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Indonesia: Has the Multi-subsector Approach been Effective for Urban Services Assistance?

Independent Evaluation Department

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ABBREVIATIONS

ADB	– Asian Development Bank
AFC	– Asian financial crisis
BAPPEDA	– Badan Perencana Pembangunan Daerah (Local Government Development Planning Department)
BAPPENAS	– Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
BLUDP	– Bandar Lampung Urban Development Project
BME	– benefit monitoring and evaluation
BOT	– build-operate-transfer
BOTABEK	– Bogor, Tangerang, and Bekasi
BPUDP	– Bogor and Palembang Urban Development Project
BTOR	– back-to-office report
CDD	– community-driven design
CDM	– clean development mechanism
CPMU	– central project management unit
DED	– detailed engineering design
DGHS	– Directorate General of Human Settlements
DGURD	– Directorate General of Urban and Rural Development
DKI	– Daerah Khusus Ibukota (Special Capital City District)
DPRD	– Dewan Perwakilan Rakyat Daerah (local parliament)
EA	– executing agency
EIRR	– economic internal rate of return
FDS	– final disposal site
FIRR	– financial internal rate of return
GLD	– guided land development
ICB	– international competitive bidding
IED	– Independent Evaluation Department
IPLT	– sludge processing plant
IUIDP	– integrated urban infrastructure development program
KIP	– <i>kampung</i> improvement program
LCB	– local competitive bidding
LIDAP	– local institutional development action plan
MDG	– Millennium Development Goal
Metro BOTABEK UDSP	– Metropolitan Bogor, Tangerang, and Bekasi Urban Development Sector Project
MIIP	– market infrastructure improvement program
MMUDP	– Metropolitan Medan Urban Development Project

MOHA	–	Ministry of Home Affairs
MPW	–	Ministry of Public Works
NRW	–	nonrevenue water
O&M	–	operation and maintenance
PCR	–	project completion report
PDAM	–	Perusahaan Daerah Air Minum (local government water supply enterprise)
PERDA	–	peraturan daerah (local government decree)
PPTA	–	project preparatory technical assistance
PSC	–	project steering committee
PSP	–	private sector participation
RDA	–	Regional development account
RIAP	–	revenue improvement action plan
RPJM	–	Rencana Pembangunan Jangka Menengah (medium-term development program)
SDR	–	special drawing right
SLA	–	subsidiary loan agreement
SPAR	–	subproject appraisal report
SWM	–	solid waste management
TPA	–	Tempat Pembuangan Akhir (final solid waste disposal site)
WJUDSP	–	West Java Urban Development Sector Project

WEIGHTS AND MEASURES

km	–	kilometer
l	–	liter
lpcd	–	liter per capita per day
lps	–	liter per second
m	–	meter
m ³ /day	–	cubic meter per day
mm	–	millimeter

GLOSSARY

<i>cipta karya</i>	–	spatial and human settlements
<i>bina marga</i>	–	roads
<i>Dana Alokasi Umum</i>	–	general allocation fund
<i>Dana Alokasi Khusus</i>	–	special allocation fund
<i>dewan perwakilan rakyat daerah</i>	–	elected local assemblies
<i>dinas</i>	–	provincial departments
<i>kampung</i>	–	village
<i>kandeps</i>	–	central government offices at the local level
<i>kanwils</i>	–	provincial offices
<i>peraturan daerah</i>	–	local government decree
<i>Perusahaan Daerah Air Minum</i>	–	local government water supply enterprises
<i>Rencana Pembangunan Jangka Menengah</i>	–	medium-term development program
<i>Tempat Pembuangan Akhir</i>	–	final solid waste disposal site

NOTE

In this report, "\$" refers to US dollars.

Key Words

indonesian urban development evaluation, indonesia water supply project evaluation, adb urban, indonesia local government, indonesia iuidp, adb water supply, *kampung* improvement program, multisector, water supply and sanitation, indonesian public health, public hygiene

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Attachments: Management Response DEC Chair Summary
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<p>The guidelines formally adopted by the Independent Evaluation Department (IED) on avoiding conflict of interest in its independent evaluations were observed in the preparation of this report. Marcus E. Napud, Pratiwi Andharyati, and Rashel Pardo (research associate) were the consultants. To the knowledge of the management of IED, there were no conflicts of interest of the persons preparing, reviewing, or approving this report.</p>

EXECUTIVE SUMMARY

Background

In early 2009, the Indonesia Resident Mission of the Asian Development Bank (ADB) requested the Independent Evaluation Department (IED) to conduct an urban services study to provide sector-specific input to the forthcoming ADB country partnership strategy for Indonesia. Evaluating the recent performance of the urban sector assistance in Indonesia and learning from the experience are important because (i) the "big-bang" decentralization put pressure on the management of urban areas, and (ii) the demand for urban infrastructure is expected to escalate due to population growth and rapid urbanization.

ADB does not have an "urban" sector in its old sector classification, urban sector projects in Indonesia were largely (92% by value) included under "Multisector" category since they included 3 or more subprojects. Following changes in the sector classification system in October 2009, the coverage of SES broadly corresponds to "Water Supply and other Municipal Infrastructure and Services" (WMS) with the term Multisector no longer applicable to these projects. Hence, this SES refers to these projects as urban "*multi-subsector*" projects. This special evaluation study (SES) covers all multi-subsector urban projects in Indonesia.

Since the start of ADB operations in Indonesia, the share of multi-subsector urban projects increased steadily from 4% of all project approvals by number up to 1979, to 8% in 1980–1989, and to 10% in 1990–1999. Thereafter, the share of urban projects dropped slightly to 9% following decentralization. In terms of volume of investment, the shares of subsectors were: water supply (35%), urban roads (23%), drainage (14%), sanitation and sewerage (9%), and solid waste (8%). The remaining 11% comprised (i) the *kampung* (village) improvement program (KIP) or the market infrastructure improvement program (MIIP), (ii) guided land development (GLD), and (iii) institutional and other capacity-building efforts.

Evaluation results available for multi-subsector urban projects approved since 1991 show a lower project success rate of 44% compared with 68% for other projects. It is important therefore to examine whether this could be due to the multi-subsector approach adopted for these urban projects. Learning the strengths and weaknesses of this multi-subsector approach becomes even more important in Indonesia because of the expected growth in the urban sector and the challenges for urban infrastructure projects due to decentralization. Subsequent to doing the study in Indonesia, IED plans to extend the review of the multi-subsector approach to the region by selecting an appropriate sample from key countries.

The multi-subsector approach is not unique to Indonesia; it is based on the urban development policies followed in other Asian countries such as India, Philippines, and Thailand since the 1970s. It was pursued with the intention of accomplishing several aspects of urban development simultaneously to build synergies across interventions. Benefits were sought in terms of (i) reducing inefficiencies by financing urban municipal infrastructure based on local demand and prioritization, (ii) increasing cost savings by simultaneously building local government capacity through institutional and human resource development, and (iii) reducing transaction costs by streamlining financing arrangements.

From ADB's point of view, the project proposals envisaged that the multi-subsector approach would be useful and efficient in directing its investments to many parts of Indonesia, considering the limited staff resources at ADB headquarters and the resident mission. The expectation was that there would be cost savings in designing and implementing different subsector investments simultaneously in the same location or by integrating different stages of

the service delivery in one project. Although ADB did not have prior experience in designing and implementing multi-subsector projects in Indonesia or in other countries, it supported the government's strong view that multi-subsector projects could be effectively implemented through "learning-by-doing." ADB did not pilot the integrated urban infrastructure development program (UIDP) in Indonesia before embarking on full-scale multi-subsector operations.

Evaluation Approach

The evaluation covers all ADB urban multi-subsector operations in Indonesia. These projects were evaluated for their implementation performance and delivery of outputs. The performance of multi-subsector projects needs to be measured in terms of financial and time savings for households, improved health conditions, increased school attendance, and conveniences provided by various amenities and entertainment. However, very few past ADB urban projects in Indonesia defined specific criteria and indicators to measure targets, established actual baseline data, set quantified targets for any of these goals, or clearly defined beneficiaries. As a result, intended impacts have not been readily measurable. Therefore, the SES assessed ADB's contribution to improvements in urban development through a combination of perception assessments, output analyses, field visits, and document reviews.

On-going projects were reviewed to assess implementation performance. Past country strategies and programs, and urban development sector strategies for Indonesia were also reviewed to determine their strategic focus and relevance. Technical assistance (TA) operations and program loans were studied to understand how ADB and other key aid agencies collaborated to improve sector performance through policy dialogue and joint capacity-building initiatives. It should be noted that external factors (e.g., the 1997 Asian financial crisis and decentralization) affected the performance of multi-subsector projects, making it difficult to isolate other factors causing poor performance of urban project, and thus to determine whether they occurred due to intrinsic shortcomings in the project design and setup.

Key questions. The SES examined the following key issues:

- (i) Did multi-subsector urban projects improve geographical and vertical integration to induce synergy effects between subcomponents?
- (ii) Did the main subcomponents receive adequate funding to attain the original intended impacts? Were some components cancelled due to lack of funding for other components?
- (iii) Were the roles and mandates of relevant government ministries and agencies clearly delineated so as to eliminate confusion or jurisdictional disputes in implementing multi-subsector urban projects? Many multi-subsector urban projects have three layers of project management at the (a) central; (b) provincial; and (c) municipality level, including the involvement of a number of municipal departments, divisions, and agencies.
- (iv) More recently, under the multi-subsector approach, community-driven design (CDD) has become popular in ADB projects. Has CDD enhanced impact? Are these new projects more compatible with government decentralization?
- (v) Private sector participation (PSP) in the provision of urban services was the key concept adopted prior to the Asian financial crisis, after which the approach lost prominence. Are the current level of ADB support and the government's legal, regulatory, and physical environment conducive to revive PSP?

