepare a draft action plan for serving these areas with improved drainage and/or sewerage because of malfunctioning septic tanks that back up in heavy rain; and
(c) carry out a financial analysis that is based on sub-sector cost recovery.

Outputs: Demand forecast for sludge disposal; review of existing sludge disposal practices; environmental assessment; business plan including proposed charges; proposal for organizational arrangements including job descriptions; detailed engineering design and bidding documents; operational manuals

Project Component 2 - US$3.44 million

Solid Waste Management

Introduction. This component consists of eight TA packages geared specifically toward improving solid waste management. These include TAs for the establishment of waste managemen corporations in Jabotabek and Greater Bandung, studies and engineering designs for landfills, TAs related to composting, and TA to introduce the "3R" solid waste reduction scheme and assistance to waste-pickers.

Jabotabek Waste Management Corporation Consultant Support				Base Cost (USD) 1,043,613
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-6	TA	DGURD	1	30

Background. WJEMP-supported initiatives expect to improve overall municipal service delivery, especially related to improved solid waste management. One of the key sub-components of the solid waste management component is the establishment of the Jabotabek Waste Management Corporation (JWMC). At present, individual cities (kota) and districts (kabupaten) carry out solid waste management and operations in Jabotabek for their respective service areas. Some of the resources and operations (landfills, transfer stations, transport services) are best shared or operated jointly. Most cities have their own landfills, but many of these are nearing exhaustion. Therefore, optimal development of future solid waste management under comprehensive regional cooperation plans will be required. This is the key justification for the proposed Jabotabek Waste Management Corporation.

A combination of waste reduction, reuse, recycling and composting has the potential to significantly reduce the volume of solid waste going to landfills, resulting in sizable cost savings to municipalities and income potential for individuals. If current management practices continue, the result will be ever increasing operational and maintenance losses, increased equipment replacement costs, continued environmental degradation, and a further decline in service levels. In addition, the indirect costs related to public health, municipal water supply, dumpsite and landfill remediation, flood control maintenance, and illegal dumping of hazardous and toxic waste, could escalate to crisis proportions.

The TA will cover solid waste management throughout Jabotabek, including:

(a) establishment of the JWMC;
(b) planning, feasibility studies for the eventual construction of new transfer stations and landfills in Jabotabek;
(c) support to the GEF composting grant program and sub-projects in compost product development and marketing, and waste recycling; and
(d) implementation of the proposed medical waste strategic plan.

Output: Strategic plan (including proactive NIMBY initiatives) and site identification; business plans including the role of the private sector; legal framework for the Corporation; operational plans, job descriptions, and an operational organization

Greater Bandung Waste Management Corporation Consultant Support				Base Cost (USD) 428,597
Contract	Category	Implementing Agency	Year	Duration (months)
West Java 3-2	TA	BAPEDALDA Tk-I	1	24

Background. At present, the city of Bandung (kota) and the surrounding district of Bandung (kabupaten) which together make up Greater Bandung, are responsible for solid waste management and operations for their respective service areas. Some resources and operations (landfill, transfer stations, transport services) are best shared or operated jointly, especially because the city of Bandung has exhausted available land within its administrative area for sanitary landfill sites.

Both local governments have expressed interest in forming a joint solid waste management entity, and will be expected to benefit from the existence of a single overarching plan for the operations and management of solid waste in Greater Bandung. There is a possibility that one or two more neighboring local governments (Garut and Sumedang) will join the Greater Bandung Waste Management Corporation (GBWMC).

A combination of recycling and composting has the potential to significantly reduce the volume of solid waste going to the landfill, resulting in sizable cost savings to the municipalities and income potential for individuals, NGOs and private companies. There is a considerable agro-business community in the Bandung area that could serve as a basis for the private sector to become involved in composting, with which GBWMC will develop close cooperation.

The TA will explore opportunities for solid waste composting in Greater Bandung, especially to reduce the potentially high cost of transporting urban waste. The TA will liaise closely with the medical waste study TA (Pusat 3-1) to ensure coordination in implementation.

Output: Strategic plan (including proactive NIMBY initiatives) and site identification; business plans including the role of the private sector; legal framework for the Corporation; operational plans, job descriptions, and an operational organization

Feasibility Study, AMDAL and DED for Kopiluhur TPA				Base Cost (USD) 161,565
Contract	Category	Implementing Agency	Year	Duration (months)
Kota Cirebon 3-3	TA	Dinas Kebersihan	1	12

Background. Solid waste management in the city of Cirebon has become a critical concern. The solid waste disposal site (TPA) at Grenjeng was exhausted over a year ago, and has raised protests from the surrounding community. As an emergency measure, the garbage is being disposed of in an open dump in Harjamukti village in Kopiluhur subdistrict. Soil cover is done every two or three days in order to mitigate the worst effects. Compaction is done using a small bulldozer each time a truck dumps garbage, while the wastepickers search for recyclable materials. No proper engineering has been done.

The city's plan for Kopiluhur includes the use of geo-textiles to block leaching. Before a geo-textile liner can be placed, the newly dumped waste must be removed. A remedial program and specific identifications for “no dump” areas need to be identified, followed by implementation of a strict disposal management regime. A feasibility study, environmental impact assessment, and detailed engineer design (DED) for TPA Kopiluhur are crucial to achieve compliance with GOI and Bank environmental standards and requirements for sanitary landfills.

The TA will:

(a) review existing plans;

(b) project the amount of waste to be generated until the year 2020 and the capacity of Kopiluhur, and evaluate the existing and potential recycling and composting in Cirebon;

(c) define a definitive plan for the Kopiluhur TPA, including selecting from various methods for controlled or sanitary landfills, siting, design, technology selection, construction techniques, and operation and maintenance procedures;

(d) carry out DED which includes (i) construction pre-design of TPA Kopiluhur, (ii) technical design of construction works, (iii) workloads description concerning necessary material and labor, (iv) sequence of implementation, monitoring, and supervision activities for physical construction,

and (v) bidding documents;
(e) define an institutional plan for operating the TPA and a training program for all staff directly associated with the TPA operation as well as city managers;
(f) draw up an environmental impact assessment complying with Indonesian regulations, World Bank standards for conducting environmental social studies and impacts assessment for new projects, and community consultation procedures in accordance with Bank guidelines; and
(g) conduct stakeholder consultations with local affected groups through the establishment of a public advisory board to be set up and funded by the project during APL1.

Outputs: Definitive plan for the Kopiluhur TPA; DED for infrastructure works; institutional plan; environmental and social assessments

Improved Solid Waste Management Services and Feasibility Study, AMDAL and DED for new TPA in East Serang				Base Cost (USD) 243,392
Contract	Category	Implementing Agency	Year	Duration (months)
Kab. Serang 3-1	TA	Dinas Kebersihan	1	12

Background. The existing solid waste disposal site (TPA) at Cilowong is the only one in Serang, and it serves only the urban area in the western part of the district (kabupaten). The existing TPA is very poorly managed, causing serious local environmental damage. To serve the rapidly expanding eastern part of Kabupaten Serang, the local government has proposed the development of a new TPA in eastern Serang. The new TPA is expected to serve five subdistricts (kecamatans), as well as an extensive industrial area of about 20,000 ha that is planned in eastern Serang, that is already supporting 190 operating industrial units in a first phase of about 8,000 ha. The site selection of the new landfill will be subject to careful site selection analysis using criteria to be agreed with the Bank.

The cleansing agency (Dinas Kebersihan) of Kabupaten Serang has limited solid waste collection and transportation infrastructure and equipment. Of the existing equipment, only 40% is in adequate operating condition. One of the consequences is that the local government is not able to fully support the collection and disposal of industrial waste, thereby missing the opportunity for increasing revenues and extending solid waste management services to the poorer areas of Serang and other smaller towns.

It is essential to establish a new TPA in East Serang to increase coverage. Serang will improve its operations of the existing TPA in order to reduce the level of local environmental damage. In accordance with the overall objectives of WJEMP, the cleansing agency will promote the "3R" concept of "reduce, reuse, recycle". Composting will be included in the plan in order to reduce the total volume of waste.

The TA will:
(a) conduct a feasibility study;
(b) carry out an environmental impact assessment;
(c) carry out DED for the construction of a TPA in East Serang;
(d) examine the potential role of the private sector (especially local industrialists) to support improved waste management throughout Serang; and
(e) design a plan to encourage regional cooperation with Cilegon city in order to optimize the use of available TPA capacity and the use of solid waste collection and transportation equipment.

During the execution of this assignment, the TA will be required to proactively coordinate with the CPSU to ensure that the overall WJEMP objectives are fulfilled. CPSU will be responsible for ensuring that

proposed WJEMP environmental and technical solutions being developed elsewhere under the project are shared with the cleansing agency and the TA.

Outputs: Feasibility study, environmental impact assessment, DED for the new TPA, plan to optimize solid waste activities between Serang and Cilegon

Design of GEF Grant Mechanism for Compost				Base Cost (USD) 321,176
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-7	TA	BAPEDAL	1	18

Background. Ever increasing solid waste production in urban area can have serious impacts on the environment and creates a heavy burden on city finances to manage it. During decomposition, solid waste also produces huge amounts of methane gas which contribute to global climatic change. Composting can significantly help reduce these adverse impacts. Composting organic waste is a technically simple option, and is potentially less costly than sanitary landfills. It also reduces greenhouse gas emissions. To assist in promoting significant composting operations in western Java, the Global Environment Facility (GEF) has approved a grant of $10 million equivalent to be managed through WJEMP. The grant is proposed to support the development of viable compost production and marketing systems in Jakarta and West Java.

Support for composting is based on the fact that even well designed and operated sanitary landfills do not recover more than 60% of the methane generated, and are therefore a source of greenhouse gas production. The potential benefits from developing a viable compost production and marketing system are: (a) reduction of greenhouse gas emissions, (b) reduced usage of non-point source polluting synthetic fertilizers, (c) reduced soil erosion, and (d) more sustainable agricultural practices.

In Indonesia most of the compost production has been relatively small scale, and has not developed marketing and quality control systems. Little consideration is given to the potentially large-scale agricultural end users. Composting must be justified on the basis of supplying a quality product to a defined market at competitive prices. Analysis done during project preparation indicates that there is a potential supply of 1.15 million tons. If it can be delivered at the right quality and price, a significant market is waiting to be served.

The TA will develop a compost grant mechanism, develop a market for agricultural use of commercial scale composting, and establish a technical advisory team. Detailed activities include the following:

(a) assess composting technology, production, and marketing development;
(b) assess compost quality and competing products;
(c) assess the price of compost relative to competing products;
(d) assess current marketing system of compost and other fertilizers;
(e) prepare quality control mechanisms;
(f) estimate market demand and targets for increasing supply;
(g) develop and conduct marketing campaign, especially targeted at large scale users; and
(h) develop an international compost information dissemination strategy.

The objective of this subcomponent is to achieve an additional 60,000 tons of compost by the end of APL1,

through a combination of a compost grant mechanism and marketing assistance. The mechanism will be simple to administer, transparent, and easy to verify that the funds are being used as intended. The first 10 months of the TA will be for the preparation of the frameworks and mechanisms, and the subsequent phase (20 months) will assist in supervising and evaluating implementation.

Output: A report containing the above assessments, recommendations for quality control mechanisms, market demand projects, design of a marketing campaign; recommendations for institutional management of the production grants; legal instruments necessary for implementation of the institutional arrangements

Disbursement of Grants and Subsidies to Compost Producers for Additional Production in WJEMP Participating Local Governments in Accordance with Mechanisms and Procedures Defined under Pusat 3-7 TA				Base Cost (USD) 1,370,968
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 2-1	sub-grant	BAPEDAL	3	24

Background. The TA under this contract Pusat 3-7 will have established the framework for the fund to be operated through a financial institution.

Output: Producers of 60,000 tons of high quality compost will receive grants; the financial institution will provide compost producers grants in accordance with the terms developed earlier

Development of Commercial Scale Composting Plant				Base Cost (USD) 434,032
Contract	Category	Implementing Agency	Year	Duration (months)
DKI 3-3	TA	Dinas Kebersihan DKI	1	12

Background. Jakarta authorities wish to expand composting of solid waste significantly to reduce the volume of waste being landfilled and hence reduce expenditures for solid waste management in the budget. In addition, increased production and usage of compost have positive environmental impacts both at the micro and macro levels.

At present, municipal waste is composed of paper, plastic, glass, rubber, textiles, metals, and organic material. Some materials are recycled but the volumes are modest. The remaining solid waste, especially the organic waste, is sent to landfills. Solid waste in Indonesia has a high organic factor (60-75%). It is also quite dense and contains a lot of moisture. The high organic fraction makes composting an attractive alternative to reducing the amount of waste being landfilled (in addition to recycling inorganic matter). Composting will help to (i) reduce greenhouse gas emissions, and (ii) reduce the amount of waste sent to landfills, thus saving the avoided disposal costs, reducing landfill areas, reducing traffic to landfills, and reducing investment costs for new equipment.