Key Findings and Assessment

Relevance. The urban multi-subsector approach is rated *relevant* (2 out of 3 points). ADB's urban assistance was largely guided by the government's 5-year plans, and followed the government's experimentation with various schemes (e.g., GLDP, KIP, and IUIDP) until the late 1990's and the shift in focus and policy from (i) the KIP and sites and services, to (ii) the IUIDP, (iii) PSP, and finally (iv) CDD. It is not evident that ADB made any proactive effort to promote any new product that would show how urban development should be addressed to achieve the best results. There is no strong evidence indicating that a multi-subsector approach improves poverty reduction efforts. Except for KIP components, there was no substantial community or beneficiary participation in other components during project design and implementation. Synergy among various subsectors could have been better achieved with a local champion, and greater tenacity to coordinate and follow up with many departments. IED did see a few subprojects where vertical and geographical integrations were achieved, taking advantage of the multi-subsector approach in municipalities like Medan and Bogor, which had more experienced staff.

Resource use. The rating for resource use in multi-subsector projects in Indonesia is *less efficient* (1 out of 3 points). All urban projects approved in the last three decades experienced substantial implementation delays. Land acquisition was a common problem for urban infrastructure projects, as locations were densely populated. Without thorough planning for control of land use and various incentives for release of land, land acquisition became increasingly difficult in urban Indonesia. Other implementation delays occurred due to consultant recruitment, local government approval procedures, misprocurement and irregularities in bidding. Lately, the government introduced "project readiness criteria," in an attempt to reduce implementation delays. Although project management units (PMUs) were expected to learn from previous projects and avoid delays, there was no significant improvement over time, as many government staff in PMUs had been changed by the time a new project started. These issues were not uncommon to the rest of the portfolio in Indonesia but were probably more pronounced in the case of multi-subsector urban projects.

Applications for ADB funds were based on separate subproject appraisal processes, with different funding methods across subsectors. There was no internal incentive to combine several subsectors, as different subcomponents (e.g., roads, solid waste, and water supply) were handled by different local government divisions, and each subsector had different funding requirements and guidelines. This made it very difficult for multi-subsector projects to integrate different components into a single area-based subproject, or a subproject with a combination of upstream and downstream components. In this context, ADB was not forthcoming in its advice to local governments on how to improve efficiency in the use of resources or how to select target cities (in concert with the government) to maximize ADB value addition. ADB assistance accounted for only about 2% of the country's total annual capital investment requirement, pointing to the need for greater role of PSP. Greater use of PSP could have helped supplement the limited ADB resources. However, because PSP initiatives in the 1990s were not adequately researched and prepared, many of the PSP initiatives were not accepted by investors who were rigid on their revenue requirements.

Results. The rating for achievement of results is *less likely* (1 out of 3 points). Having multi-subsector components did not yield visible improvements in various indicators and impacts defined in the project document (e.g., livelihood and health). Multi-subsector projects saw no increase in budget provision for operation and maintenance (O&M). The use of a basket funding setup would have allowed, for example, surpluses and shortfalls to be shared across different subprojects in one project, or some savings to be apportioned for O&M. Such an approach could

potentially have had a positive impact on sustainability, but it was disallowed by the rigid financing rules accompanying decentralization. ADB organized project implementation training workshops and seminars on financial reporting, procurement, and consultant recruitment. Most trainings were one-time events, and ADB lacked a long-term plan for gradually changing the content of the capacity-building component, providing incentives to participants, or sustaining commitment.

Overall rating. Based on its relevant approach, less efficient resource use, and less likely achievement of results, ADB assistance for urban services in Indonesia under the multi-subsector approach is assessed as *partly successful*. The SES has several lessons concerning the project design and implementation stages.

Lessons for Project Design and Implementation

Institutional capacity assessment. Given the characteristics of urban organizational structure, political sensitivities play a significant role in the prioritization of subcomponents. Therefore, it is very important to identify the decision-making authorities and determine in which departments or divisions to place them and where to set up the PMU or project implementation unit (PIU).

Demand assessment. It is important to have some criteria to verify the level of local beneficiary support and key assumptions made in the justification to include certain subprojects. Generally, for sanitation and solid waste, local demand is lower than for water supply and urban roads, although the former two subsectors are very important for overall livelihood improvement in Indonesia. Incorporation of awareness-raising and education initiatives to promote ownership by beneficiaries is important to enable effective management and expansion of the system.

Assessing opportunities. Natural disasters or challenges stemming from major urban degradation can be opportunities to promote infrastructure investment and greater inter-agency coordination. At these times, it is easier to mobilize local beneficiary support, interest by civil society organizations, and understanding and cooperation from nongovernment organizations.

Increasing environmental awareness. Despite efforts by the government and municipalities to mitigate the risks associated with open dumping in the face of the huge volume of urban waste, the capacity to treat, process, and landfill garbage is diminishing. It has become increasingly difficult to find new landfill sites and to continue to operate existing ones due to local opposition. Given ADB's strategic focus on the environment, there is a need to adopt new approaches, such as use of solid waste to generate energy under the clean development mechanism to address these environmental concerns.

Promoting geographical and vertical integration. The presence of a local champion is important to realize vertical and/or geographical integration in the delivery of urban infrastructure. The champion can be a strong and responsible local figure—or a well-experienced head of the planning department (BAPPEDA)—who can negotiate with and develop agreements between all relevant departments and agencies on prioritization and packaging of subcomponents.

Assessing financing arrangements. During project preparation, the targeted municipality's debt positions on past capital investment loans should be checked. In addition, history on taking out loans or subsidiary loan agreements (SLAs) should also be investigated. If records show that the local parliament was reluctant to increase their indebtedness and rejected several SLA proposals for urban infrastructure in recent years, it is an indication that achieving another SLA approval will be difficult.

Financial sustainability and tariff control. Some subsectors can generate their own revenues, and municipalities can then increase the independence of those operations or profit centers; separate accounts can be maintained for each such subsector to reflect their costs and revenues in order to improve their efficiency and profitability. Promoting political will for tariff increases to enable cost recovery is important.

Assessing resource adequacy. The shortcomings of past projects indicate that future project prioritization and preparation will require more staff resources from various disciplines (including legal, business, environmental assessment, governance, and technological knowledge specific to the country). Much more rigorous dialogues with other aid agencies and recipient municipality staff are needed to assess the human and institutional capacity for project preparation and implementation.

Beneficiary involvement in projects. To accommodate beneficiary participation, more time needs to be allotted for project design and implementation, especially for large infrastructure projects. Past ADB multi-subsector projects have shown that beneficiary participation in project design, implementation, and maintenance is effective when the scale of urban infrastructure is at the neighborhood level and there are direct benefits to the residents. However, for larger municipality-scale infrastructure—whether urban roads, district-level water supply, or district-level sanitation—the direct involvement of residents is difficult to sustain unless the implementation period is longer than usual or active involvement of beneficiaries is arranged, beginning with the design stage.

Realistic assumptions on project benefits. It is essential to recognize the arrangements made with the implementing agencies and be realistic about a project's benefits. Although 30,000 households were targeted by the microfinancing component of a recent project, only 1,500 (5%) availed of the microfinance loans. The main reason for the shortfall was that the actual interest rate charged from the borrowers ranged from 20% to 60% due to charges added on by several intermediaries before the funds reached end-users, and the loans therefore became unattractive under existing market conditions.

Challenges for private sector participation. In designing urban sector projects for PSP, it is imperative to consider the following aspects: (i) obtaining a clear understanding and a plausible commitment on tariff setting, given that the issue is highly political and sensitive; (ii) assessing whether there are economies of scale in operations to achieve the revenue base needed for PSP; (iii) assessing the financial and economic costs and benefits of increasing efficiency and quality of service; and (iv) ascertaining the enabling environment for PSP and whether there is capacity, knowledge of the legal provisions, and risk sharing among the parties at the local level. Unless these issues are assessed and dealt with before the project design phase, PSP will remain a challenge in most urban projects, especially in the WSS sector.

ADB commitment to capacity development. During project implementation, both ADB headquarters and the resident mission should scrutinize and rigorously track the effectiveness of ADB interventions that use a capacity-building component. Cofinancing with bilateral aid agencies should be considered for a longer term capacity development strategy, with careful examination of institutional gaps and staff needs, rather than thinly spreading training resources. In addition, demands from municipality staff concerning what they really want to improve and the process to follow need to be considered during project preparation.

Monitoring project benefits and impacts. Outcome and results monitoring should be taken more seriously by the government, municipalities, and ADB before implementation. There

is a need to collect project impact information, including health and socioeconomic data, and improvements in public health and livelihoods from social infrastructure projects. The government and ADB need to agree ex-ante on monitoring indicators, frequency of collection, and funding mechanisms, and how to measure benefits and economic values. Given the poor implementation performance and sustainability, it is useful for ADB to support post completion monitoring to advise on any outstanding issues on cost recovery.

Conclusions and Recommendations

Based on the analysis of project design, implementation, past records, and experiences, it is evident that the launch of the multi-subsector approach was based on good intentions and undertaken with high expectations. However, local authorities in Indonesia lacked adequate capacity to plan, coordinate, and implement projects across a wide range of urban subsectors, and could not therefore effectively reap the benefits, intended outcomes, and impacts. The projects' poor success, as reflected in project performance evaluation reports, also reflects the overall difficult realities facing urban projects, including inadequate government infrastructure financing systems and the decentralization movement. The above lessons on implementation are also generally valid for ongoing projects approved since 2000, although the design has been somewhat different. Some projects have a more participatory approach, and others are program loans with a reform agenda. Four urban multi-subsector projects have been approved in the past decade compared to 9 in the previous decade, the decrease being mainly on account of a slowdown in the total number of projects in Indonesia from 86 to 44 in the same two periods. However, the reduction in the share (by number) of urban multi-subsector projects relative to other sectors (from 10% in the 1990s to 9% in the 2000s) is not very significant indicating therein the continued importance of urban projects in ADB assistance to Indonesia.

In light of the above, the following recommendations are made regarding the use of the multi-subsector approach for urban assistance in Indonesia.

The multi-subsector approach (vis-à-vis other approaches) should not be adopted in urban projects unless there are agreements between the government and ADB on all of the following:

- (i) *Experience:* There is adequate capacity in the PMU and/or PIU, especially a project director with sufficient experience in designing, planning, packaging, and implementing multi-subsector projects.
- (ii) *Procedures:* There are clear application procedures, requirements, and rules for financing mechanisms of a multi-subsector project; for better resource utilization, there are incentives of a flexible mix of grants and onlending, organized not by subsector, but by level of vertical and/or geographical integration.
- (iii) *Strategy:* There is (a) a local figure to champion the project based on a strategic, long-term plan for prioritization of subcomponents; and/or (b) an existing master plan that stipulates the prioritization or sequencing, which has already been vetted by the local parliament, general public, and civil society.
- (iv) *Implementation management.* Especially for externally funded projects, which have relatively shorter expected implementation periods (5–6 years), it is important to have a single authority that has the powers to prioritize subprojects (and determine which components to proceed with first) so that delays are minimized.

If local conditions do not favor adoption of a multi-subsector approach, then ADB should adopt a sector-specialized approach with fewer components (e.g., the conventional three components of water supply, sanitation, and capacity building). ADB urban projects in Indonesia need to be specialized, rather than comprehensive. ADB's scale of operations is limited

against the total infrastructure needs. ADB urban projects should be more strategic, selective, and realistic in what can be done, and in understanding the best means to impact the most people.

There should be a financing scheme that strongly supports the multi-subsector approach. If a city or a district meets the agreements above, then the availability of flexible financing—such as a loan or grant that could be used across various subsectors to allow cost savings from capital expenditure in one subsector to be flexibly transferred for investment in another, and thus realize vertical or geographical integration—would constitute an opportunity to adopt the multi-subsector approach. Such type of capital-expenditure-financing scheme intended for multiple-subsector projects currently does not exist in the local authority budget.

A focused and long-term vision of ADB's role in capacity building should be developed. The needs assessment for capacity building should be more rigorous, and an analysis made of what constitutes the added value of ADB TA in terms of knowledge and skills compared with other aid agencies. Partnerships with other agencies may be developed for longer-term capacity building to enhance the local capacity for engagement as indicated by the Paris Declaration. Bilateral donors (e.g., the Netherlands) have been effective and have provided significant capacity building in nonrevenue water reduction campaigns. In addition, ADB should critically examine how it can achieve better results through short term capacity-building efforts within the span of project implementation.

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I. INTRODUCTION

1. In early 2009, the Indonesia Resident Mission of the Asian Development Bank (ADB) requested the Independent Evaluation Department (IED) to conduct an urban services study to provide sector-specific input to the forthcoming ADB country partnership strategy for Indonesia. Evaluating the recent performance of the urban sector (Appendix 1) in Indonesia and learning from the experience are important because (i) the "big-bang" decentralization put pressure on the management of urban areas, and (ii) the demand for urban infrastructure is expected to escalate due to population growth and rapid urbanization.

2. Until the late 1990s, urban infrastructure and municipal services (e.g., water supply, sanitation, and urban roads) were provided by respective line ministries which were centrally managed. Subsequent to the passage of decentralization laws (Law 22/1999 on regional Governance and Law 25/1999 on Fiscal balance), urban municipalities and cities were given the responsibility of providing such infrastructure as well as securing the funds for them. However, these urban areas did not have the capacity or the resources to match their new responsibilities; ADB and other organizations increased their efforts to support the urban sector.

3. Of the 228 million people who lived in Indonesia in 2008, more than 100 million lived in urban areas. By 2015, the population is expected to increase to about 250 million, and the share of urban population is expected to increase to about 60% which means a substantial increase in urban infrastructure would be needed. However, the current urban environment is already saddled with multitude of problems not only in metropolitan areas but also in large cities which form the nucleus of regional economies. Access to and quality of water supply and sanitation (WSS) are among the lowest in Southeast Asia. Water supply service coverage is only 35% in urban areas. Many of these cities and large towns are underresourced and cannot self-finance urban infrastructure needs because almost half of the urban population is below the poverty line. The cities are unable to provide even the needs of their current populations, let alone prepare for the future.

4. **Multi-subsector approach for urban projects.** Discussing the multi-subsector approach for urban projects is complicated, because "urban" or "multisector" or "multi-subsector" are terms not clearly defined in ADB sector classification, but they are very closely linked. Therefore it is necessary to explain how these terms have been used in this Special Evaluation Study (SES), which focuses on the multi-subsector approach that is being used to design and implement projects that provide urban infrastructure and services.

5. First, ADB does not have the "urban" sector in its sector classifications; therefore it is unclear which projects can be called urban projects. For the purpose of this SES, the projects that provide urban infrastructure and services are considered "urban projects" if they include components or subsectors: in water supply, sanitation, drainage (or urban flood control), solid waste management, urban roads, *kampung* (informal village in urban peripheries) improvement program, market infrastructure improvement program, and guided land development (GLD).

6. Second, due to the absence of a sector of its own, urban projects as defined above have often been included in the Multisector category in the ADB sector classification, but the sector classification in ADB has been changing over the years. Prior to 2004, the eight-category sector classification that existed (Appendix 2) in ADB included two sectors that were not specific—namely "Multisector" and "Other." At the time, the Multisector category included projects that covered more than one key sector (e.g., Energy and Industry) as well as those that included several subsectors such as water supply, sanitation, and urban roads. Therefore urban projects, which typically covered several subsectors, were classified as Multisector.

7. In the 2004 revision of sector classification, the "Other" category was abolished and new sectors were introduced to make up 10 sectors including Multisector. The Multisector category still included projects that covered more than two or three sectors or those with three or more subsectors. Therefore, from 2004 to 2009, urban projects could be classified in two ways, either as "Water Supply, Sanitation and Waste management" (WSS) or "Multi-sector" depending on the number and type of subsectors it covered. In 2009, the sector classification was changed yet again, and 10 sectors were introduced, still with Multisector to include projects with multiple sectors. However, a key difference in terms of urban projects was that under the new classification, all urban projects could now fall under the "Water Supply and other Municipal Infrastructure and Services" (WMS) sector, which for the first time included two new subsectors named "Urban Development" and "Other Municipal Services." As a result urban projects can now be included under their own sector classification instead of being under the Multisector category.

8. This recent sector reclassification had an impact on this study as this new sector classification took effect when the study was substantially completed. Therefore, it is necessary to explain the intention of the study in the context of the changes in the sector classification and the approach used for urban projects in Indonesia. All the urban projects that ADB has approved for Indonesia, which were previously classified under Multisector or WSS are now reclassified as WMS from October 2009.

9. The focus of this SES is not which sector the urban projects fall into, but the *approach* used to design and implement these urban infrastructure projects. The approach of combining three or more subsectors in one urban project was adopted about three decades ago. These were therefore classified under Multisector until 2009. To differentiate this approach from the Multisector classification hereafter, this study will refer to the approach as "*multi-subsector approach*."

10. The share (by number) of urban multi-subsector projects in Indonesia has been gradually increasing from the start of ADB operations in Indonesia until the big-bang decentralization (Table 1). After the decentralization took effect, the share of urban projects in the first decade of the new century dropped slightly to 9% from 10% in the previous decade. The four urban investment projects approved since the decentralization are on-going while the associated program loans were fully disbursed within 1–5 months of loan approval.

Table 1: Share of Project Sector under 2009 ADB New Category

Sectors	1968–1979		1980–1989		1990–1999		2000–2009	
	No.	%	No.	%	No.	%	No.	%
		share to total		share to total		share to total		share to total
Agriculture and Natural Resources	19	35	36	46	27	31	6	14
Education	3	5	10	13	12	14	4	9
Energy	12	22	6	8	9	10	2	5
Finance	2	4	4	5	4	5	4	9
Health and Social Protection	0	0	2	3	5	6	3	7
Industry and Trade	4	7	1	1	1	1	2	5
Public Sector Management		0		0	1	1	12	27
Transport and ICT	10	18	10	13	11	13	2	5
WMS	3	5	8	10	13	15	5	11 ^a
(of which, "urban multi-subsector")	(2)	(4)	(6)	(8)	(9)	(10)	(4)	(9)
Multisector	2	4	1	1	3	3	4	9
Total	55		78		86		44	

ADB = Asian Development Bank, ICT = information and communication technology, WMS = Water and Other Municipal Infrastructure and Services.

^a 11 includes Loans 2263/2264/2475-INO and 2361-INO, i.e., three projects under Multisector category.

Source: Asian Development Bank database.

11. In terms of subsectors covered under this approach, the distribution (by order of approved investment volume) was water supply (35%), urban roads (23%), drainage (14%), sanitation and sewerage (9%), and solid waste (8%). The remaining 11% comprised (i) the *kampung* (village) improvement program (KIP) or the market infrastructure improvement program (MIIP), (ii) guided land development (GLD), and (iii) institutional and other capacity building efforts.¹

12. This special evaluation study (SES) focuses primarily on the multi-subsector urban projects, approved by ADB for Indonesia since 1979. This comprises 21 loan projects focusing on urban services.²

13. Of the 29 ADB projects with the WMS category under the 2009 classification, 21 (72%) comprised multi-subsector urban projects; these accounted for 92% of the lending amount, or \$2.438 billion of the \$2.650 billion total for multi-subsector projects.