DKI Jakarta introduced composting in the late 1980's, but the focus was more on small-scale composting. With the decision to reduce the organic fraction being landfilled, it is important to develop large-scale commercial compost plants. The city has considered constructing a plant on DKI-owned land.

The TA will:

(a) establish a commercial scale compost plant to produce high quality compost;

(b) link the compost production to other WJEMP activities such as compost marketing initiatives and GEF grant scheme;
(c) assist with project site selection and management of vehicle movements to/from the plant;
(d) draw up preliminary engineering designs;
(e) carry out the initial environmental assessment;
(f) project the production and sale of compost based on outputs from a parallel marketing assessment (separate assignment under WJEMP);
(g) estimate project cost and financing plans; and
(h) prepare bidding documents for potential private sector investments in partnership with DKI Jakarta.

Output: The output of this sub-project will be a 100 ton/day increase in good quality compost production. Depending on the findings during this TA, DKI may enter into a BOO/BOT contract with a private operator or it may enter into a multi-year compost supply contract for 100 t/day. To assess the options, a feasibility study will be undertaken to guide DKI including preliminary engineering design, environmental assesment, and costs and financing plan

Community-Based Solid Waste Management - Reduce, Reuse and Recycle (3R) and Assistance to Waste Pickers				Base Cost (USD) 487,747
Contract	Category	Implementing Agency	Year	Duration (months)
DKI 3-2/3-7	TA	Dinas Kebersihan	1	30

Background. The volume of solid waste produced in urban areas is increasings rapidly, rendering the disposal problem difficult to cope with. The urban solid waste management problem cannot be solved only by adding more personnel, equipment, or budget. It is very important to make efforts to reduce the amount of waste through the "3R" program of reduce-reuse-recycle.

The "3R" program represents a comprehensive effort in environmental management to minimize the amount of waste in the production, distribution, and consumption of goods, covering:

(a) waste reduction: minimization of waste in the industry through better design, better processes, and use of more suitable raw materials, and also minimization in the distribution system by more efficient packaging or by avoiding excessive packaging;
(b) waste reuse: using waste “as is” for secondary uses or /processes, such as using wastewater from cleaner processes for other processes which do not require clean water, reusing used cloth or textiles, furniture or equipment; and
(c) waste recycling: using waste as raw material for other useful products through other processes, such as composting, producing plastic pellets from used plastics, producing office paper from used paper, processing used oil, etc.

Waste reduction will mainly be the role of industries and distributors, but consumers should be encouraged to buy products which support waste reduction. Waste reuse by individuals or businesses can significantly reduce waste. Waste recycling can generate income for low-income communities as well as small and medium size industries.

The main activity of this project will be the development of community-based recycling including assistance to waste-pickers, and a public awareness campaign to reduce or reuse waste especially those related to community activities.

The private sector can play an important role in waste reduction, reuse, and recycling as producers and suppliers and also as buyers of secondary raw materials supplied by the community and home industries. The challenge is how to develop and strengthen linkages between the community, the private sector, and the agencies.

In the solid waste management chain in Indonesia, the waste-pickers both at landfills and collectors around town are known as "pemulung"; those who buy recyclable materials from waste-pickers are "lapak"; "bandar" are waste traders, and "pemasok" or suppliers to industries, play important roles. Waste-pickers are the most vulnerable group with low and fluctuating incomes, living in unhealthy settlements, and exposed to disease. They are the under-privileged and usually are excluded from development programs or social activities. Waste-pickers work at various levels of the urban solid waste management system: at the household level, at the TPS (transfer sites), and at landfill sites such as Bantar Gebang where 3,000-4,000 work. The project will help waste-pickers be more productive and improve their living conditions.

The TA will:

(a) develop a strategy and action plan to promote waste reduction-reuse-recycling, including preparations for implementation;
(b) develop an action plan for community-based recycling involving all stakeholders in two project areas;
(c) develop an action plan to increase the scope, efficiency, and productivity of waste-picker activities (at the household level, market, transfer sites, and final disposal sites) and to improve their living conditions;
(d) facilitate the establishment and development of cooperation between the private sector, informal sector, community cooperatives, and the five municipalities in DKI Jakarta to maintain a sustainable framework for waste reduction-reuse-and recycling;
(e) identify locations for two pilot projects, design implementation plans, and identifying procurement needs for equipment, facilities and civil works in the two pilot project areas; and
(f) support the cleansing agency (Dinas Kebersihan) in the implementation of the pilot projects in years 2 and 3 of APL1. Implementation would start with simple activities in year 2, and be expanded in year 3 of APL1.

Output: Strategy plans for community-based waste reduction; detailed action plans for two pilot communities in DKI Jakarta

Project Component 3 - US$ 4.85 million

Community and Private Sector Participation

Introduction. This component consists of eight TAs. It focusses on support mechanisms for small and medium industries; support to the soybean processing industry; support for a number of operations which are potential targets for private sector participation; and the community environment facility.

	Base Cost (USD)
Preparation of Program Design and Implementation Plan for Small and Medium Scale Industry Support	247,312

Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-9	TA	DEPERINDAG (Ministry of Industry and Trade)	2	18

Background. The facility is open to all small and medium-sized industries submitting proposals during implementation; it is not limited only to the tofu processing, batik, or electroplating industries. A committee will review the proposals and decide to what extent the proposed action would benefit the environment. The facility can be in the form of credit, training, information, or other assistance.

Most of the pollution in urban areas comes from industry. Therefore it is crucial to encourage industries to take an active role in preventing and reducing pollution. Large industries and some of the medium industries have participated in the Clean River Program (PROKASIH) and the (explain in English) (PROPER) scheme which evaluates and rates industries, and discloses lists of the most polluting industries. The program is ongoing and has successfully reduced the amount of pollution discharged to rivers. There has been little involvement from small and medium-sized industries and households.

After working for many years with large industries, it is now necessary to look at the small and medium-sized industries, and encourage them to contribute to pollution prevention and reduction. Most of these industries have very low capacity (in financing and human resources) in terms of environmental protection and improvement. It is necessary to provide incentives for them to behave responsibly in parallel with strengthening law enforcement.

The TA will:
(a) consult stakeholders to get their inputs to improve the current government policy, strategy, program and mechanisms;
(b) provide technical assistance, training, and information on ways to reduce pollution; and
(c) design incentives and a financing facility which WJEMP will provide in APL2 and APL3 to build waste treatment or improve the efficiency of their production processes to reduce pollution.

These efforts will be closely related to environmental awareness campaign and law enforcement. The implementing agency for this sub-component will be the Ministry of Industry and Trade, working closely together with BAPEDAL and DGURD. BAPEDAL will be a member of the Selection Committee. The Ministry of Industry and Trade is operationally responsible for the development of industry, including its environmental protection aspects.

Outputs: Literature to disseminate way to reduce pollution to small and medium sized enterprises; report proposing incentives and design of grant facility for APL2 and APL3; recommendations for administration of the Fund.

Preparation of Program Design and Implementation Plan for Community Environment Facility (CEF)				Base Cost (USD) 354,067
Contract	Category	Implementing Agency	Year	Duration (months)
Pusat 3-8	TA	DGURD, with assistance from DG of Community Development (PMD) and local governments	2	12

Background. The success of environmental management will very much depend on public support and participation. The understanding of local environmental problems and community participation in improving their settlement, is the foundation for understanding macro problems and for developing support for a sustainable environment. The CEF will assist the community in developing activities and small businesses which help to reduce pollution and improve environmental quality. It will include technical assistance, training, facilitators, and a grant facility. The program and mechanisms will be developed in the second year of APL1.

This TA will:
(a) based on the plans developed during project preparation, prepare the frameworks, organization and procedures to assist environmental protection and improvement at the community level;
(b) lay the groundwork for the financing facility through information, training, and grant; and
(c) define the procedures to select a financial institution through which to channel the project funds later on.

This scheme is different from the TA to small and medium industries, which will be managed at a higher level (central or provincial) due to its higher coverage. WJEMP will make the funds available in APL2 and APL3 through an implementing bank. The implementing agency for preparation will be the Directorate General of Community Development (PMD), and implementation will be managed by the local governments, facilitated by PMD.

Outputs: Detailed frameworks, organization and procedures to operate the CEF in APL2 and APL3.

Preparation of Soybean Processing Industries Pollution Reduction Program in Central Jakarta				Base Cost (USD) 132,474
Contract DKI 3-5a	Category TA	Implementing Agency Dinas PERINDAG Tk I	Year 1	Duration (months) 12

Background. Inefficiencies in soybean processing result in significant losses of raw materials and excessive organic (BOD) waste loading into waterways. The over 4,600 soybean processing industries in Jakarta account for 80% of the total waste load from the food sector in Jakarta. Even if ranked separately from the food sector, soybean processing ranks third in terms of total negative environmental impacts from small-scale industry behind car repair shops and textile/batik dyeing.

Roughly 70% of soybean processors are located in clusters of about 50 individual producers, while 30% are scattered. The current location of many soybean producers is unsuitable, mostly along river banks in the low-income areas. Waste is insufficiently treated (if at all), resulting in polluted waterways, which in turn, result in conflicts with the downstream population. However, the industry is important, as soy-based products are an inexpensive, staple food.

There are three different ways to deal with waste from the soy industry. Firstly it can be prevented through more efficient use of raw materials or production of byproducts. Up to 90% reduction in waste discharge can be achieved based on preventive measures alone, motivated by profit-driven market forces. Secondly it can be treated, or converted to a less polluting form, one of which uses the Anaerobic-Aerobic Fixed Film Reactor similar to that being employed in South Jakarta. Finally it can be discharged, causing

environmental problems.

Opportunities for increasing efficiencies of processing raw materials and for reducing waste discharges in this industry hinge on applying techniques to capture lost material from the waste stream for the production of saleable by-products (such as soy sauce and Nata de Soya), or through reintroduction into the primary products (closed loop production). In the case of soy production, the principal waste stream is “whey” which is currently discharged by soy producers, although it contains 33% of the soybean.

The TA will:
(a) explore various prevention options such as reusing the whey, changing production processes, and producing saleable by-products from the waste stream such as Nata de Soya or soy sauce;
(b) explore various waste treatment options and their cost and benefits;
(c) indicate financing options, both through WJEMP and other available sources (such as the existing small scale credit schemes);
(d) carry out financial and environmental analyses of alternative production and treatment options, and the impact on the environment (cost-benefit) for each option;
(e) conduct consultations and small testing with the soy producers in an iterative "feed and feedback process” to check the applicability and acceptability of various options;
(f) test the marketing of new by-products through a survey of consumer preferences regarding waste stream by-products;
(g) estimate market potential of by-products at current production costs, i.e., financial viability of the overall concept (self-sustained reduction of waste from soy production through profit-oriented prevention strategies applied industry-wide); and
(h) carry out the preliminary engineering design for a pilot plant to serve as a demonstration project including preparation of bidding documents for implementation in the first year of APL2.

The TA will conduct consultations with soy producers to discuss ways to improve the settlements and living conditions, in addition to exploring ways to reduce pollution. Micro credit will be available through the assistance for small and medium industries which will be managed separately in the WJEMP.

Outputs: Action plan to make improvements, organization framework to implement common activities.

Support to Soybeen processing and salted Fish Industries in Northern Jakarta				Base Cost (USD) 226,785
Contract	Category	Implementing Agency	Year	Duration (months)
DKI 3-5b	TA	Dinas PERINDAG Tk I	2	12

Background.

The TA will: TORs are very similar to TA DKI 3-5a.

Output: Similar to TA DKI 3-5a.

Feasibility Study for Pulogadung Domestic/Industrial Wastewater Treatment System	Base Cost (USD) 445,718

Contract	Category	Implementing Agency	Year	Duration (months)
DKI 3-4	TA	Dinas PU Tk I	1	

Background. In 1996 detailed designs were prepared by a private firm for a wastewater treatment plant for the industrial estate in Pulogadung. Because of the financial crisis, implementation was never started.

This TA will:

(a) update the design and cost estimates; and

(b) prepare a feasibility study for inclusion of the domestic waste from the neighboring low-income residential areas.

In considering the feasibility of the proposal, the TA will review the possibility of private sector participation in the operation and possibly the ownership of the treatment plant.

Output: update of the industrial waste water projections; review of the adequacy of the existing design, including the feasibility of includng discharges from the low-income residential areas, proposals for tariff structures; detailed design and bidding documents for the proposed or revised design and proposed institutional arrangements.

Feasibility Study for Centralized Wastewater Treatment for Industries				Base Cost (USD) 83,536
Contract	Category	Implementing Agency	Year	Duration (months)
Kab. Serang 3-3	TA	BLH (Environment Bureau)	3	12

Background. There are two principal industrial areas to the west (900) industries and in the south-east (300) industries. Of these 1,200 industries, 300 are classified as large; only 50 of these industries have industrial waste treatment facilities, and many of these fail to meet discharge standards. The technical assistance is required to prepare a comprehensive plan for the management of industrial wastewater from these two principal areas. TA contract Tangerang 3-2, which will have started in year 1 of the project, will produce a strategic environmental plan which will provide the overall framework for this TA.