14. In looking at urban projects in Indonesia, evaluating the multi-subsector approach has become important, because evaluation results available for urban projects (Appendix 2) approved since 1991 under the multi-subsector approach show a lower project success rate of 44% compared with 68% for other projects. It is important therefore to examine whether this could be due to multi-subsector approach adopted for urban projects. Learning the strengths and weaknesses of this multi-subsector approach becomes even more important because of the expected growth in the urban sector and the challenges that have been imposed for urban infrastructure projects due to decentralization. Subsequent to doing the study in Indonesia, IED plans to extend the review of the multi-subsector approach to the region in 2010 by selecting an appropriate sample from key countries.

15. However, comparison of the effectiveness of the multi-subsector and non-multi-subsector approach for urban services projects is difficult in Indonesia because (i) these two approaches were used in different periods, with only one urban development project in the non-multi-subsector category since 1995; and (ii) the situation prevailing in the country has changed vastly in these periods. Therefore, the study instead focuses on key questions (para. 21) to learn how to improve the performance of multi-subsector projects in Indonesia.

II. KEY MESSAGES FROM LITERATURE REVIEW

16. **Intended impacts and difficulty in monitoring results.** Many urban projects had a common goal: to improve urban environmental and living conditions, particularly for the urban poor. The projects were intended to ensure planned and orderly urban development in the targeted cities. All projects also tried to increase local government capacity for project implementation and urban management. These goals encompassed a variety of objectives. Environmental impacts included varying degrees of reduced air, water, soil, and noise pollution. Improved living conditions may be understood as a combination of various municipal services; however, their impacts would need to be measured in terms of financial and time savings for households; improved health conditions (number of sick days, costs of health treatment avoided); education (number of hours spent in school rather than attending to household chores); and convenience and entertainment (measured using culturally appropriate indicators). Unfortunately, past ADB urban projects in Indonesia had very few, if any (i) defined specific criteria and indicators to measure targets; (ii) established actual baseline data; or (iii) quantified targets for

¹ Details of these projects and all other Indonesia urban projects are in Appendix 1, Table A1. They are not footnoted when referred to in the text.

² The Infrastructure Reform Sector Development Program (Loans 2263/2264-INO) and still ongoing, and thus has not been reviewed completely; its progress is referred to in para. 50.

any of these goals. As a result, the intended impacts of urban projects appear ambiguous, because beneficiaries and indicators are not clearly defined.

17. **Challenges with multi-subsector projects.** ADB's relevant operations departments have also critically assessed the performance of urban projects. According to the latest Indonesia country strategy and program (CSP) 2006–2009,³ many delays were encountered in implementing water supply or urban projects. According to the CSP, the processing of new urban projects became more challenging for several reasons due to decentralization, lack of coordination between agencies, and weak institutional and human capacities. In addition, ADB's loan products were increasingly seen as outdated, with high transaction costs. The design and implementation of decentralized projects tests the capacity of both the government system and ADB. The projects under implementation involved in total some 200 districts. ADB lacked adequate resources for project supervision and monitoring, and results were difficult to measure. The CSP has self-critically concluded that past urban projects have been responsive to the needs of the government, but ADB was unable to adjust quickly enough to the new realities of decentralization. ADB should work increasingly through existing government systems in support of government programs; the financial crisis and subsequent democratization and decentralization process have diluted capacities within line agencies and at the local level.⁴

18. **Lessons from past Independent Evaluation Department evaluations.** The following are some of the conclusions drawn in two previous IED evaluation studies of the urban development and housing sector, undertaken in December 1997⁵ and the WSS sector in 1999:⁶

- (i) Resources were spread thinly such that vital subcomponents of a subsector might be excluded from a project (a lack of vertical integration). There was no clear evidence of synergy effects, which is the major advantage advocated by promoters of the integrated urban infrastructure development program (IUIDP). In early IUIDPs, subcomponents were implemented separately, often in areas that were not linked so that no systematic infrastructure network was developed. There was no vertical integration.
- (ii) Geographic integration is as important as vertical integration. The effects of synergy are lost if urban infrastructure components in different parts of a city are upgraded without requisite connections, undermining the entire rationale of the approach.
- (iii) When various subsectors are integrated into one project the number of agencies involved increases, sometimes to the extent that management and coordination are impeded. This is exacerbated when the roles and responsibilities of the different agencies are not clearly delineated.
- (iv) Targeting more towns in one project increases the institutional risks associated with multi-subsector projects, as the institutional framework tends to become either extremely complex or remains centralized, limiting local government involvement.

³ ADB. 2006. *Country Strategy and Program Indonesia 2006–2009*. Manila.

⁴ IED's country assistance program evaluation (CAPE) 2005 (ADB. 2005. *Country Assistance Program Evaluation for Indonesia*. Manila), which analyzes the WSS and urban sector, acknowledges that evidence from the field suggests that, when implemented well, WSS sector investments make a significant contribution to local development. Some projects that were successful had a clear institutional champion and clear lines of responsibility. Sustainability of benefits is more likely, as investments are in line with local government's established activities, and funds are made available for maintenance. The CAPE 2005 looked at the completed and ongoing multi-subsector projects individually, but when it came to "sector evaluation," there was no substantive assessment for the "multi-subsector" category per se. Only a brief evaluation of the "water supply, sanitation, and waste management" sector was conducted as part of sector performance evaluation (CAPE, p. 46).

⁵ ADB. 1997. *Impact Evaluation Study on the Bank Assistance to the Urban Development and Housing Sector*. Manila.

⁶ ADB. 1999. *Impact Evaluation Study of Bank Assistance in the Water Supply and Sanitation Sector*. Manila.

- (v) Some government-reform measures associated with decentralization (e.g., those on water tariff control) have increased the control of local authorities over their financial situation; however, urban services agencies still need to develop from their current dependent role to become a more autonomous, financially independent, and customer-oriented service industry.
- (vi) Future ADB-financed projects must adopt a more participatory and demand-based approach that encourages communities to identify their own priorities and ways of achieving them.
- (vii) Weaknesses in institutional capacity, especially in Perusahaan Daerah Air Minum (local government water supply enterprises [PDAMs]) and smaller municipal offices with fast-increasing populations, continue to plague the sector. Significant efforts by both the government and ADB are needed to strengthen management and technical capacity.

III. METHODOLOGY

19. **Case study approach.** A case study approach was used in this SES due to limited availability of baseline data and time. IED initially reviewed all available project documents, past PCRs and PPERs, and earlier SESs concerning the Indonesian urban and WSS sectors. Through these reviews, the evaluation team derived the major assumptions made by ADB regional departments in endorsing the multi-subsector approach for urban project implementation. Key research questions (para. 21) were established. From the total of 21 urban projects, 15 were selected for further investigation in the field and analysis through review of documents. The remaining 6 were either capacity building projects (1), or had not been physically completed (4), or were too old (1) [i.e., the first urban multi-subsector Loan 271-INO: Bandung Urban Development and Sanitation Project approved in 1976] and information on them were gathered from ADB sources. For the 15 case studies, in addition to collecting information from ADB sources, interviews and focus group discussions were conducted with past project directors and their staff, central government officials, beneficiaries, and other aid agencies active in the sector in Indonesia. IED analyzed this information to gain an understanding of the common factors underlining project success and failure. However, a key limitation in evaluating the effectiveness of the multi-subsector approach was the difficulty in isolating the impacts of the 1997 Asian financial crisis (AFC) and decentralization that affected the multi-subsector approach itself (paras. 33–40). It is expected that the phase 2 (para. 9) region-wide study would be able to isolate exogenous effects.

20. **Evaluation approach.** The evaluation covers all ADB urban multi-subsector operations in Indonesia approved in the last three decades. The findings of the previous IED impact evaluation studies on the urban development and housing sector in December 1997 (footnote 5) and the WSS sector in Indonesia in September 1999 (footnote 6) were also reviewed to evaluate their validity in the current context. The CSPs and urban development sector strategies for Indonesia were also reviewed to discern their strategic focus and relevance to effective implementation and development impact of the sector. The policy dialogues promoted by ADB and other key external agencies in the sector through TA and program loans were also taken into account in the context of improving the performance of the sector. The projects were evaluated for their implementation performance and delivery of outputs. However, very few past ADB urban projects in Indonesia defined specific criteria and indicators to measure targets, established actual baseline data, set quantified targets for any of these goals, or clearly defined beneficiaries. As a result, intended impacts have not been readily measurable. The SES assessed ADB's contribution to improvements in urban development through a combination of perception assessments, output analyses, field visits, and document reviews. Using the findings from these sources, the SES analyzed the information collected to understand the (i) relevance of the multi-subsector approach to achieving

the objectives of urban projects, (ii) whether resources are being used effectively under the multi-subsector approach, and (iii) results (whether the multi-subsector approach provides sustainable outcomes). These questions are addressed in chapter VII.

21. **Key questions.** Key issues that were examined in the SES were as follows:

- (i) Did multi-subsector urban projects undertaken since 1999 improve geographical and vertical integration to induce synergy effects between subcomponents (paras. 62–64)?
- (ii) Did the main subcomponents receive adequate funding to attain the original intended impacts? Were some components cancelled due to lack of funding for other components (para. 35 and 58)?
- (iii) Were the roles and mandates of relevant government ministries and agencies clearly delineated so as to eliminate confusion or jurisdictional disputes in implementing multi-subsector urban projects? Many multi-subsector urban projects have three layers of project management at the (a) central; (b) provincial; and (c) municipality level, including involvement by a number of municipal departments, divisions, and agencies (paras. 55–58).
- (iv) More recently, under the multi-subsector approach, CDD has become popular in ADB projects. Has CDD enhanced impact achievement? Are these new projects more compatible with government decentralization, and have they attained more success in meeting outcomes and impacts (paras. 71 and 83)?
- (v) Private sector participation (PSP) in the provision of urban services was the key concept adopted prior to the AFC, after which the approach lost prominence. Are the current ADB support and the government's legal and physical environment conducive to reemphasizing PSP (paras. 73 and 88)?