The TA will: evaluate alternative wastewater collection and treatment arrangements, including the preparation of alternative least cost phased implementation programs that take into account the anticipated cost of land purchase, and the social impact of land acquisition and resettlement (if any).

Output: Inventory of all industrial wastes in Kota Tangerang (working from existing data and supplemented by surveys); site identification study and preliminary environmental impact assessment of alternative treatment plant sites and inventory of affected persons (if any); feasibility studiy and preliminary design with proposed business and organizational plans.

Feasibility Study for Centralized Wastewater Treatment for Industries				Base Cost (USD) 83,536
Contract	Category	Implementing Agency	Year	Duration (months)
Kota Tangerang 3-4	TA	BAPEDALDA	3	12

Background. In Kota Tanerang there are two principal industrial areas to the west with 900 industries an in the south-east with 300 industries. Of these 1200 industries, 300 are classified as large. Only 50 of these industries have industrial waste treatment facilities, and many of these fail to meet discharge standards. This TA will follow on with the local strategic plan prepared during the first two years of the project (TA contract Kota Tangerang 3-2).

The TA will:

(a) prepare a comprehensive plan, including site identification, for the management of industrial wastewater from these two principal areas including wastewater from housing sub-areas within these industrial locations;

(b) evaluate alternative wastewater collection and treatment arrangements, including the preparation of alternative least-cost phased implementation program, taking into account land acquisition and social impacts

Output: Inventory of all industrial wastes (meaning types or sources?); preliminary environmental impact assessment of alternative treatment plant sites and inventory of affected person

Design, Build, Operation of Commercial Scale Compost Plant for Unit #1				Base Cost (USD) 1,215,054
Contract	Category	Implementing Agency	Year	Duration (months)
DKI 1-2	sub-grant	Dinas Kebersihan Tk I	3	not applicable

Background. Implementation of the recommendations prepared under Development of Commercial Scale Composting Plant DKI 3-3 being implemented from Year 1.

Output: An operating commercial composting plant with a daily production not less than 100 t/day high quality compost.

Annex 3: Estimated Project Costs

INDONESIA: WESTERN JAVA Environmental Management Project

Project Cost By Component	Local US $million	Foreign US $million	Total US $million
Overall Urban Environmental Management	4.92	1.45	6.37
Solid Waste Management	2.17	0.64	2.81
Community and Private Sector Participation	1.22	0.36	1.58
Composting Sub-grants	2.73	0.19	2.92
Total Baseline Cost	11.04	2.64	13.68
Physical Contingencies	0.00	0.00	0.00
Price Contingencies	1.55	0.14	1.69
Total Project Costs	12.59	2.78	15.37
Total Financing Required	12.59	2.78	15.37

Project Cost By Category	Local US $million	Foreign US $million	Total US $million
Goods			0.00
Works			0.00
Technical Assistance	9.37	2.57	11.94
GEF Compost Grants	3.22	0.20	3.42
Total Project Costs	12.59	2.77	15.36
Total Financing Required	12.59	2.77	15.36

Incremental Cost Analysis

Broad Development Goals

The proposed Western Java Environmental Management Project (WJEMP) will improve urban environmental services and municipal waste management, promote the Indonesian government's municipal service decentralization efforts, and support local economic development in the major urban areas of western Java and Jakarta. The proposed GEF component – an innovative organic waste composting program – will pilot an environmentally sound and potentially efficient method of managing organic waste that would also cost-effectively reduce Indonesia's GHG emissions. If successful, it will provide a replicable model for organic waste management that can be applied in other urban areas of Indonesia and in other developing countries.

WJEMP within the longer term Western Java Environmental Management Program.

The Government requested the Bank to assist its longer term program and the Bank agreed in principle to assist through three APLs covering nine years of the program. The GEF at the same time agreed to the government's request to provide a USD 10 million grant for the nine year program period. The analysis deals with the entire program period.

Like for the other activities in the program, the APL1 will be used to undertake the detailed design, set up the institutional framework and to initiate some pilot activities.

Baseline

Currently, about 50% to 60% of the urban waste stream in the West Java and Jakarta areas is collected and dumped at "basic" landfills, which are mostly open dumps. Collection rates are lower in poor neighborhoods – Jakarta's collection is estimated at 66%, but Botabek's is only 23%. The rest of the waste is dumped in canals or vacant lots or is burned. Management of the existing disposal sites is deficient in a number of areas: irregular waste covering, sporadic compaction, poor dumping control, ineffective leachate collection and treatment, etc. Anaerobic decomposition of the organic waste that is dumped creates significant quantities of methane, a potent greenhouse gas. However, under the unfavorable landfill operating conditions, methane collection and flaring has not been attempted at any of the sites, so most of the methane escapes into the atmosphere. An alternative means of reducing methane emissions from wastes - separating organic and non-organic waste and composting the organic component - has been tried on a small scale in about 40 local areas, and a few such programs are still operating. Areas of high organic waste supply have been identified and many people are aware of composting and its potential role in a cost-effective integrated waste management system.

All levels of government within Indonesia recognize the environmental unsustainability of existing waste management programs and are attempting to remedy the situation. The proposed project is one example of the environmentally sustainable baseline situation that GOI is striving to achieve. The project's goal for the Jabotabek urban region is 100% collection coverage and sanitary landfilling by end 2006. Since most of the waste disposal will occur in existing sites where retrofitting for methane collection would be very costly and difficult, methane collection will not be attempted under the baseline scenario. Although will costs vary considerably between sites, it is estimated that the sustainable waste management baseline system (sanitary landfilling with no methane collection) will cost an average of $35.00 per tonne of waste received on site by 2009. The baseline costs will be much less than this initially, but will rise over time as more effective and sustainable waste collection and disposal techniques are applied. These costs will financed by Indonesia.

Global Environment Objective

The global environment objective of the project's GEF component is to cost-effectively reduce GHG emissions from the decomposition of collected organic waste in western Java. Assuming the component is successful, a second objective is to facilitate its replication and hence further GHG reductions in other urban areas in Indonesia and other developing countries.

GEF Alternative

The GEF alternative would promote an alternative, less technically demanding and hence potentially more widely replicable way to reduce landfill GHG emissions than sanitary landfill with methane collection, which is to compost part of the organic waste stream in the neighborhoods that produce it and sell the compost to farmers for use in their fields. Composting is an aerobic (with oxygen) waste degradation process that produces CO2 as a by-product. Sanitary landfilling results in anaerobic decomposition, which produces methane (CH4). Composting is a potentially cost-effective way to reduce GHG emissions because: (a) methane produced by anaerobic decomposition is a much more potent GHG than the CO2 produced by composting, plus the best designed and operated landfill gas recovery systems (or anaerobic " fuel cells") collect 80% of the methane, at the very most; (b) composting occurs much closer to the waste generation source, thus reducing waste collection and transportation costs and their associated emissions, and composting also avoids the operation of landfill equipment; (c) compost application reduces the use of

synthetic fertilizers, which involve an energy-intensive, GHG-emitting manufacturing process. (Although compost only has a low fertilizer contribution, its ability to improve soil structure enables more efficient use of fertilizers).

Under the GEF alternative, communities in the Jabotabek region would be encouraged by financial incentives and assisted technically to aerobically compost an average of at least 100,000 tonnes/year of the organic waste they produce over the nine year life of the program. Mechanisms would be developed to market the compost to local farmers. The GEF Alternative would thus divert at least 100,000 tonnes/year of organic waste from landfills, where it would otherwise decompose anaerobically. In so doing, the it would reduce GHG emissions by about 600,000 tonnes of CO2 equivalent per year.

Scope of the Analysis

The scope of the analysis is: (a) the urban organic waste stream and the associated system for the collection and disposal of this waste in the Jabotek region of Indonesia; and (b) the agricultural area around this region that will use the compost that is produced by the GEF alternative method for processing this share of the organic waste stream.

Costs

The objective of the GEF Alternative is to divert 1,000,000 tonnes of organic waste from local dumps and landfills to compost production over the program's nine year life. The estimated cash flows of the Baseline and GEF Alternative systems are summarized in the following table:

Incremental Cost Analysis Table

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Waste treated (tonnes per year)	40,000	60,000	75,000	100,000	125,000	150,000	150,000	150,000	150,000
COMPOSTING									
Costs PER TONNE									
Collection	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0
Separation	3.0	3.0	3.0	3.5	3.5	3.5	4.0	4.0	4.0
Residue Disposal	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Public Education	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Processing (incl land and capital)	28.0	28.0	27.0	27.0	26.0	25.0	25.0	24.0	23.0
Transport	3.0	3.0	3.0	3.5	3.5	3.5	4.0	4.0	4.0
Management/Quality Assur	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total Costs	**45.0**	**45.0**	**44.0**	**45.0**	**44.0**	**43.0**	**44.5**	**43.5**	**42.5**
REVENUES PER TONNE									
Revenue from Disposal fee (same as the Total Landfilling Cost)	4.0	4.8	10.1	13.0	16.9	20.8	32.5	33.8	35.0
Revenue from sale of compost	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Total revenue (US$ per tonne of waste)	4.0	5.8	12.1	16.0	20.9	25.8	38.5	40.8	43.0

Cost difference between composting and landfiling(US$ per ton)	41.0	39.2	31.9	29.0	23.1	17.3	6.0	2.8	-0.5
Cost difference stream (for all waste) in million US$	1.6	2.4	2.4	2.9	2.9	2.6	0.9	0.4	-0.1
Total cost difference stream (million US$)	16.0								
Present value of cost difference stream of INCREMENTAL COST (million US$)	11.1								
at dicount factor of	10%								
LANDFILLING COSTS	**Uncontroled disposal**					>	**Landfilling costs**		
Investments PER TONNE									
Environmental remediation (if required for the landfill) incl. closure	1.0	1.0	2.0	2.9	3.9	4.8	7.5	8.0	8.5
Site Acquisition (incl. community compensation)	0.0	0.0	2.0	2.6	3.3	3.9	4.8	4.9	5.0
Transfer	0.0	0.8	1.6	2.4	3.3	4.1	6.0	6.3	6.5
Design and Costr.	0.0	0.0	1.0	1.0	1.8	2.5	5.5	5.8	6.0
Operational costs	3.0	3.0	3.5	4.0	4.8	5.5	8.8	8.9	9.0
Total Costs	**4.0**	**4.8**	**10.1**	**13.0**	**16.9**	**20.8**	**32.5**	**33.8**	**35.0**

The agreed incremental cost of the GEF Alternative is $11.1 million. Indonesia requests a GEF grant of $10.0 million, and will fund the balance of these costs from its own resources. The GEF grant request equates to a unit GHG abatement cost of $1.7/tonne of carbon equivalent.

Incremental Cost Matrix

	Baseline	Alternative	Increment
Global Environment Benefit	Negative. Expanded waste collection and sanitary landfilling increases anaerobic decomposition and methane emissions.	6.0 million tonnes of methane gas emissions avoided by diverting 1,000,000 tonnes of organic waste to composting.	
Domestic Benefit	Better community health from more effective waste treatment.	Same as baseline.	
Costs	US$22.9 million	US$34.0 million	US$11.1 million

[1] Identifiable taxes and duties are 0 (US$m) and the total project cost, net of taxes, is 12.59 (US$m). Therefore, the project cost sharing ratio is 86.26% of total project cost net of taxes.

Annex 4: Cost Benefit Analysis Summary

INDONESIA: WESTERN JAVA Environmental Management Project

To assist in overall program development an Economic Rate of Return, using data from the Jabotabek Environmental Management study, was estimated for the nine year program. The summary follows.

A discrete economic analysis does not apply for APL1, Western Java Environmental Management Project (WJEMP), which does not include any investments in physical components but sets the strategic framework, strengthens the institutions and prepares the feasibility studies and detailed design for the investments to be undertaken under ensuing APL2 and APL3.

Regional Economic Setting

1. The provinces of West Java (which included the new province Banten at the time) and DKI Jakarta contained some 41.6 million and 9.5 million people respectively in 1998. The population of the project area was estimated at 16.6 million, 33% of the regional total. The population growth rate 1995 to 1998 was 1.9% in West Java and 1.2% in Jakarta, both declining from previous periods. In West Java 48% of the population is urban. The growth of the urban population of the region 1995 to 1998 was estimated at 4.3%, compared to 5.0% 1990 to 1995. Most of the growth up to 1996 took place in Botabek (Bogor, Tanggerang and Bekasi, all included in the WJEMP).

Table A4.1 Population of the Project Area, Jakarta and West Java (000)

		Total			1998 Total		Growth % pa
Kotamadya / Kabupaten	**1990 (000)**	**1995 (000)**	**1998 (000)**	**Group %**	**Region %**	**1990/95 %**	**1995/98**
Jakarta	8228	9144	9489	57.0%		2.1%	1.2%
Bandung	2069	2422	2502	15.0%		3.2%	1.1%
Tanggerang	NA	2303	2263	13.6%			-0.6%
Bekasi	NA	1640	1457	8.8%			-3.9%
Bogor	272	329	346	2.1%		3.9%	1.7%
Cilegong (Serang)	NA	313	332	2.0%			2.0%
Cirebon	255	266	259	1.6%		0.8%	-0.9%
Project	NA	16417	16648	100.0%	32.6%		0.5%
West Java							
Other urban	NA	489	3389	8.2%	6.6%		90.7%
Total urban	12208	16906	20037	48.2%	39.2%	6.7%	5.8%
Total	35380	39340	41578	100.0%	81.4%	2.1%	1.9%
% Urban	34.5%	43.0%	48.2%				
Region							
Urban	20436	26050	29526	57.8%	57.8%	5.0%	4.3%
Total	43608	48484	51067	100.0%	100.0%	2.1%	1.7%
% Urban	46.9%	53.7%	57.8%				

Note: Tanggerang, Bekasi and Cilegong were not classified as kotamadya (cities) in 1990 and separate population data is not available. Cilegong is the recently formed kotamadya within Kabupaten Serang.

2. Average per capita GRDP in Jakarta is some four times that in West Java. This is not reflected in worker earnings. In 1997, West Java's manufacturing non-supervisory workers earned 97% of those in Jakarta. Earnings in West Java are also less skewed even at that level (the median wage of workers was 2.2% higher than in Jakarta). The cost of living in Jakarta, as evidenced by the minimum wage, is similar to that in the surrounding areas of Jabotabek but some 20% higher than in the remaining areas of West Java.

3. As recorded in pre-crisis statistics, the proportion below the absolute poverty line was 2.5% in Jakarta and 9.9% in West Java (10.5% in urban areas and 9.4% in rural). Post-crisis statistics are unreliable, but imply that the overall proportion of the urban poor has increased to some 20%.

4. Other surveys to determine the effects of the crisis (RAND with USAID and World Bank funding and surveys) showed that mean incomes in West Java and Jakarta decreased significantly more than the average but that median incomes did not. Data imply that largely it was the incomes of the comparatively wealthy that fell the most while those of the poor were less affected.

Regional Environmental Health

5. The environmental study of the Third Jabotabek Urban Development Project (JUDP III) found that the overall levels of air and water pollution in the region were severe, costing the inhabitants some US $750 million per year (some $ 55 per person). Some 85% of the cost was due to air pollution, mainly from urban transport: around 5%, or US $40 million per year, was caused by the burning of solid waste. The remainder was due to water pollution, some US $110 million a year. These costs are considered conservative, since they only include the ill effects of some of the known pollutants (a later study on urban policy (SURIP - UTPP) estimated the annual transport related costs of air pollution in Jakarta alone as some US $ 1.3 billion).

6. In 1995, cases of diarrhea per thousand people were reported to be 38.5 in West Java and 12.4 in Jakarta. The national average was 25.8. A similar relation relates to cause of death and morbidity. In West Java diarrhea is one of the top ten causes of hospital death. Similarly, diarrhea is the 3rd most treated disease at health centers in West Java and the 7th in Jakarta. Diarrhea or intestinal infection was the main cause of admission to hospitals in both West Java and Jakarta. Similar data are not available for other water related diseases but JUDP III record the following for DKI Jakarta in 1992.

Table A4.2 Water Related Diseases, DKI Jakarta 1992

Disease	Admissions	Deaths	Estimated due to water quality
Diarrhea	20624	489	76%
Cholera	1224	20	90%
Hepatitis	2062	79	50%

Typhoid	11420	170	50%
Paratyphoid	988	38	40%
Total	36318	796	

7. The Program will contain seven major components, each with sub-components:

- solid waste management, including collection, transport, disposal, composting, recycling, medical waste, industrial waste;
- community environment facility (CEF), including clean water, waste collection, drainage, latrines;
- small and medium sized industry pollution control (SME);
- environmental education, formal, informal and monitoring activities;
- environmental management, including air quality and surface water control activities, greening, campaigns and monitoring;
- an unspecified/unallocated component;
- training and support.

8. Local governments have been asked to propose sub-projects and to date some 190 have been identified. These are of varying sizes and only some 60 are costed at more than US $ 150,000. In many cases, the sub-project will itself contain separate sub-components. This applies particularly to CEF sub-projects but will also include sub-projects in other sectors.

Sub-Project Economics

9. Sub-projects fall into two major groupings: (a) those whose benefits are generic and determined by the overall level of pollution and (b) those whose benefits are location specific. This distinction will be used to determine the type of analysis required. The Central Program Support Unit will determine whether or not a specific sub-project can use one of the generic groups or should have its own location specific analysis.

10. Generic projects are those whose benefits will depend largely on the overall level of environmental degradation. While the benefits to such projects would be different in areas with more or less pollution, variations in the benefits within any one area will be minor as long as they follow standard operating procedures. These procedures will be determined by the Project Secretariat.

11. The generic groupings that have been identified are the nine relevant groups specified by JUDP III and the community environment facility sub-projects. These are discussed below. Followed by a discussion of the project groups which might require specific evaluation. Those that have already been identified are: industrial pollution (SME), composting and flood control.

12. Sub-projects of all sizes should be subject to least cost solutions analysis. Projects below US $ 100,000 will not require economic evaluation but should have a financial analysis. Projects between US $ 100,000 and $ 250,000 require an economic evaluation only if there is no generic ERR which demonstrates viability. The latter will be accepted only if the project follows standard operating procedures set by the Project. Sub-projects over US $ 250,000 should receive a detailed economic evaluation, although this can make use of the JUDP III assumptions and data used to make their generic ERRs.

13. All sub-project proposals will be required to provide a description of the direct and indirect beneficiaries and of the effects that will be mitigated by the project. The description should include beneficiary numbers and their physical/socio-economic condition. Since land values will often be required, the area affected and the present average land value should be estimated. Data should also be collected on the current level of parameters related to whatever effect it is proposed will be reduced, e.g. cases of diarrhea.

Indicative Project ERR

14. An indication of the project ERR can be provided from the JUDP3 evaluation of the available data on sub-projects costing more than US $150,000. They imply an overall project ERR of 20.4% (as shown in Table A4.5 at the end of this annex).

JUDP III Project Types

15. The JUDP3 project identified 12 sub-project types, nine of which have been or might be proposed for WJJEMP. The JUDP III project ERRs were based on the human health costs of air and water pollution. The former used standard dose-response relationships and the results were found to be conservative by the SURIP UTPP urban transport study. The effects of water pollution used a cross-sectional and time based analysis of river water quality and diarrhea. Adding other water borne diseases would increase the benefits by around 50%.

16. The returns on the JUDP3 sub-projects would be only marginally affected by location specific data. The project calculations were made for the Jabotabek area, which includes all of the program areas apart from Bandung, Serang and Cirebon. The pollution situation outside Jabotabek is certainly less severe. However, the diarrhea situation in West Java as a whole implies that using Jabotabek derived data is not unreasonable. Therefore, it is proposed to use the generically based ERRs for all projects that can be directly related to one of the above project types.

17. The JUDP3 ERRS, which allowed for the costs of management, training, advisory consultants and public awareness programs, were as follows.

Table A4.3 JUDP3 Project Economic ERRs

Project Type	**ERR**
Rubbish Collection/Disposal	26.2%
Toxic Waste Management	19.0%
Septic Tank Maintenance	23.2%
Community Septic Tanks (see below)	Neg.
Local Drain Cleaning	14.9%
Diesel Vehicle Particulate Control	20.1%
CNG Large Bus Fuel	26.5%
LPG Small Bus/Taxi Fuel	17.0%
Environmental Protection & Pollution Control Inspection/Advisory Service (see SME below)	28.0%
Source: JUDP III Phase III Report, June 1994	

Community Environmental Facility (CEF) Projects

18. The ERRs for Community Environmental Facility projects will also be estimated generically. They include waste collection, drainage and latrines. This sub-projects are very similar to the kampung improvement projects (KIP) which the Bank funded since Urban I started in 1972. Those projects were justified by their likely effects on land values. The 1988 project completion report (PCR) for the Urban III loan validated this assumption. It estimated average land price increases resulting from KIP of: 24% along roads, 29% along footpaths and 61% in inner kampungs. These reflected in ERRs of 26% to 31%. The 1995 impact evaluation report (IER) confirmed the PCR's estimated land value increases (but noted the need to assure that these benefits accrued to residents).

Industrial Pollution Control (SME)

19. The JUDP3 analysis found large potential benefits from setting up an agency to control industrial pollution (estimated ERR of 28%). The benefits would be from decreased fuel burning and from decreased dumping in the drains/rivers. Industrial waste is specific to the proposed intervention and it would be necessary to validate the benefits for each proposal. This would be particularly important given the obvious opportunities for collusion. The Central Program Support Unit will evaluating sub-projects to ensure the capture of social benefits.

Community Septic Tanks

20. The JUDP3 finding for community septic tank benefits is surprisingly low. One reason is the short period assumed but extending this would not increase the return sufficiently. Similarly, JUDP3 included significant costs for management and awareness campaigns etc. Even excluding these raises the ERR to only some 4%, however. The finding is important since it is government and Bank policy to support community facilities such as these. Therefore, the issue of sewerage requires more comprehensive review and is not included in the Program

Composting

21. Composting rates in Jakarta are insignificant. In West Java more waste is composted and an even higher percentage (35%) is burnt at source. This probably reflects the rural areas. The program areas are likely to have characteristics more similar to Jakarta's.

Table A4.4 Garbage Disposal Practices

Province	Collected	Composted	Burnt	River	Dumped	Total
West Java	18.6%	6.0%	35.4%	11.5%	28.5%	100.0%
Jakarta	70.2%	0.8%	9.9%	4.3%	14.8%	100.0%
Indonesia	17.0%	6.2%	34.5%	8.6%	33.7%	100.0%

Source: Environmental Statistics of Indonesia, BPS 1996, p 132						

22. The World Bank internal study *Small Scale Composting, Financial and Economic Analysis, A Case* Study, by Dong Liu, recommended that the government could provide compost marketing support in an attempt to expand demand, but should not provide financial support to producers unless the social benefits would be sufficient to validate them.

23. The analysis was based on the cost and revenue structure of a plant with capacity of 16 tonnes/month. Demand, which gave a sufficient financial return, was at least 60% of capacity. Low relative demand, when social returns are insufficient to justify support occurred at around 40% of capacity. A relatively narrow range, 40% to 60% of capacity, occurs where government intervention would be both necessary and economically viable. At the lower end of the range, the ERR would be the assumed 10% cut-off rate, rising to 20% at the higher end.

24. The emphasis should be on the correct estimation of demand for the compost. A compost plant can be both economically and financially viable as long as the demand was correctly forecast and capacity properly related to demand. The burden should be placed on the project proposers to explain why a subsidy is needed. Proposers will be required to prepare a detailed business plan with validated sales forecasts. These alternative will be investigated by the Program.

Summary of Benefits and Costs:

Main Assumptions:

Sensitivity analysis / Switching values of critical items:

Annex 5: Financial Summary

INDONESIA: WESTERN JAVA Environmental Management Project

Years Ending
July

	IMPLEMENTATION PERIOD						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Total Financing Required							
Project Costs							
Investment Costs	2.2	6.9	6.2	0.0	0.0	0.0	0.0
Recurrent Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Costs	2.2	6.9	6.2	0.0	0.0	0.0	0.0
Total Financing	2.2	6.9	6.2	0.0	0.0	0.0	0.0
Financing							
IBRD/IDA	1.8	6.1	2.9	0.0	0.0	0.0	0.0
Government	0.2	0.6	0.5	0.0	0.0	0.0	0.0
Central	0.1	0.3	0.7	0.0	0.0	0.0	0.0
Provincial	0.1	1.2	0.4	0.0	0.0	0.0	0.0
Co-financiers	0.0	0.1	0.0	0.0	0.0	0.0	0.0
User Fees/Beneficiaries	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Others	0.1	0.2	2.8	0.0	0.0	0.0	0.0
Total Project Financing	2.1	7.0	6.3	0.0	0.0	0.0	0.0

	OPERATIONAL PERIOD						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Total Financing Required							
Project Costs							
Investment Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recurrent Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing							
IBRD/IDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Government	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Central	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provincial	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Co-financiers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User Fees/Beneficiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Main assumptions:

The Bank financing of US$ 10.86 million

The project base cost is US$ 13.67 million; physical contingencies - US$ 0.00 million, and price contingencies - US$ 1.69 million. GEF base cost financing estimated at US$ 2.92 million or US$ 3.11 current cost.

Exchange Rate 1 US$ = IR 10,200.

Annex 6: Procurement and Disbursement Arrangements
INDONESIA: WESTERN JAVA Environmental Management Project

Procurement

Procurement of works and goods will follow the "Bank Guidelines: Procurement under IBRD Loans and IDA Credits", January 1995 edition, revised January and August 1996, September 1997 and January 1999. Standard Bidding Documents (including Standard Prequalification and Bid Evaluation Documents), which may be updated from time to time, will be used for all Bank financed procurement.