22. **Evaluation limitations:**

- (i) Outcome assessment of individual projects was limited to those that had been completed and for which PPERs or PCRs were available.
- (ii) Studies on socioeconomic and poverty impacts relied on completed and ongoing operations, published statistics, project preparatory TA report baselines, and other aid agencies' reports, given the complexity, time required, and difficulty in obtaining reliable results or findings.
- (iii) The availability and quality of data on the social sectors, particularly relating to public health and hygiene are generally poor, especially at the municipality level; thus the study had to rely on secondary data and information provided by local authority divisions during the field visits.

IV. URBANIZATION IN INDONESIA AND GOVERNMENT STRATEGY

A. Urbanization

23. **Population.** In 2000, the total population of Indonesia reached more than 206 million,⁷ with 40% residing in urban areas.⁸ In 2008, the population was 228 million (footnote 9) with close to half of that in urban areas. It is estimated that by 2015, the urban population will have increased to nearly 60%, and by 2030 to approximately 70%.⁹ The growth of urban centers is directly related to economic development and diversification, and the trend of rapid urbanization is expected to continue. Urban centers form the nucleus of a cluster of economies, providing services and acting as growth hubs. At the same time, many urban areas are under-resourced. As in many

⁷ World Bank. 2009. *World Development Indicator*. <http://www.worldbank.org/data>

⁸ Association of Southeast Asian Nations. <http://www.aseansec.org/>

⁹ Globalis website. <http://globalis.gvu.unu.edu/>

developing countries in the region, rural settlements have been transformed into urban areas, and the rising urban population has led to the proliferation of squatter settlements, and a number of resulting urban problems.

24. **Poverty.** Migrants from rural areas have settled in cities in the past few decades in search of better livelihood opportunities. The magnitude of this urban migration has hindered the ability of cities to provide sufficient economic opportunities, and severely pressured urban services and infrastructure. Migrants occupy marginal lands (measuring 10–20 square meters per person), which constitute an unhealthy living environment and are perhaps the worst locations for settlements. These areas are composed of densely occupied, inadequate housing.¹⁰

B. Urban Development Context

25. Urban development in Indonesia has evolved in response to numerous urban issues, and the government's strategies, programs, and institutional arrangements for urban development have changed rapidly over time. Simple and limited water supply and slum improvement programs implemented during the first national Five-Year Development Plan—Rencana Pembangunan Lima Tahun (REPELITA) I: 1969–1973—evolved into complex and comprehensive multi-subsector and multicity programs, with the government expending much more in the way of resources, and international aid agencies providing significant financial and technical support. However, the increasing resources being made available for urban projects still fall short of envisaged needs. Moreover, deficiencies in basic services and degradation of environmental conditions have contributed to poor health, particularly among the urban low-income population.

26. **Water supply and sanitation.** WSS is the least developed infrastructure sector in Indonesia (Loan 2475-INO: Infrastructure Reform Sector Development Program [Subprogram 2]). Although it provided an essential public service, it generally received no subsidy from the central government, because WSS management and service delivery were decentralized. The sector suffers from low investment, a situation that has prevailed since the AFC. Only about 40 million people, or 18% of the population, were connected to piped water supply from PDAMs, while only 33% of people in the urban areas were connected to piped water (Loan 2264-INO: Infrastructure Reform Sector Development Program [Project Loan] and Loan 2475-INO IRSDP). The majority of urban dwellers still depend on individual wells, small-scale providers, or water vendors, especially in areas with limited water sources or poor PDAM connections, which are often provided at very high cost and may be unsafe for drinking water. The poor suffer most from this situation. Fewer than 20% of Indonesia's poor have access to safe drinking water, compared with more than 80% of rich Indonesians. Furthermore, the poor pay water vendors up to five times more for a given quantity of water than is paid by the rich, who have access to piped water.¹¹ The situation in the WSS sector poses a great threat to the health of Indonesians. Poor water and sanitation connections cause widespread contamination of surface and groundwater, which results in repeated local epidemics of gastrointestinal infections and high incidence of typhoid.¹² Economic losses attributed to inadequate sewerage were conservatively estimated at \$4.7 billion annually, or 2.4% of the 1997 gross domestic product (GDP), which was equivalent to approximately \$12

¹⁰ World Bank. 2006. *Making the New Indonesia Work for the Poor*. http://siteresources.worldbank.org/INTINDONESIA/Resourses/Publication/280016-1152870963030/2753486-1165385030085/Overview_standalone_en.pdf

¹¹ The World Bank. 2003. *Cities in Transition: Urban Sector Review in an Era of Decentralization in Indonesia*. Washington DC.

¹² ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Program Cluster, Loan, and Technical Assistance Grant to Indonesia for the Poverty Reduction and Millennium Development Goals Acceleration Program*. Manila (Loan 2361-INO, for \$400 million, approved on 30 October); and ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Indonesia for Subprogram 2 Infrastructure Reform Sector Development Program*. Manila (Loan 2475-INO, for \$280 million, approved on 27 November).

per household each month.¹³ In a study made by the World Bank in 2007, poor sanitation was estimated to have caused diarrhea that led to more than half a million deaths every year. Based on the study, the health impacts of poor sanitation totaled Rp139,000 per person, or Rp31 trillion nationally each year.¹⁴

27. Indonesia also has one of the lowest rates of urban sewerage coverage in Asia. Only 7 of 91 cities have some form of modern sewerage system, servicing just over 1 million urban residents, or about 1% of the urban population. Low coverage results in part from government policy, which assigns the responsibility for sanitation to households. In 2007, over 94 million Indonesians (or 43% of population) did not have sanitary toilets, and only 2% of urban sewerage connections were treated. Just about 2% of the population in Jakarta was connected to a sewerage system, compared with 7% in Manila, 12% in Ho Chi Minh, 30% in Dhaka, 41% in Phnom Penh, 60% in Delhi, and 80% in Kuala Lumpur.¹⁵ The data show how far Indonesia lags behind other countries in the region with a comparable level of development.

28. **Solid waste management.** There has been a limited expansion of SWM services over the years, but services have been unable to keep pace with demand in the last decade. In 1996, only 44% of the solid waste generated in urban areas was collected, resulting in environmental pollution and clogged drainage systems.¹⁶ In 2003, only about 50%–60% of waste produced was collected by a municipal service (Loan 2072-INO: Neighborhood Upgrading and Shelter Sector Project), and this was still the case in 2008.¹⁷ Across several big cities, the proportion of solid waste collected varied from 57% to 94% of the total daily volume of solid waste generated. Waste collection was more efficient in metropolitan cities on the island of Java—such as Special Capital City District (Daerah Khusus Ibukota) Bandung, Jakarta, Surabaya, and Yogyakarta—as well as major cities in the provinces of Kalimantan, Nusa Tenggara, and Sulawesi, with 84% to 95% of the total waste generated being collected. However, even in these metropolitan cities, final disposal sites (FDS) are poorly managed.¹⁸ In large cities, at least half of the solid waste comes from households. The situation becomes more alarming due to the large volumes of garbage generated by urban residents. The 2008 estimates show that the average Indonesian urban resident produced 2–3 liters of solid waste each day weighing about 0.76 kilograms, and on the average produced two to three times more solid waste than rural residents.¹⁹ These figures emphasize the alarming need to control waste generated by urban households, especially since inadequate SWM creates a breeding ground for illnesses.

29. **Drainage and flood control.** Drainage systems have been unable to keep pace with increasing demand.²⁰ Overall, the proportion of households without a drainage system in

¹³ The World Bank. 2003. *Cities in Transition: Urban Sector Review in an Era of Decentralization in Indonesia*. Washington DC.

¹⁴ G. Hutton et al. 2007. *Economic impacts of sanitation in Southeast Asia: summary report*. World Bank Water and Sanitation Program. Washington DC.

¹⁵ National Development Planning Agency (BAPPENAS) in cooperation with The World Bank Water and Sanitation Program-East Asia and the Pacific. 2007. *Urban Sanitation: Portraits, Expectations, and Opportunities (It's Not a Private Matter Anymore)*. Jakarta.

¹⁶ ADB. 2003. *Report and Recommendation of the President on the Proposed Loans on Neighborhood Upgrading and Shelter Sector Project*. Manila.

¹⁷ The World Bank. 2008. *The Sanitation Business: 100 Million Customers Await You*. Washington DC.

¹⁸ The World Bank. 2003. *Cities in Transition: Urban Sector Review in an Era of Decentralization in Indonesia*. *East Asia Urban Working Paper Series*, Dissemination Paper 7. Washington DC: World Bank Infrastructure Department Urban Sector Development Unit. Washington DC.

¹⁹ G. Hutton et al. 2008. *Economic Impacts of Sanitation in Southeast Asia*. Jakarta: World Bank Water and Sanitation Program.

²⁰ The World Bank. 2003. *Cities in Transition: Urban Sector Review in an Era of Decentralization in Indonesia*. *East Asia Urban Working Paper Series*, Dissemination Paper 7. Washington DC: World Bank Infrastructure Department Urban Sector Development Unit; and Indonesia's Urban Studies blog. <http://indonesiaurbanstudies.blogspot.com>

Indonesia increased from 16.8% in 1995 to 37.2% in 1998 (footnote 19). Jakarta experiences high levels of flooding every year, and the flood in 2007 was by far the worst.²¹ Only a few cities have comprehensive watershed management programs or comprehensive flood control master plans. In most cities, flood control systems are designed and implemented incrementally, and physical infrastructure— such as construction of dikes along the riverbanks and the forming of river channels—is often the main focus, as opposed to efforts with more lasting residual impact, such as improving land management and the operation and maintenance (O&M) of drainage systems, conducting stream monitoring, and installing warning systems.