Selection of Consultants will follow the "Bank Guidelines: Selection and Employment of Consultants by World Bank Borrowers", January 1997 edition, revised September 1997 and January 1999 and "Standard Request for Proposals for Selection of Consultants", July 1997 edition, revised April 1998 and July 1999.

The Compost Grants under the GEF grant will be distributed through a financing intermediary in accordance with guidelines to be developed during the first year of the project and acceptable to the Bank.

The Procurement Plan providing a timeline for each step of the procurement process has been prepared for APL1 and will be updated annually.

An annex to Schedule 4 of the Loan Agreement addresses the above inconsistencies for procurement of works under NCB procedures and establishes that the World Bank's guidelines for procurement of works, goods and selection of consultants takes preeminence in procurement under the Loan and Grant.

A Procurement Capacity Assessment Report (PCAR*)* was conducted for the project and is available on the project file. This covered legal issues, project cycle management, organization and functions, support and control systems, record keeping, staffing, the general procurement environment, and overall risk assessment.

Summary of the Procurement Capacity Assessment. The legal framework which has been revised by the government in early 2000 is generally acceptable. However, NCB procedures still have weaknesses. The new Keppres 18/2000 is revising the old Keppres 16/1994, including new provisions on procurement of goods and selection of consultants, and guidance on fraudulent, corruption and collusion practices. In general both Keppres' have some acceptable guidelines, rules and procedures compared with the World Bank's procurement guidelines, rules and procedures. However, there are still provisions in these Keppres' that are inconsistencies between the World Bank's guidelines, such as (i) the criteria and procedures for the prequalification are unclear (ii) interest for late payment is unclear, (iii) automatic re-biding if the participating bidders is less than three, (iv) rejection of all bids if all bidders' price are above the budget allocation, (v) above certain thresholds of the contract, a large firm or foreign firm must join with smaller firms or local firm and (vi) the guidelines for procurement of goods and for selection of consultant are unclear. As the APL1 only includes technical assistance procurement, this is not a concern in this project.

The institutional anchoring of procurement is weak with bidding committees and senior project positions being temporary in nature and without clear guidelines. The biggest weakness, however, stems form a long culture of collusion between contractors, inefficient use of consultants, lack of transparency and interference from senior levels in the process and transient nature of the committees and staff responsible for procurement . The ongoing decentralization of responsibilities to the local governments adds uncertainty to how the future performance will be. Under the project, each implementing unit will only

implement two to five contracts, mainly TA contracts, which will of sizes similar to what they have been procuring in the past. All contract documents and methods of selection for the first year's procurement have been agreed by the Bank prior to negotiations, thereby reducing the risk of delay in the procurement. Considering the various risk elements, the overall risk assessment is: Average

Procurement methods (Table A)

Table A shows the project cost by procurement arrangements.

APL1 does not include procurement of Civil Works or Goods.

The consulting services for capacity building, development of regulations, guidelines, standards, operating procedures, preparation of investment projects, detailed engineering and design (DED), studies and for training and awareness building estimated at $ 10.1 million will be provided under consultancy contracts procured using Consultants selection method are shown in Table A1. Eight consultants' contracts estimated to cost US$ 8.6 million will be selected based on Quality and Cost (QCBS) estimated at US$ 8.6 million. Quality Based Selection (QBS) has been selected for 22 consultancy service contracts, where assignments are highly specialized and where consultants have to show willingness to innovate and seek alternative solutions. The estimated cost is US$ 3.1 million. Five consultants' service contracts, estimated to cost US$ 178,000, for which the work is technically well defined will be selected under fixed budget procedures.

Two GEF- Sub-grants will be provided. A production grant fund of USD 1.25 mill will be established in a financial intermediary institution which will provide grant to compost producers according to tonnage produced. The details of the sub-grant production scheme will be developed and agreed with the Bank during the first year of the project. The Province of DKI Jakarta has requested that a second Sub-grant of USD 1.1 million will be provided to DKI to procure 100 tons per day. The Bank is of the opinion that this would jeopardize GOI's ability to meet the target of increasing the production of compost by 60,000 tons during APL1. This issue will be resolved during the negotiations and the Annex amended to reflect the agreement reached.

Table A: Project Costs by Procurement Arrangements
(US$ million equivalent)

Expenditure Category	Procurement Method[1]				Total Cost
	ICB	NCB	Other[2]	N.B.F.	
1. Works	0.00		0.00	0.00	0.00
	(0.00)	()	(0.00)	(0.00)	(0.00)
2. Goods	0.00		0.00	0.00	0.00
	(0.00)	()	(0.00)	(0.00)	(0.00)
3. Services	0.00	0.00	11.94	0.35	12.29
Technical Assistance	(0.00)	(0.00)	(11.17)	(0.00)	(11.17)
4. GEF Sub-grants	0.00	0.00	0.00	3.07	3.07
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Total	0.00	0.00	11.94	3.42	15.36
	(0.00)	(0.00)	(11.17)	(0.00)	(11.17)

1/ Figures in parenthesis are the amounts to be financed by the Bank Loan/Grant. All costs include contingencies

2/ Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

N.B.F. Not Bank Financed

Table A1: Consultant Selection Arrangements (US$ million equivalent. Current)[1]

Project Code	Project Name	Procurement / Selection Method			Current Price
		QCBS	QBS	NBF	US$
Pusat 3-1	Wastes		462,806	-	462,806
Pusat 3-2	Management and Technical Advisory Services to Central Program Support Unit		2,611,195	-	2,611,195
Pusat 3-3	Component	639,088		-	639,088
Pusat 3-5	Cilegon/Serang Emergency Preparedness Program		561,713	-	561,713
Pusat 3-6	Jabotabek Waste Management Corporation Consultant Support		1,172,380	-	1,172,380
Pusat 3-4	Component	558,960		-	558,960
Pusat 3-8	Environment Facility	399,622		-	399,622
Pusat 3-9	Preparation of Program Design and Implementation Plan for Small and Medium Scale Industry Support (S/MIS)	277,006		-	277,006
West Java 3-1	West Java Province Environmental Strategy	598,302		-	598,302
West Java 3-2	Greater Bandung Waste Management Corporation Consultant Support	477,861		-	477,861
DKI 3-2/3-7	Community Based Solid Waste Management- Reduce, Reuse and Recycle (3R) and Assistance to Waste Pickers		554,329	-	554,329
DKI 3-3	Develoment of Commercial Scale Compost Plant	471,750		-	471,750
DKI 3-4	System		484,451	-	484,451
DKI 3-5a	Preparation of Tahu Industries Pollution Reduction Program in Central Jakarta		143,986	-	143,986
DKI 3-6	Local Environmental Awareness-DKI Jakarta		176,859	-	176,859
DKI 3-5b	Support to Tahu / Tempe, Salted Fish Industries in North Jakarta		251,415	-	251,415
Kota Bandung 3-3	Feasibility Study and Preliminary Engineering Design for Cikapundung River Domestic Wastewater Facilities		203,537	-	203,537
Kota Bandung 3-1	Kota Bandung Local Environmental Strategy		84,993	-	84,993
Kab. Bandung 3-1	Kabupaten Bandung Local Environmental Strategy		89,654	-	89,654
Kota Bekasi 3-1	Kota Bekasi Local Environmental Strategy		111,314	-	111,314
Kab. Bekasi 3-1	Kabupaten Bekasi Local Environmental Strategy		85,542	-	85,542
Kota Bogor 3-1	Kota Bogor Local EnvironmentalStrategy		126,804	-	126,804
Kota Depok 3-1	Study for Normalization and Management of Lakes		221,366	-	221,366
Kota Depok 3-2	Kota Depok Local Environmental Strategy		122,692	-	122,692
Kota Tangerang 3-1	Feasibility Study, AMDAL and DED for Domestic Waste Treatment (IPLT)	125,434		-	125,434
Kota Tangerang 3-2	Kota Tangerang Local Environmental Strategy		54,012	-	54,012
Kota Tangerang 3-4	Feasibility Study for Centralized Industries Waste Water Treatment		97,395	-	97,395
Kota Cirebon 3-1	Kota Cirebon Local Environmental Strategy		81,703	-	81,703
Kota Cirebon 3-2	Oxidation Pool	42,497		-	42,497
Kota Cirebon 3-3	Feability Study, AMDAL and DED for TPA Kopiluhur		175,605	-	175,605
Kab. Serang 3-2	Kabupaten Serang Local Environmental Strategy		114,467	-	114,467
Kab. Serang 3-1	New TPA		264,543	-	264,543
Kab. Serang 3-3	Feasibility Study for Centralized Industries Waste Water Treatment		97,395	-	97,395
Pusat 3-7 (GEF)	Design of GEF Compost Grant Mechanism and Marketing Study for Agricultural Use of Commercial Scale Compost		-	350,174	350,174
Pusat 2-1 (GEF)	Compost Grant/Subsidies			1,629,801	1,629,801
DKI 1-2 (GEF)	Design, Build, Operation Commercial Scale Compost Plant for Unit # 1			1,444,451	1,444,451
		3,590,520	8,350,155	3,424,426	15,365,101

Note: QCBS = Quality- and Cost-Based Selection
QBS = Quality-based Selection
SFB = Selection under a Fixed Budget
LCS = Least-Cost Selection
CQ = Selection Based on Consultants' Qualifications
Other = Selection of individual consultants per Section V of Consultants Guidelines)

N.B.F. = Not Bank-financed
Figures in parenthesis are the amounts to be financed by the Bank loan.

[1] Costs will be revised after negotiations to reflect agreements on which taxes area to be paid by consultants. At t

Prior review thresholds (Table B)

The 34 procurements under the project for technical assistance, will be done by 14 local government units, 4 provincial units and 4 national government units. Of the six largest contracts, between US$ 0.6 million and US$ 2.6 million four will be procured by national government units and one by the West Java Province.

Table B shows the threshold values for prior review. Since the project is the first of three planned APLs, particular attention will be made to the procurement procedures to inculcate good practices from the start of this planned 9 years relationship. The major procurements in civil works and goods are schedule for the second and third APL with TA dominating procurements in APL1.

The Procurement Capacity Assessment Report identified the unfavorable procurement climate in the implementing agencies, and Indonesia generally, and identified the risk as average. Hence, to mitigate the risk and to help the implementing units to start well on the nine year program, the first contract within each procurement category and each implementing unit will be subject to prior review. An analysis showed only marginal reduction in the numbers to be reviewed by increasing the threshold from US$ 50,000 to US$ 100,000. Hence, to remove the temptation to fragment contracts into smaller contracts, the threshold has been set uniformly at US$ 50,000, which would is low for the larger and more experienced local governments. However, they will not be inconvenienced, as they only have one contract within each procurement category during APL1, and the values are well above the US$ 100,000 level.

Contracts for consultants' services estimated to cost more than $100,000 for firms will be subject to prior review (27 contracts). The following will be subject to prior review by the Bank: (a) terms of reference for such contracts; (b) the qualifications and experience; and (c) the terms of employment. For consultancies financed from provisional sums, all documents, including contracts and selection methods will be prior reviewed.

Table B1: Thresholds for Procurement Methods and Prior Review - IBRD [Loan]

Expenditure Category	Contract Value Threshold (US$ thousands)	Procurement Method	Contracts Subject to Prior Review (US$ millions)
1. Works			
2. Goods			
3. Services	First contract each local government agency Contracts for firms $100,000 and more	See Table A1	TORs, shortlists and qualifications for all contracts. (10.64)

Table B 2: Thresholds for Procurement Methods and Prior Review - GEF Grant [1]

Expenditure Category	Contract Value Threshold (US$ thousands)	Selection Method	Contracts Subject to Prior Review (US$ millions)
3. Services	First contract each local government agency Contracts for firms $100,000 and more	QBS	TORs, shortlists and qualifications for all contracts. (0.35)
4. Sub-grants			
Sub-grants to producers	N.A.	Will be determined after Year 1 and to be approved by the Bank	1.63
GEF Sub-grant DKI [1]		QCBS/BOT	1.44

Total value of contracts subject to prior review:	13.00 million

1. Will be revised to reflect the agreement reached during the negotiations.

Disbursement

Allocation of loan/grant proceeds (Table C)

Table C1: Allocation of IBRD Loan Proceeds

Expenditure Category	Amount in US$ million	Financing Percentage
Works		
Goods		
Services	10.85	80%
Total IBRD Costs	10.85	

Table C2: Allocation of GEF Grant Proceeds

Expenditure Category	Amount in US$ million	Financing Percentage
Works		
Goods		
Services	0.35	90%
Sub-grant	1.63	100%
Sub-grant to DKI	1.44	100%
Total GEF Grant Costs	3.42	100%
Total	13.97	

Financial Management

The project is being implemented decentrally by local government units which are responsible for all aspects of their sub-project. The government budgeting, accounting procedures and internal controls meet the minimum standards required and will be followed in the project.. Only the CPSU has during the last three years had experience with implementation of donor financed projects and it will be responsible for

consolidating the project accounts based on monthly reports from the local governments. The Director General Urban Development, has developed a Project Management Manual which sets out the procedures to be followed by participating local governments and this manual has to be agreed by negotiations.

At the local government level the effectiveness of internal control procedures are questionable and with the lack of experience with the requirements of donors, it is necessary to conduct financial management training for the staff of the participating units prior to loan effectiveness.

CPSU's quarterly Project Management Reports will form the basis for the projects annual account. Audit arrangement will be agreed during negotiations and will be undertaken in accordance with the Terms of Reference below.

Financial Management Action Plan

Issues/ Problems	Remedial Action	Responsible Unit	Due Date
1. Overdue project account audit reports	• One audit report overdue	• Dir. Bina Teknik (SH)	• Before negotiation
2. Organization structure	• Central project organization structure to be agreed through signed SK • Agreed in principle with the Bank (this will be included in the PMM - see below)	• DGURD	• Substantially complete • Agreed during Appraisal Mission
3. Project staffing	• Staff for the CPSU to deputy level have been appointed; assistants to be assigned prior negotiation	• DGURD	• Done
4. Project management capacity	• Capacity evaluation already conducted by WBOJ (by Rizal Rivai), but no report to GOI • Project management (procurement and financial) training for project staff is part of Bridging Consultancy.	• GOI/WB	• Done • Before Loan Effectiveness
5. Project Management Manual (PMM)	• PMM forwarded to WBOJ on 08.03.01 • Provision of TA to develop accounting software is included in Bridging Consultancy scope of works.	• DGURD	• 08/03/01 • before Loan Effectiveness
6. Budget & Funding for 1st year	• 1st year budgets already prepared	• LGU's & central PIUs	• Done

7. Circular letter (SE) by DG Budget	• Draft SE for payment procedures to be sent to WBOJ after final GOI review meeting	• MoF	• 09/03/01
8. Audit Arrangement	• draft audit TOR prepared by WBOJ • Auditor assignment agreed	• WBOJ / DGURD • WBOJ	• Done • at Negotiation
9. GEF component and activity	• GEF draft request, acceptable and agreed with Bank • Preliminary fund mechanism in PMM	• Bappenas/ Bapedal	• Done • DGURD
10. Community /Private Sector Participation component and activity	• Program included in PIP/PAD/PMM • Fund mechanism to be defined in APL 1 under TA Pusat 3-8 for implementation in APLs 2 and 3.	• DGURD / PMD	• Done • After effectiveness

Audit

TERMS OF REFERENCE
for the Audit of Special Purpose Project Financial Statements

Objectives

The overall objectives of the audit are: (i) to enable the auditor to express a professional opinion on the project financial statements, the operation of the overall financial management system including internal controls, and compliance with financing agreements; (ii) to provide project management with timely information on financial aspects of the project to enable follow-up action; and (iii)) to assess on the achievements of project objectives as measured by performance indicators.

The audit should cover the entire project, i.e. covering all sources and application of funds by all implementing agencies. The auditor should visit the various implementation units and other agencies as considered necessary for the audit.

Scope

The audit will be carried out in accordance with International Standards of Auditing and with the Audit Manual for World Bank Financed projects (July 1998). It will include such tests and controls as the auditor considers necessary under the circumstances. Specific areas of coverage of the audit will include the following:

(1) an assessment of whether the project financial statements have been prepared in accordance with consistently applied Generally Accepted Accounting Principles (GAAP) and give a true and fair view of the operations of the project during the year and the financial position of the project at the close of the fiscal year. Any material deviations from GAAP, and the impact of such departures on the project financial statements as presented would be stated

(2) an assessment of the adequacy of the project financial management systems. The financial management system would include methods and records established to identify, assemble, analyze, classify, record and report on transactions and to maintain accountability for the related assets and liabilities

, including internal controls. This would include aspects such as adequacy and effectiveness of accounting, financial and operational controls, and any needs for revision; level of compliance with established policies, plans and procedures; reliability of accounting systems, data and financial reports; methods of remedying weak controls or creating them where there are none; verification of assets and liabilities; and integrity, controls, security and effectiveness of the operation of the computerized system (if any), and

.(3) an assessment of compliance with provisions of financing agreements, especially those relating to accounting and financial matters. This would inter alia include verification that:

(a) all external funds have been used in accordance with the conditions of the relevant financing agreements, with due attention to economy and efficiency, and only for the purposes for which the financing was provided.

(b) counterpart funds have been provided and used in accordance with the relevant financing agreements, with due attention to economy and efficiency, and only for the purposes of which they were provided;

(c) expenditures charged to the project are eligible expenditures and have been correctly classified in accordance with the relevant financing agreement;

(d) goods and services financed have been procured in accordance with the relevant financing agreement;

(e) all necessary supporting documents, records, and account have been kept in respect of all project activities

(f) clear linkages exist between the accounting records including accounts books and the Project Financial Statements;

(g) where Special Account has been used, it has been maintained in accordance with the provisions of the relevant financing agreement.

(h) statement of expenditures (SOE) used as the basis for the submission of withdrawal applications accurately reflect expenditures and activities on the project

(i) project expenditures as reported by the project implementation agencies are reconciled with the amounts withdrawn from the Special Account and the amounts deposited to the special account are reconciled with the amounts disbursed from the IBRD Loan.

(4) an assessment on Project Management Report (PMR) and the achievements of the planned results of the projects as measured by the performance indicators as stipulated in the relevant financing agreement.

Project Financial Statements

Project Financial Statement shall be prepared by each PMU/PIU whereas the consolidated project accounts shall be prepared by PMU on provincial level and CPMU for the whole project account, and should include (i) Annual Project Expenditures and Financing; and (ii) Cumulative Project Expenditures and Financing. Sources of funds would show IBRD, GEF, and GOI counterpart funds separately. Project expenditures would be summarized by main project components, disbursement categories and by project location (province or kabupaten) both consolidated for the current fiscal year and accumulated to date. The consolidated project account shall also include Financial Statement of Special Account covering: (i) deposits and replenishments received from the Bank; (ii) withdrawals from the special account; and (iii) the remaining balances at the end of the fiscal year

The auditor should provide an opinion as to the degree of compliance with the Bank's procedures and the exactitude of the balance of the Special Account at year-end. The audit should examine the eligibility and integrity of financial transactions during the period under review and fund balances at the end of the period, the operation and use of the special account in accordance with the financing agreement, and the adequacy of internal financial controls.

Special Account: The auditor must assess a reconciliation report between the project

expenditures made from the special account and the withdrawals from the special account. Reconciliation should also be made with the amounts paid from the pre-financing account and direct payments (if any). The auditor should assess a reconciliation report between the amounts deposited to the special account and disbursed by the World Bank to the special account.

Statement of Expenditures: The auditor is also required to audit all SOEs (paid from the special account and/or other accounts) used as the basis for the submission of withdrawal applications. The auditor should apply such tests and control as the auditor consider necessary under the circumstances. These expenditures should be carefully compared for project eligibility with the relevant financing agreements, and with reference to the Project Appraisal Document for guidance when considered necessary. Ineligible expenditures identified as having been included in withdrawal applications and reimbursed by the World Bank should be noted separately by the auditor. The total withdrawals under the SOE procedure should be part of the overall reconciliation of Bank disbursements described above.

Audit Report

The audit report shall contain the auditor's opinion on the fairness of the project financial statements, including an opinion on the Special Account and a separate paragraph commenting on the accuracy and propriety of expenditures withdrawn under the SOE procedures and the extent to which the Bank can rely on SOEs as a basis for loan disbursement. The report should refer to the auditor's TOR. The auditor should submit the report to the project executing agency who should then promptly forward one copy of the audited accounts and report to the Bank. It should be received by the Bank no later than ***six months*** after the end of the project's fiscal year (June 30).

Management Letter

In addition to the audit reports, the auditor will prepare a management letter or include in the report, in which the auditor will:

(a) give comments and observations on the accounting records, systems, and controls that were examined during the course of the audit; and identify specific deficiencies and areas of weakness in systems and controls and make recommendation for their improvement;

(b) give comments on economy, efficiency, and effectiveness in the use of resources;

(c) report on the achievement of the planned results of the project

(d) report on the degree of compliance of each of the financial covenants on the financing agreement and give comments, if any, on internal and external matters affecting such compliance;

(e) communicate matters that have come to attention during the audit which might have a significant impact on the implementation of the project, and

(f) any other matters that the auditors considers pertinent.

General

The auditor should be given access to all legal documents, correspondence, and any other information associated with the project and deemed necessary by the auditor. Confirmation should also be obtained of amounts disbursed and outstanding at the Bank.

The auditor should be familiar with the Bank's *Audit Manual for World Bank Financed Projects* which provide guidance to auditors conducting audits of World Bank financed projects.

Annex 7: Project Processing Schedule

INDONESIA: WESTERN JAVA Environmental Management Project

Project Schedule	Planned	Actual
Time taken to prepare the project (months)	8	24
First Bank mission (identification)		
Appraisal mission departure	10/15/99	11/12/2000
Negotiations	01/10/2000	
Planned Date of Effectiveness	05/22/2000	

Prepared by:

Preparation assistance:

Bank staff who worked on the project included:

Name	Speciality
Daniel Hoornweg	Senior Environmental Engineer
Suhadi Hadwinoto	Urban Development Specialist
Mohamad Nuch	Operations Officer
Keiichi Tamaki	Financial Analyst
Vivianti Rambe	Environmental Specialist
Unggul Suprayitno	Financial Management Officer
Anne Harrison	Program Assistant
Leila Elvas	Financial Analayst
JoAnne Nickerson	Operations Analyst
Rizal Rivai	Procurement Specialist
Karin Nordlander	Senior Counsel
Finn Nielsen	Senior Municipal Engineer

External Assistance in Indonesia;

Outside Indonesia:

Annex 8: Documents in the Project File*
INDONESIA: WESTERN JAVA Environmental Management Project

A. Project Implementation Plan

See Below

B. Bank Staff Assessments

Project Capacity Assessment Report, March 2001

C. Other

- **The following documents were used as reference in preparation of the WJEMP, but are filed with the Indonesia Third JABOTABEK Urban Development Project (LN. 3246-IND):**
- Assessment of Popular Participation of KIP-JUDP III (Draft Final Report)- Novemeber-1994- 50pgs.
- Environmental Protection Component 2 Part A- Institutional Analysis and Strengthening Strategy (Final Report)-Volume I-Institutional and Organizational- November 1994-10 Chapters (2 copies)
- Environmental Component 2 Part B-Environmental Protection and Pollution Control Strategy and Action Plan (Inception Report) August -1993-39pgs. with cover letter from Ir. H. Muzahiem Mokhtar- September 1, 1993- 1pgs.
- JUDP III Environmental Protection Component (B) small scale Industries Waste Reduction in DKI Jakarta (Draft Final Report) Volume 1(Text),- June 1993- 131pgs., Volume II (Appendices) June 1993
- Environmental Protection Component (A) Joint Waste Water Treatment for Industrial Estates- Volume IA, IB, Executive Summary, Volume II, Volume 3- June 1993
- JUDP III Evaluation Report Sub-project design and Implementation Pilot Project Resources Recovery- October-1995- 20pgs.