30. **Urban transport.** The number of private vehicles in urban areas has increased rapidly, despite the 1997 AFC. The number of imported cars is increasing as a result of liberalized motor vehicle import rules. Vehicular pollution is a serious problem in Bandung, Jakarta and other large cities. Despite poor public transport facilities, buses, minibuses, taxis, motorcycles, and bicycles are still the most commonly used forms of transport. Toward the end of 1996, Indonesia had 385,800 kilometers (km) of roads, approximately 31,600 km of which were in urban areas under local responsibility. Several big road projects were undertaken before the 1997 AFC. These included many toll road developments involving public–private partnerships (PPPs) with significant local private investment, most of which were implemented under build-operate-transfer (BOT) arrangements. These projects were undertaken mainly around the metropolitan cities in Java such as Bogor Cikampek, Ciawi, Jakarta, Karawang, Malang, and Surabaya. Interestingly, while major cities are congested, Indonesia still has the lowest road density in the region, with 0.18 km of roads per square km or 1.5 km per 1,000 people.²²

31. **Urban infrastructure finance.** The investment gap between what is needed and what is available in the country continues to widen.²³ Estimates for the decade 2003–2013 are as follows: (i) for the water supply sector, an investment gap of \$16 billion;²⁴ (ii) for SWM and wastewater collection systems, total investment needs of \$500 million;²⁵ and (iii) additional financing requirements of (a) \$1 billion for hospitals, (b) \$600 million for transport passenger terminals, and (c) \$3.5 billion for education facilities. The main issues causing the financing gap are (i) lack of access to long-term finance, brought about by limited resources and lack of creditworthiness; and (ii) lack of an enabling environment for urban infrastructure finance. The Regional Development Account (RDA) at the Ministry of Finance has been the only source of long-term credit for regional governments and their enterprises (mainly PDAMs), and the performance of the RDA has thus far been largely unsatisfactory.²⁶ Furthermore, investments in urban infrastructure stagnated after 1999 due to restrictions on long-term borrowing by regional governments in accordance with an agreement between the International Monetary Fund and the Indonesian government. In addition, the poor financial reporting system of regional governments failed to reflect their accurate financial position.

²¹ Indonesia's Urban Studies blog. <http://indonesiaurbanstudies.blogspot.com>

²² ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Indonesia for Subprogram 2 Infrastructure Reform Sector Development Program*. Manila (Loan 2475-INO IRSDP, for \$280 million, approved on 27 November).

²³ Imron Bulkin. 1996. Source of urban infrastructure finance data: Country Discussion Paper for Indonesia presented at the Regional Technical Assistance 5646: Urban Infrastructure Finance Concluding Seminar, Manila, Philippines, 16–18 April; ADB. 2003. *PPTA and TA Grant to Indonesia for the Private Sector Participation Development Facility for Urban Infrastructure Project*. Consultant's Final Report 1. Manila; ADB. 2006. Back-to-office report – Infrastructure Reform Program, 4 April, Manila; and footnote 23.

²⁴ Ministry of Settlement and Regional Infrastructure. 2001. Discussion paper presented at the International Seminar on Water Supply and Sanitation Sector Reform in the Context of Regional Autonomy, Jakarta, May.

²⁵ ADB. 2003. *PPTA and TA Grant to Indonesia for the Private Sector Participation Development Facility for Urban Infrastructure Project*. Consultant's Final Report 1. Manila.

²⁶ ADB. 2004. *Project Performance Audit Report: Second Development Finance Project*. Manila.

32. The estimated financing gap in 2006 was about \$65 billion, with \$25 billion (38%) to come from the government budget, \$14 billion (22%) from domestic banks and insurance and pension funds, \$10 billion (15%) from multilateral and bilateral development partners, and \$16 billion (25%) from domestic and foreign private sector investors. With these figures, infrastructure investments would again reach about 5%–6% of GDP, which is considered to be the minimum required to restore pre-crisis levels of infrastructure provision, and support the medium-term development program (RPJM) targets (Loan 2475-INO IRSDP).

C. Country Context

33. **Asian financial crisis.** During the first half of 1997, Indonesia's economic performance was quite stable, with high growth seen as likely to be attained by the end of the fiscal year. The AFC began with a 15% to 20% devaluation of the Thai baht on 2 July 1997. The fall of the baht was followed by other currencies in the region, including the Indonesian rupiah, Malaysian ringgit, and Philippine peso. The Indonesian government decided to allow the rupiah to float in August 1997 in an effort to stabilize the exchange rate, but it continued to depreciate steadily. The second wave of the crisis hit in early November 1997, when the Hong Kong, China stock market collapsed with a 40% loss, which triggered losses in other regions, especially in Latin America.

34. The urban poor were hit hardest by the AFC (footnote 19). Thousands of low-income urban workers slipped into the informal sector due to the increasing rate of unemployment driven by the decline in economic activity. During the peak of the crisis, urban households reduced real spending on food by 28% (compared with 8% in the rural areas). The national poverty incidence increased from February 1996 to February 1999, with urban areas posting much higher figures. The incidence of urban poverty increased to almost double that of rural poverty, with increases in the poverty headcount and poverty gap. As a result, many urban poor who were greatly affected by the economic turmoil returned to rural villages. In 2006, about a decade after the crisis, almost half of the country's population still lived on less than \$2 a day. In 2006 the poor had less money than was needed to afford a diet of 2,100 calories a day, which was equivalent to Rp152,847 (\$16.80) per month.²⁷

35. The 1997 AFC affected the implementation of many urban projects that were ongoing at the time. Implementation of the Metropolitan Bogor, Tangerang, and Bekasi Urban Development Sector Project (Loan 1511-INO: Metro BOTABEK UDSP), was particularly impacted, as the central government was unable to release the necessary counterpart funding for civil works. A series of reductions in project scope resulted, and ADB responded with "spring-cleaning" exercises. It assessed the project components, cancelling some subcomponents or reducing the length of roads or water supply coverage. The government's absorptive capacity was reduced, and this was compounded by local governments not wanting to assume loans when local parliaments did not approve any subsidiary loan agreements (SLAs).

36. **Full-scale decentralization by 2001.** By the mid-1990s, Indonesia had a robust economy—the average growth rate was 7.1% between 1985 and 1995, the real GDP growth rate was 7.8% in 1996, poverty dropped from almost 60% of the population to around 11% between the 1960s and the 1990s, and general living standards saw overall improvement (footnote 19).

37. President Suharto's 31 years of rule over a highly centralized government ended in May 1998. He was succeeded by then-Vice President B.J. Habibie. On June 1999, Indonesia's first free and open elections led to the selection of President Abdurrahman Wahid, with Megawati Sukarnoputri as Vice President. The Wahid administration initiated plans for decentralization to

²⁷ *Economist*. 2006. Always with Them. 14 September 2006.

counter the centralized form of government. This initiative may have been rooted in several proposals made since the early 1970s specifically for fiscal decentralization, which were brought about by regional inequities and inequality in the share of earnings from natural resources. In April 1999, Parliament adopted two laws to further promote the decentralization: (i) Law 22/1999 on Regional Governance, and (ii) Law 25/1999 on Fiscal Balance. Law 22/1999 on Regional Governance (Appendix 3 has details of the relevant laws) specifies the political and administrative responsibilities of the central, provincial, and local governments within a decentralized structure of government. This law eliminates the hierarchical relationships between the provincial and local governments. The local governments, previously known as *kotamadya*²⁸ and *kabupaten* (cities and districts), have become administratively fully independent, with *walikota* (mayors) and *bupati* (district heads) selected by *dewan perwakilan rakyat daerah* (elected local assemblies [DPRD]). Instead of the previous practice of reporting to provincial governors, these heads now report to the local assembly, making them responsible to the local electorates. In the new system, the provinces have no hierarchical relationship with local governments; they have a coordinating role and perform what the local governments are not yet equipped to undertake. However, the provinces retain their hierarchical relationship with the central government and continue to have the status of self-directed and administrative regions under the President.

38. Law 25/1999 on Fiscal Balance provides the legal foundation for fiscal decentralization, delineating the new division of revenue sources and intergovernmental transfers. The law provides for (i) sharing property and natural resource revenues (from land, buildings, property transfers, forestry, mining, fisheries, gas, and oil); (ii) creation of a general allocation fund called *Dana Alokasi Umum* (DAU); and (iii) creation of a special allocation fund called *Dana Alokasi Khusus* (DAK). Despite the low revenue autonomy granted to regional government, revenue sharing, the DAU, and other transfers have helped close the vertical fiscal gap between the central government and regional government, but the horizontal gap has widened since 2001, especially among local governments. The decentralization system is still not doing enough to reduce the horizontal fiscal disparities. The disparities between regions in public services and standards of living are still quite considerable. The first decentralization reforms removed hierarchal relationships between provinces and the districts and cities. But more recent reforms under the Law 32/2004 on Fiscal Balance (Appendix 3) have introduced new forms of hierarchal control by the approval of the annual budgets of local governments. These policy changes are motivated by a perceived need to strengthen central oversight and control over the local governments through the provincial authorities, especially the governors.²⁹ Several external partners (including the World Bank and Canada) are providing ongoing assistance to the government with respect to an intergovernmental fiscal system. In 2008, a new proposal was made on local taxation, which is still being debated. The Parliament is proposing changes in property tax, while the government is eager to introduce a business tax under the name of an "environmental tax."³⁰ IED was informed by most cities visited in September 2009 that they were unable to raise local taxes to balance the debts in public service operations, as local parliaments were usually reluctant to increase taxes.³¹

39. The impact of the decentralization initiative was fully felt in 2001, at a time when seven ADB-financed IUIDPs were at various stages of implementation. The new authority and

²⁸ After decentralization, the word city in Indonesian was changed from "kotamadya" to "kota."