The following documents are part of the official project file for WJEMP:

I. Inception Report, March 1998

II. Workshops Reports

- Laporan Lokakarya, Serang, April 30, 1998
- Laporan Lokakarya, Cirebon, May 6, 1998
- Laporan Lokakarya, Bandung, May 13, 1998
- Laporan Lokakarya, Jabotabek, June 25, 1998

III. Action Plans

- Action Plan, Serang, September 1998
- Action Plan, Cirebon, September 1998
- Action Plan, Bandung, September 1998
- Action Plan, Jabotabek, September 1998

IV. Deliverables - April 1999 (Addendum 1)

- Project Summary
- Volume 1 Environmental Education for Schools
- Volume 2 Community Environmental Facility (CFF)
- Volume 3a.(i) Solid Waste Strategic Plan for Jabotabek
- Volume 3a.(ii)Basic Design Leuwigajah Site Improvement, Bandung
- Volume 3a.(iii)Basic Design, Kopilohur Landfill-Cirebon
- Volume 3a.(iv)Brief Technical Evaluation, Bantar Gebang Landfill Extension
- Volume 3b.(i) Waste Reduction in the Tahu Sector
- Volume 3b.(ii)Waste Reduction in the Electro Plating Sector
- Volume 3c.(i) Recommendations for Prokasih Program Cikapundung River, Bandung & Ciliwung River, Jakarta/Bogor
- Volume 3c.(ii) Ground Water Conservation Bandung, Project No.21
- Volume 4 WJJEMP Project Management
- Volume 5 Economic Analysis
- Volume 6(i) Project Costing and Financial Table
- Volume 6.(ii) Summary and Contract Procurement Packages
- Volume 6.(iii) Financial Analysis
- Volume 7 List of Priority Sub-Projects

V. Deliverables – September 1999 (Addendum 2)

- Terms of Reference
- TPA Kopiluhur Cirebon Environmental Review
- Project Implementation Plan
- Volume I Project Support
- Volume II Solid Waste Management
- Volume III Small/Medium Scale Industry Support
- Volume IV Environmental Education and Awareness
- Volume V Community Environment Facility
- Volume VI Subproject Information
- Volume VII-A Project Cost and Financing Plans
- Volume VII-B Subproject Table "Base Cost"
- Programmatic Environmental Review (Executive Summary)
- Programmatic Environmental Review (Full Document)

VI. Deliverables - April 2000 (Addendum 3)

- Project Implementation Plan
- Project Environmental Review
- Request for Proposal/RFP (English & Indonesia)
- Sub-Project Mapping - June 2000
- Clipping Environmental Issues - June 2000
- Technical Assistance Table "Base Cost" - June 2000

TORs:

- Study Environmental Degradation in Town of Bandung [English & Indonesian]

- AMDAL for Cikapundung River Domestic Wastewater Facilities [English & Indonesian]
- Productive Vegetation Study in Town of Bandung [English & Indonesia]
- Study for Monitoring Air Quality in Kota Bandung [Indonesia]
- Kampung Improvement Program CBD Tribina Kabupaten Bekasi [English & Indonesia]
- Study of Town Vegetation - Bekasi [English & Indonesia]
- AMDAL for TPA Cipayung [Indonesia]
- Study Normalization and Development of Lakes [Indonesia]
- Structuring and Vegetation of Cisadane Rivers Banks in The Town of Bogor
- Oriented on Agroindustry [English & Indonesia]
- Feasibility Study, AMDAL and DED for Domestic Waste Treatment (IPLT) [Indonesia]
- AMDAL for TPA Kopiluhur Cirebon [English & Indonesia]
- Study of Vegetation Using Productive Plants to Empower Economy-Kabupaten Serang [English & Indonesia]
- Improvement Environmental Sanitation for Low-Income Community (SPAL MCK and Waste Facilities) in Kabupaten Serang [English & Indonesia]
- Study for Urban Poor Area Upgrading, Industrial and Coastal Areas Settlement [Indonesia]
- Based Solid Waste Management Reduce, Reuse, Recycle (3R) [English & Indonesia]
- Feasibility Study for Jakarta Industrial Estate Pulogadung Centralized Wastewater Treatment System [English & Indonesia]
- Development of Commercial Scale Compost Plant [English & Indonesia]
- Waste Minimization through Assistance to Waste Pickers in DKI Jakarta [Indonesia]
- West Java Solid Waste Management Consultant Support [English & Indonesia]
- Platform Strategy Environmental Development in West Java [English]
- Central Project Management Unit Consultant Support [English & Indonesia]
- Jabotabek Waste Management Corporation Consultant Support [English]
- Environmental Education & Awareness [English]
- Air Quality Program for The Urban Areas of West Java and Jakarta [English]
- Cilegon Emergency Preparedness Program [English & Indonesia]
- Support to Small/Medium Scale Industries: Tahu/Tempe & Salted Fish
- Industries in North Jakarta.

<u>Borrowing Capacity</u>:

- Borrowing Capacity DKI Jakarta - August 2000
- Borrowing Capacity Kota Bandung - August 2000
- Borrowing Capacity Kabupaten Bandung - August 2000
- Borrowing Capacity Kota Bekasi - August 2000
- Borrowing Capacity Kabupaten Bekasi –August 2000
- Borrowing Capacity Kota Bogor - August 2000
- Borrowing Capacity Kota Depok – August 2000

- Borrowing Capacity Kota Tangerang - August 2000
- Borrowing Capacity Kota Cirebon - August 2000
- Borrowing Capacity Kabupaten Serang - August 2000
- Project Cost by Component - September 2000
- Dokumen Tender untak Pekerjaan Borongan/Local Competitive Bidding [Bill of Quantity/BO] Paket Pembangunan TPA sampah Sanitary Landfill Kopiluhur -/Cirebon
- Dokumen Tender untuk Pekerjaan Borongan/Local Competitive Bidding [Rencana Kerja dan Syarat-syarat Teknis/RKS Teknis] Paket Pembangunan-TPA Sampah Sanitary Landfill Kopiluhur - Cirebon
- Dokumen Tender untuk Pekegoan Borongan/Local Competitive Bidding. Paket Pengadaan Kendaraan Pengangkut Sampah den Peralatan Penunjang , untuk TPA
- Dokumen Tender untuk Pekerjaan Boronganl Local Competitive Bidding [Engineer Estimate/EE] Paket….Pembangunan TPA Sampah Sanitary Landfill Kopiluhur - Cirebon
- Dokumen Tender untuk Penigadaan Barang dan jasa/Local Competitive & International Competitive Bidding. Paket A,B,C,D&E Pengadaan Kendaraan Pengangkut Sampah den Peralatan Penunjang untuk TPA
- Dokumen Tender untuk Pengadaan Barang dan Jasa/Local Competitive Bidding. Paket D pengadaan Kendarsan Pengangkut Sampah den Peralatan Penunjang untuk TPA
- Dokumen Tender untuk Pekerjaan Borongar~/Local Compepetitive Bidding [Rencana Kerja den Syarat-syarat Umum/RKS Umum] Paket … Pembangunan TPA Sampah Sanitary Landfill Kopiluhur - Cirebon
- Tender Dokument for Procurement of Goods and Services Internationa1Competitive Bidding. Package A Procurement of Heavy Equipment for The Final Disposal Site.
- Dokument Tender untuk Pengadaan Barang den Jasa Local Compepetitive Bidding Paket C Pengadaan kendaraan Pengangkut Sampah dan peralatan penunjang untuk TPA
- Tender Document for Procurement of Goods and Services International Competitive Bidding Package B Procurement of Heavy Equipment for The Final Disposal Site.

*Including electronic files

Annex 9: Statement of Loans and Credits

INDONESIA: WESTERN JAVA Environmental Management Project

Mar-2001

Project ID	FY	Purpose	Original Amount in US$ Millions IBRD	IDA	GEF	Cancel.	Undisb.	Difference between expected and actual disbursements[a] Orig	Frm Rev'd
P049545	2000	ID-PROVINCIAL HEALTH I	0.00	38.00	0.00	0.00	35.89	1.21	0.00
P059477	2000	ID-WSSLIC II	0.00	77.40	0.00	0.00	75.66	0.00	0.00
P059930	2000	DECENT AGR/FOR EXT	13.00	5.00	0.00	0.00	16.87	2.93	0.00
P055821	1999	IND-URBAN POVERTY PROJECT	0.00	100.00	0.00	0.00	41.96	5.29	0.00
P056074	1999	IND-MUNCIPAL INNOVATIONS PROJECT	5.00	0.00	0.00	0.00	3.22	2.23	0.00
P041895	1999	ID-SULAWESI BASIC EDUC.	47.90	15.93	0.00	0.00	55.24	18.41	0.00
P003967	1999	ID-FIFTH HEALTH PROJECT	44.70	0.00	0.00	5.00	32.07	11.72	0.00
P064118	1999	WATSAL	300.00	0.00	0.00	0.00	250.00	250.00	0.00
P063732	1999	CORPORATE RESTRUCTRG	31.50	0.00	0.00	6.12	20.03	26.15	0.00
P040196	1999	ID-SUMATRA BASIC EDUC	54.50	20.10	0.00	0.00	58.11	10.73	0.00
P036049	1999	ID-EARLY CHILD DEVELOPMENT	21.50	0.00	0.00	0.00	19.89	14.36	14.36
P040061	1998	BENGKULU REG DEV	20.50	0.00	0.00	0.00	19.14	7.14	0.00
P048715	1998	IIDP	34.50	0.00	0.00	8.50	20.31	22.17	17.31
P045337	1998	ID-KECAMATAN DEV FUND	225.00	0.00	0.00	0.00	157.58	56.94	0.00
P040062	1998	CORAL REEF MGMT REHA	0.00	0.00	4.10	0.00	2.57	1.65	1.35
P036956	1998	ID-SAFE MOTHERHOOD	42.50	0.00	0.00	8.00	20.67	10.01	6.59
P003993	1998	SUMATRA REG. ROADS	234.00	0.00	0.00	50.00	157.77	28.77	-3.03
P039644	1998	ID-W. JAVA BASIC EDUC.	103.50	0.00	0.00	3.76	60.01	-20.06	0.00
P055755	1998	BANKING REFORM ASST.	20.00	0.00	0.00	0.90	6.42	7.32	0.00
P036048	1998	CORAL REEF MGM REHAB	6.90	0.00	4.10	0.00	4.38	3.72	3.12
P036053	1997	IND-SULAWESI UDP II	155.00	0.00	0.00	67.05	29.47	87.35	-14.08
P004026	1997	RLWY EFFICIENCY	105.00	0.00	0.00	20.00	79.47	77.81	0.00
P036047	1997	IND-BALI URBAN INFRASTRUCTURE PROJECT	110.00	0.00	0.00	30.06	60.68	27.74	15.12
P040195	1997	ID-QUALITY OF UNDERGRADUATE EDUC (QUE)	71.20	0.00	0.00	9.89	34.31	13.59	4.29
P003700	1997	SOLAR HOMES SYSTEMS	0.00	0.00	24.30	0.00	19.27	13.65	3.45
P003987	1997	ID-CENTRAL INDONESIA SEC. EDU.	104.00	0.00	0.00	0.00	63.73	42.93	0.00
P049051	1997	BEPEKA AUDIT MODER P	16.40	0.00	0.00	0.90	10.58	8.60	6.64
P042540	1997	ID-IODINE DEF. CONTROL	28.50	0.00	0.00	9.00	11.31	11.15	10.35
P041894	1997	ID-SUMATRA SEC EDUC	98.00	0.00	0.00	0.03	37.45	0.15	0.00
P037097	1996	ID-E.JAVA SEC.EDUC.	99.00	0.00	0.00	3.63	50.30	26.73	0.00
P039312	1996	IND-EAST JAVA UDP II	117.00	0.00	0.00	53.00	17.79	70.79	9.41
P003978	1996	IND'L TECHNOLOGY DEV	47.00	0.00	0.00	8.54	9.21	17.71	11.73
P003699	1996	KERINCI SEBLAT ICDP	0.00	0.00	15.00	0.00	9.85	4.57	0.00
P004003	1996	ID-SECONDARY SCHOOL TEACHER DEVT	60.40	0.00	0.00	30.00	2.73	32.13	-0.60
P004004	1996	ID-HIGHER EDUC SUP.(DUE)	65.00	0.00	0.00	6.86	7.72	-5.43	-8.92
P004008	1996	NUSA TENGGARA DEV.	27.00	0.00	0.00	4.90	6.84	6.71	-1.01
P004021	1996	POW. TRANS & DIST II	373.00	0.00	0.00	110.00	74.87	184.87	18.24
P004016	1996	STRATEGIC URB. RDS I	86.90	0.00	0.00	10.00	24.83	28.33	5.62
P004011	1996	SULAWESI AGRI AREA	26.80	0.00	0.00	3.70	6.53	2.17	-3.58
P004014	1996	KERINCI SEBLAT ICDP	19.10	0.00	15.00	3.00	11.94	10.47	0.00
P003965	1995	ID-HEALTH IV:IMPR HEALT	88.00	0.00	0.00	39.00	1.61	34.77	10.61
P003951	1995	IND-KALIMANTAN UDP	136.00	0.00	0.00	15.00	20.10	35.10	11.10
P039754	1995	IND-TAP4I-2	28.00	0.00	0.00	3.00	10.98	13.98	5.12
P003968	1995	ID-BOOK & READING DEV	132.50	0.00	0.00	36.50	42.90	73.06	37.88
P003972	1995	AG. RESEARCH II	63.00	0.00	0.00	22.10	15.28	35.38	4.33
P003984	1995	LAND ADMINISTRATION	80.00	0.00	0.00	33.90	0.25	34.15	17.65
P003988	1995	ID-PHRD II	69.00	0.00	0.00	12.00	9.77	20.11	11.94
P004001	1995	TELECOM SECTOR MODER	325.00	0.00	0.00	69.67	96.38	166.05	116.05
P003890	1994	IND-SEMARANG SURAKARTA UDP	174.00	0.00	0.00	38.67	34.95	73.61	19.23
P003910	1994	SUMATERA & KALIMAN P	260.50	0.00	0.00	56.00	43.68	99.68	99.65
P003945	1994	HIGHWAY SECTOR II	350.00	0.00	0.00	46.00	61.94	107.94	30.28
P003954	1994	JAVA IRR IMP & W R M	165.70	0.00	0.00	41.17	19.85	59.91	37.90
P004010	1994	DAM SAFETY	55.00	0.00	0.00	19.80	4.26	24.06	-0.58
P034080	1994	BIODIVERSITY COLLECT	0.00	0.00	7.20	0.00	0.26	0.59	0.00

			Original Amount in US$ Millions					Difference between expected and actual disbursements[a]	
Project ID	FY	Purpose	IBRD	IDA	GEF	Cancel.	Undisb.	Orig	Frm Rev'd
P003914	1993	ID-THIRD COMM HEALTH &	93.50	0.00	0.00	19.70	1.34	21.04	5.04
		Total:	4834.50	256.43	69.70	905.35	1990.20	1922.15	502.53

INDONESIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
Mar-2001
In Millions US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1997	PT Bank NISP	5.71	0.00	0.00	0.00	5.71	0.00	0.00	0.00
1997	PT Berlian	9.29	20.00	0.00	27.09	8.15	16.65	0.00	23.57
1995	PT Bunas Finance	5.54	0.00	0.00	1.45	5.54	0.00	0.00	1.45
1996	PT Dharmala	20.00	0.00	0.00	10.00	20.00	0.00	0.00	10.00
1995	PT Grahawita	0.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00
1995	PT Hotel Santika	3.78	0.00	0.00	0.00	3.78	0.00	0.00	0.00
1991	PT Indaci	0.00	0.00	1.83	0.00	0.00	0.00	1.44	0.00
	PT Indo-Rama	22.00	0.00	0.00	0.00	22.00	0.00	0.00	0.00
1990/91/93/95/99	PT KIA Keramik	16.51	6.02	0.00	53.49	16.51	6.02	0.00	53.49
1992/94/96	PT KIA Serpih	15.00	6.35	0.00	49.50	15.00	6.24	0.00	49.50
1995	PT Kalimantan	20.00	15.00	0.00	6.00	15.56	15.00	0.00	4.67
1997	PT Makro	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00
1997/00	PT Megaplast	8.75	2.50	0.00	0.00	8.75	2.50	0.00	0.00
1998	PT Nusantara	3.18	0.00	0.00	10.38	3.18	0.00	0.00	10.38
1993	PT PAMA	0.00	0.71	0.00	0.00	0.00	0.71	0.00	0.00
1994	PT Pramindo Ikat	25.00	8.18	25.00	59.50	25.00	3.91	25.00	59.50
1996	PT RIMBA	2.53	0.60	0.00	0.74	2.53	0.60	0.00	0.74
1991	PT Samudera	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00
1993	PT Sayap	10.00	0.00	0.00	14.00	10.00	0.00	0.00	14.00
1997	PT Viscose	23.59	0.00	0.00	29.46	23.59	0.00	0.00	29.46
1992/95	PT Wings	8.68	0.00	0.00	14.92	8.68	0.00	0.00	14.92
1997	Prudential Asia	0.00	4.80	0.00	0.00	0.00	2.24	0.00	0.00
1994	SEAVI Indonesia	0.00	1.43	0.00	0.00	0.00	1.43	0.00	0.00
1991	Semen Andalas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1980/87	Ciluluk Village	0.04	0.00	0.00	0.00	0.02	0.00	0.00	0.00
2000	KDLC Bali	2.08	1.14	0.00	0.00	2.08	1.14	0.00	0.00
1994	LYON-MLF-Ibis	2.01	0.00	0.00	2.01	2.01	0.00	0.00	2.01
1991	Manulife	0.00	0.32	0.00	0.00	0.00	0.32	0.00	0.00
1988	POF	5.14	1.93	0.00	6.00	5.14	1.93	0.00	6.00
1995	PT ABS Finance	0.00	1.31	0.00	0.00	0.00	1.31	0.00	0.00
1995	PT AdeS Alfindo	10.29	3.53	0.00	17.64	10.29	3.53	0.00	17.64
1997	PT Agro Muko	0.00	2.20	0.00	0.00	0.00	2.20	0.00	0.00
1989	PT Alumindo	18.50	0.00	0.00	16.00	18.50	0.00	0.00	16.00
1997	PT Argo Pantes	9.38	13.00	0.00	11.36	9.38	13.00	0.00	11.36
1991	PT Astra	0.00	5.82	0.00	0.00	0.00	5.82	0.00	0.00
1989/91/94	PT Astra Graphia	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00
1997	PT Astra Otopart	0.00	1.07	0.00	0.00	0.00	1.07	0.00	0.00
1997	PT BBL Dharmala	11.35	0.00	0.00	21.40	11.35	0.00	0.00	21.40
1993/96	PT Bakrie Pipe	17.14	0.00	9.50	0.00	17.14	0.00	9.50	0.00
1995									
	Total Portfolio:	275.49	104.13	41.33	350.94	269.89	92.62	40.94	346.09

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
2000	NISP Equity	0.00	0.00	5000.00	0.00
2000	PT Petrosea	15000.00	8200.00	1800.00	0.00

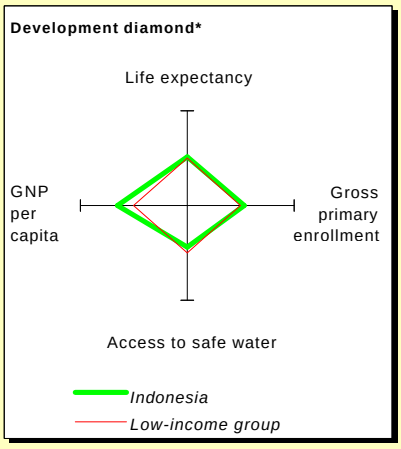
Total Pending Commitment:	15000.00	8200.00	6800.00	0.00

Annex 10: Country at a Glance

INDONESIA: WESTERN JAVA Environmental Management Project

9/8/99

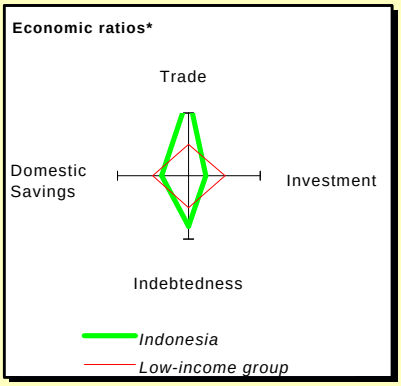
POVERTY and SOCIAL	Indonesia	East Asia & Pacific	Low-income
1998			
Population, mid-year *(millions)*	203.7	1.817	3.515
GNP per capita *(Atlas method, US$)*	680	990	520
GNP *(Atlas method, US$ billions)*	138.5	1.802	1.844
Average annual growth, 1992-98			
Population *(%)*	1.6	1.2	1.7
Labor force *(%)*	2.7	1.6	1.9
Most recent estimate (latest year available, 1992-98)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	38	35	31
Life expectancy at birth *(years)*	65	69	63
Infant mortality *(per 1,000 live births)*	47	37	69
Child malnutrition *(% of children under 5)*	34	20	..
Access to safe water *(% of population)*	65	77	74
Illiteracy *(% of population age 15+)*	15	15	32
Gross primary enrollment *(% of school-age population)*	115	117	108
Male	117	119	113
Female	112	118	103



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

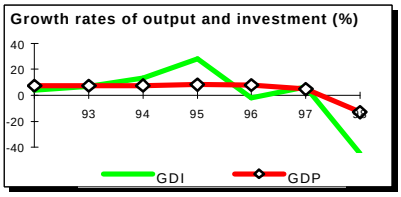
	1977	1987	1997	1998
GDP *(US$ billions)*	48.4	75.7	215.7	94.2
Gross domestic investment/GDP	23.4	27.4	31.8	14.0
Exports of goods and services/GDP	24.8	24.8	27.9	53.9
Gross domestic savings/GDP	29.0	29.7	31.5	23.9
Gross national savings/GDP	..	..	28.6	14.7
Current account balance/GDP	..	..	-0.8	4.6
Interest payments/GDP	1.3	3.4	2.4	5.8
Total debt/GDP	34.0	69.3	63.1	154.4
Total debt service/exports	..	..	30.6	18.3
Present value of debt/GDP	..	..	59.6	..
Present value of debt/exports	..	..	199.5	..

	1977-87	1988-98	1997	1998	1999-03
(average annual growth)					
GDP	6.3	6.6	4.7	-13.2	5.1
GNP per capita	3.8	4.8	2.4	-18.0	3.6
Exports of goods and services	-1.1	9.2	7.8	11.2	5.9

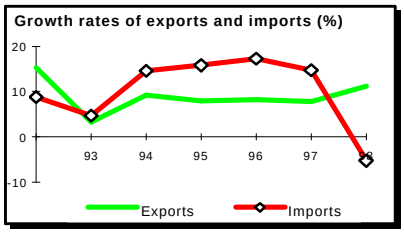


STRUCTURE of the ECONOMY

	1977	1987	1997	1998
(% of GDP)				
Agriculture	29.6	23.4	16.1	19.5
Industry	34.3	36.3	44.3	45.3
Manufacturing	10.5	17.0	26.8	24.9
Services	36.2	40.3	39.6	35.2
Private consumption	61.0	60.8	61.7	70.4
General government consumption	9.9	9.5	6.8	5.8
Imports of goods and services	19.2	22.5	28.1	43.8



	1977-87	1988-98	1997	1998
(average annual growth)				
Agriculture	3.9	2.9	1.0	0.8
Industry	6.2	8.7	5.2	-15.1
Manufacturing	14.0	9.6	5.3	-11.9
Services	8.0	6.4	5.6	-16.2
Private consumption	9.3	8.2	7.8	-3.3
General government consumption	7.4	2.2	0.1	-15.4
Gross domestic investment	9.1	7.1	6.3	-44.8
Imports of goods and services	6.1	12.5	14.7	-5.3
Gross national product	5.9	6.5	4.1	-16.7

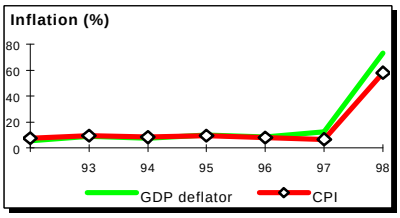


Note: 1998 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

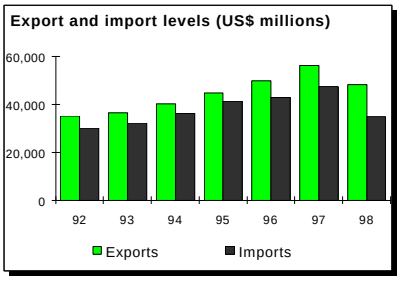
PRICES and GOVERNMENT FINANCE

	1977	1987	1997	1998
Domestic prices				
(% change)				
Consumer prices	..	9.3	6.7	58.1
Implicit GDP deflator	13.3	15.4	12.6	73.1
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	16.4	17.8	16.2
Current budget balance	..	-4.0	5.5	3.4
Overall surplus/deficit	..	..	-0.5	-3.2



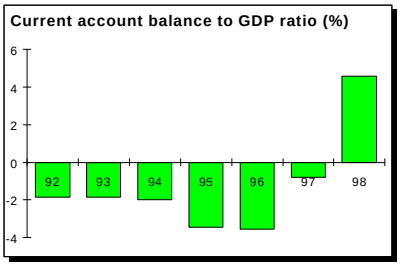
TRADE

	1977	1987	1997	1998
(US$ millions)				
Total exports (fob)	..	17,669	56,245	48,314
Fuel	..	8,818	11,603	..
Rubber	..	1,055	1,505	..
Manufactures	..	4,538	18,568	..
Total imports (cif)	..	14,886	47,487	34,842
Food	..	820	3,174	..
Fuel and energy	..	3,123	3,835	..
Capital goods	..	5,675	20,744	..
Export price index *(1995=100)*	..	73	..	..
Import price index *(1995=100)*	..	79	..	..
Terms of trade *(1995=100)*	..	93	..	..



BALANCE of PAYMENTS

	1977	1987	1997	1998
(US$ millions)				
Exports of goods and services	..	..	62,997	53,733
Imports of goods and services	..	..	50,365	36,690
Resource balance	..	..	12,632	17,043
Net income	..	..	-14,098	-12,679
Net current transfers	..	..	-233	-37
Current account balance	..	..	-1,699	4,327
Financing items (net)	..	..	-11,601	-1,827
Changes in net reserves	..	..	13,300	-2,500
Memo:				
Reserves including gold *(US$ millions)*	..	..	17,189	29,169
Conversion rate *(DEC, local/US$)*	415.0	1,643.8	2,909.4	10,013.6



EXTERNAL DEBT and RESOURCE FLOWS

	1977	1987	1997	1998
(US$ millions)				
Total debt outstanding and disbursed	16,471	52,495	136,174	145,346
IBRD	402	7,391	9,991	10,692
IDA	466	866	715	694
Total debt service	2,057	6,998	19,736	10,164
IBRD	31	875	1,848	1,456
IDA	3	12	26	26
Composition of net resource flows				
Official grants	73	195	183	200
Official creditors	752	2,523	535	2,279
Private creditors	603	303	5,888	-2,130
Foreign direct investment	235	385	4,677	1,300
Portfolio equity	0	0	298	250
World Bank program				
Commitments	406	1,418	810	1,672
Disbursements	240	1,374	899	1,212
Principal repayments	1	362	1,165	754
Net flows	238	1,013	-266	458
Interest payments	32	525	709	728
Net transfers	206	488	-975	-270