²⁹ ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Program Cluster and Loan to Indonesia for Subprogram 1 Second Local Government Finance and Governance Reform Program*. Manila (Loan 2478-INO, for \$350 million, approved on 4 December) (p. 10).

³⁰ United States Agency for International Development. 2009. *Stock Taking on Indonesia's Recent Decentralization Reforms*. Jakarta (p. 50).

³¹ IED's forthcoming (2010) Special Evaluation Study on ADB Support for Decentralization in Indonesia will look into fiscal management issues related to decentralization, vertical and horizontal fiscal gaps.

responsibility given to the local governments resulted in difficulties in institutional and project coordination for IUIDP implementation, causing delays in project completion for some projects and even contributing to ADB's decision to suspend disbursements for one IUIDP.

40. During these financial and political transitions, urban development also underwent a transformation, resulting from the changes in the leadership in the national government and its strategy. The REPELITA era—which took a sectoral approach to national development—ended in 1999. It was replaced in 2000 by the National Development Plan (PROPENAS), which promoted a thematic approach, in which good governance and the rule of law are central themes. It also aimed for (i) national cohesion and social stability, (ii) accelerated economic recovery and sustainability, (iii) social sector and human welfare development, (iv) strengthening of regional autonomy, (v) promoting rural and urban development, and (vi) intensifying poverty reduction programs.

D. Evolution of the Government's Strategy

41. **Centralized approach.** Soon after the proclamation of independence in 1945, the Indonesian government began to develop urban infrastructure in a centralized fashion. A top-down planning approach was deemed more convenient, given the very limited resources and capacities of provincial and local governments. Moreover, each urban service was viewed separately, with no thought given to planning for multi-subsector urban development. Integration and coordination of urban infrastructure was neither a practice nor an option. The difficulty of planning for urban growth amid 17,508 islands was exacerbated by the challenge of managing urbanization in a country where only 20% of land parcels were registered.³²

42. **Kampung improvement program.** During the colonial era, members of the opposition in the Dutch Parliament demanded more humane conditions for local populations living in urban areas in the colonies, and the first generation of the KIP was introduced (albeit under a different name). The establishment of municipal governments early in this century brought renewed interest in *kampung* improvement. The government experienced failures of the highly sectoral approach to urban development. The birth of REPELITA I in 1969, which reformed urban development management by introducing an integrated approach to the provision of urban infrastructure, produced what could be considered the one of the best informal settlement upgrading efforts in the world³³—the formulation of the KIP. The KIP was also initiated in Surabaya and Jakarta in 1969. With the cooperation of the stakeholders, the program was adopted by the national government as a national policy, and applied to over 500 cities in Indonesia.

43. By 1974, the KIP had caught the attention of the World Bank (Appendix 4), which provided assistance to the government to accelerate the program. With the World Bank's support, a separate project unit was established with staff seconded from the various departments involved. Residents were not charged for the infrastructure provided, although they were required to contribute (without compensation) the land required for access routes. Over the next 10 years the KIP concept evolved, and based on REPELITA II and REPELITA III, the government expanded the coverage of KIP from the community-level to involve and complement citywide services and infrastructure.

44. **Integrated urban infrastructure development program.** The World Bank and ADB were already funding urban development projects from 1974 to 1984, although not integrated as future IUIDP projects would be. The second-generation approach in Indonesia's effort to plan and

³² World Bank. 2004. *Urbanization Dynamics and Policy Frameworks in Developing East Asia*. Washington D.C.

³³ United Nations Economic and Social Commission for Asia and the Pacific. 1998. *Urban Land Policies for the Uninitiated*. Bangkok.

implement infrastructure on an integrated basis emerged during REPELITA II and REPELITA III, with the support of ADB and the World Bank. Key features included (i) urban infrastructure planning, composed of both physical and financial coordination; (ii) provision by local governments of counterpart funds; (iii) planning and feasibility studies undertaken by the national government, which in effect marketed the proposals to local governments; (iv) effective cooperation between involved national government departments; and (v) a shift in the government's focus, away from hard infrastructure to institutional development of the national government.

45. The Government of Indonesia replicated this approach in other regions of the country, and by 1984 had formulated a new urban development approach called the Integrated Urban Development Program. The main difference between the KIP and the IUIDP (or ADB multi-subsector approach) is that the KIP focused on *kampung* upgrading, whereas the IUIDP deals with the entire city area. Also, the KIP was handled by the "human settlement" division within a city, whereas the IUIDP requires cooperation across the infrastructure divisions. Due to the complexities of the urban projects, the Integrated Urban Development Program approach seemed overly ambitious and unrealistic. It was believed that the focus should first be simplified to look into provision of urban infrastructure only, resulting in the program being renamed the IUIDP.³⁴ The IUIDP was established in 1985 and is considered the most widespread effort by far to plan and design urban infrastructure in the country. It was adopted by more than 75% of local governments. The IUIDP responded to the growing coverage of the KIP, and complemented KIP intervention at the citywide efforts.

46. The IUIDP framework is patterned after the urban development policies applied in other Asian countries such as India, Philippines, and Thailand since the 1970s. These policies revolve around (i) financing urban municipal infrastructure using local funds, (ii) improving locally sourced revenues to lessen dependence on national government funds, (iii) developing cost-effective methods in urban infrastructure development, and (iv) building capacity in local governments through institutional and human resource development and financial reforms. The IUIDP covers eight major urban service components that fall under Indonesia's Directorate General of Human Settlements (DGHS, also known as *Ditjen Cipta Karya*) in the Ministry of Public Works (MPW): (i) spatial urban planning; (ii) water supply; (iii) sewerage and human waste; (iv) SWM; (v) drainage and flood control; (vi) urban roads; (vii) MIIP, and (viii) housing (i.e., KIP, core housing and sites and services schemes, urban renewal and resettlement, new settlements, urban land provision and GLD, public housing, and rental housing).³⁵ Financing projects locally was difficult, given the limited resources of local governments. The IUIDP also included some urban services with cost recovery.

47. Prior to decentralization, five ministries were involved at the national level in governing urban affairs: (i) MPW; (ii) the Ministry of Home Affairs; (iii) the Ministry of Finance; (iv) the National Development Planning Board (BAPPENAS); and (v) the National Land Administration Agency (BPN) and the National Urban Development Corporation (PERUMNAS) in charge of land and housing issues, which were both under the State Ministry for Housing. With various ministries involved in each project, specific task forces were set up to coordinate activities. The governance of urban affairs at the provincial level is similar to arrangements at the national level. The provinces had their own planning agencies (BAPPEDAs) and autonomous provincial departments (*dinas*) at the provincial level in charge of service delivery. In addition, central government ministries and agencies maintained "deconcentrated" provincial offices (*kanwils*). At the local

³⁴ It is sometimes also called the Integrated Urban Infrastructure "Improvement" Program.

³⁵ Robert Van Der Hoff. 1992. *Innovative Approaches to Urban Management: The Integrated Urban Infrastructure Development Programme in Indonesia*. United Kingdom: Averbury Publishing Company.

level, cities and districts had their own *dinas*, along with some deconcentrated central government offices at the local level (*kandeps*).

48. **Decentralized approach.** Plans to decentralize service delivery emerged as early as the 1970s, as reflected by Law 5/1974 on Local Government Administration. Despite these ideas, the provision of urban services remained under the control of central ministries (e.g., MPW). MPW continued to plan and implement urban infrastructure projects and transferred the facilities to the respective local governments for O&M only upon project completion. Many projects were not aligned with local priorities, and failed to consider whether local governments had the technical and financial capabilities to operate and maintain the facilities.

49. The big-bang decentralization and the lingering effects of the financial crisis motivated the government, with the aid of external agencies, to devise new initiatives under the multi-subsector approach using both program loans and investment components. Although the program loans were disbursed within 1–5 months, the disbursements under the investment loans were delayed substantially (Table 2). Nevertheless, the projects had aimed to develop a better enabling environment for the promotion of local development, including CDD, neighborhood upgrading, appropriate PSP, and program loans. This effort started with the Neighborhood Upgrading and Shelter Sector Project which is still ongoing. The project retained elements of the KIP in previous IUIDPs, but instead the approach used was bottom-up, with full community participation, starting with project identification and formulation. The project had the following components: (i) improve planning and management systems for both upgrading and new site projects for the urban poor; (ii) improve access to financing for shelter by the poor through central and local microfinance institutions or branches; (iii) upgrade poor neighborhoods and new site development for the poor with a sustainable maintenance regime; and (iv) strengthen sector institutions responsible for delivering the program. As indicated in Table 2, \$15.6 million was cancelled from the Loan 2072-INO: NUSSP mainly because the micro-credit component was not successful (due to high interest rate charged from end-users in the range of 20%–60%). The project implementation has been extended by 12 months, and is due to close on 31 December 2010.

Table 2: Current Status of More Recent Projects

Loan No.	Loan Name	Approved Amount (\$ million)	Approval Date	Net Loan Amount (\$ million)	Disburse Rate against Original Plan (%)	Elapsed Time against Original Plan (%)	Actual Closing Date
Project Loans							
2072	Neighborhood Upgrading and Shelter Sector Project (OCR)	68.6	19-Dec-03	53.0	63	103	n.a.
2073	Neighborhood Upgrading and Shelter Sector Project (ADF)	21.3	19-Dec-03	21.3	86	103	n.a.
2264	Infrastructure Reform Sector Development Program	27.6	21-Nov-06	27.6	7	56	n.a.
Program Loans							
2263	Infrastructure Reform Sector Development Program (Subprogram 1)	400.0	21-Nov-06	400.0	100	n.a.	29-Nov-06
2361	Poverty Reduction and MDG Acceleration Program	400.0	30-Oct-07	400.0	100	n.a.	31-Mar-08
2475	Infrastructure Reform Sector Development Program (Subprogram 2)	280.0	27-Nov-08	280.0	100	n.a.	18-Dec-08

ADF = Asian Development Fund, MDG = Millennium Development Goal, n.a.= not applicable, OCR = ordinary capital resources.

Source: Asian Development Bank database.

50. This was followed by three projects: Loans 2263/2264-INO and Loan 2475-INO: Infrastructure Project Development Facility with two subprograms and Loan 2361-INO: Poverty Reduction and Millennium Development Goals Acceleration Program. The former project focused on the acceleration of PSP in infrastructure through better prepared feasibility studies for national and decentralized PSP projects, and adoption of open and transparent bidding processes as well as transaction execution. The investment component of the program³⁶ is a "project development facility," which aims to identify many PSP sub-projects: such as a ferry terminal, water supply projects, multipurpose passenger terminals, and an airport. As Table 2 indicates, the two tranches of program loans have been disbursed on time or earlier, however, the project loan component is delayed, because (i) PPP transactions (in identified various subsectors) have been below expectation, (ii) only a handful biddings have taken place, and (iii) some biddings were not in line with the government's bidding guidelines for the development of a project development facility revolving fund to finance project preparation in the coming years. The subsequent ADB initiative (Loan 2361-INO: PRDGAP), was another program loan, and the single tranche was released within the same month of the approval. The program intended to support government's reform efforts to develop and implement MDG-related policy actions, while establishing a flexible policy framework in relevant sectors, i.e. poverty reduction, school enrollment, child mortality, and public health.

V. HISTORY OF ADB'S INDONESIA URBAN DEVELOPMENT PROJECTS

A. Project Outcomes

51. As mentioned in paras. 44–47, ADB supported the IUIDP concept when it was first formulated in Indonesia late 1979. Loan 400-INO: Bandung Urban Development Project (BUDP), which was implemented over 9 years from October 1979 to February 1988, was an early IUIDP funded by ADB. The multi-subsector approach aimed to program urban infrastructure facilities in a planned and coordinated manner and stressed decentralization and devolution of planning and implementation of the program to local governments. The new approach entailed a substantial level of TA to help local governments prepare medium-term investment plans and to implement local institutional development plans (LIDAPs) and revenue improvement action plans (RIAPs), which were part of the IUIDP. Under REPELITA VI (1994–1998), IUIDP became even more comprehensive, embracing not only traditional physical infrastructure but also institutional components.

52. The case study projects covered include the BUDP and 14 other ADB IUIDPs that were implemented from 1981 to 2007.³⁷ These projects targeted urban centers of towns and cities from Sumatra to Irian Jaya. Almost all urban infrastructure projects covered water supply, drainage, sanitation, SWM, and roads. In the mid-1990s, the objective of urban development changed somewhat, becoming more progressive and forward-looking, in contrast to the past focus on upgrading of urban services to accommodate urban population growth. ADB assistance for the sector continued under the multi-subsector approach, expanding basic facilities in urban areas. However, the slow implementation of urban development projects—which is related in part to the need to coordinate several sectoral components involving many government agencies at the national, provincial, and local levels—raises the question whether the multi-subsector approach was effective. What is apparent is that ADB did not specifically question the effectiveness of the approach until the big-bang decentralization. It continued to be responsive to the government's 5-

³⁶ ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Program Cluster, Loans, Technical Assistance Grant, and Administration of Grant to Indonesia for Infrastructure Reform Sector Development Program*. Manila (Loan 2263-INO, for \$400 million, approved on 21 November).

³⁷ The very first "urban" multi-subsector project—*Bandung Urban Development and Sanitation Project* (approved in 1976, \$0.1 million)—has no PCR or PPER, and was therefore not considered as a case study project.

year plans, and ADB projects adopted the government's implementation approach, (e.g., KIP, IUIDP) rather than introducing new approaches to address evident weaknesses in local governments' infrastructure development. The government led experimentation with various schemes (e.g., the GLD, KIP, and IUIDP) until late 1990s. Subsequent to the decentralization ADB responded to government requests for more program based approaches. For detailed descriptions of the strengths and weaknesses of each ADB project, see Appendix 2. Table 3 provides summary project descriptions.

Table 3: Project Descriptions

Item	Project Strengths and Weaknesses
1.	<p>400-INO: Bandung Urban Development Project (BUDP), \$28.6 million, approved May 1979, closed February 1988. This loan and the next (550-INO MUDP)^a shared the same objectives and implementation approach, and covered the same subsectors (except for water supply in Bandung, which was covered in another loan). Physical implementation was done almost simultaneously and faced similar problems.^b The BUDP's physical completion was delayed by 45 months (Appendix 5 has data on estimated and actual implementation duration). The project was implemented when the government's strategy was moving toward improvement of social infrastructure and promotion of development with equity (REPELITA III and REPELITA IV). The PPER rated the BUDP <i>generally successful</i>.</p>
2.	<p>550-INO: Medan Urban Development Project (MUDP), \$31.2 million, approved November 1981, closed October 1989. Project completion was delayed by 38 months due to slow completion of physical works. The MUDP was implemented under the government's equitable growth strategy (REPELITA III and REPELITA IV). Since MUDP and BUDP were being implemented at almost the same time, MUDP could not benefit from the experiences of the BUDP. Although both projects experienced long delays, the majority of physical targets were attained by the revised loan closing dates. The PPER rated the UDP <i>generally successful</i>. IED observed the KIP components, where more than 6,000 housing units were constructed under KIP. The housing areas have matured over time with good beneficiary involvement.</p>
3.	<p>629-INO: Small Towns Urban Development Sector Project (STUDSP), \$34.2 million, approved September 1983, closed June 1990. In an effort by the government to fast track the promotion of "development with equity" in less urbanized cities and towns, the STUDSP covered 38 towns in the province of Central Java^c and five subsectors. By the time the project was implemented the MPW DGHS,^d one of the executing agencies of the BUDP and MUDP, had gained experience in ADB procedures and in the implementation of multi-subsector projects. However, because towns and cities included in previous projects were not given priority or not included in succeeding projects,^e PIU heads and staff and to some extent the PMU head and staff had limited or no knowledge of ADB procedures and the complexity of implementing multi-subsector projects. To address this deficiency, training in ADB procedures and project implementation was provided to staff of the PIU and PMU. Project completion was delayed by 33 months due to slow completion of physical works. Financial sustainability had mixed results, as small towns did not record O&M costs, and few towns were able to increase tariffs despite surveys that revealed a high willingness to pay on the part of residents. There was no proper regulatory body for tariff, and local water enterprises were competing with private water distributors. The PPER rated the STUDSP overall <i>generally successful</i>.</p>
4.	<p>768-INO: Second Bandung Urban Development Project (SBUDP),^g \$108.2 million, approved May 1986, closed July 1994. This project covered not only Kota Bandung (as in the BUDP) but also the six adjacent subdistricts. The implementation issues (delayed hiring of consultants, land acquisition problems, and revision in engineering design) experienced during the BUDP were also encountered in the SBUDP. In addition, late finalization of cofinancing from the Government of the Netherlands contributed to implementation delays. Project completion was delayed for 45 months. Land acquisition problems (drainage, flood control, and sewerage) also contributed to the significant delay. PCR rating was <i>generally successful</i>, and there was no PPER.</p>

Item	Project Strengths and Weaknesses
5.	<p>919-INO: Second Medan Urban Development Project (SMUDP),^h \$171.7 million, approved November 1988, closed June 1996. The project covered Kota Medan, Binjai and the five subdistricts of Kabupaten Deli Serdang. While the main focus of projects 1–4 above was on the physical works, the SMUDP included assistance to the government to strengthen staff capacity for urban management and municipal services. The SMUDP benefited from the MUDP, as key issues raised during the project completion review of the MUDP were taken into account in the design of the SMUDP. However, despite the lessons from the previous project, delays were still experienced in consultant recruitment, and problems were experienced in the coordination between different agencies. The PCR overall rating was <i>generally successful</i>, and there was no PPER. All physical targets were achieved except for sewerage (34.2%).</p>
6.	<p>983/984-INO: Secondary Cities Urban Development Sector Project (SCUDSP), \$112.7 million, approved November 1989, closed March 1997. After the completion of the STUDSP in June 1990, another multi-subsector and multicity project, three times larger in terms of cost, was approved.ⁱ While the STUDSP targeted the province of Central Java, the SCUDSP covered 51 secondary cities in West Java and eight provinces in Sumatra. More subsectors (water supply, sanitation, and urban roads) were covered compared with the STUDSP. As in the five previous multi-subsector projects, project completion was delayed for 6 months. The overall PCR rating was <i>generally successful</i>. The PPER overall rating was <i>partly successful</i>, with evaluation criteria of <i>partly relevant, efficacious, efficient, and less likely to be sustainable</i>. The PPER also noted that the O&M capacity of local governments was not substantially improved by the project and was considered negligible. This could be attributed in part to the fact that the project did not include advisory TA for capacity building. This project was originally envisaged to promote community participation, but the actual implementation had minimal beneficiary consultation, and was centrally implemented.</p>
7.	<p>1077-INO: BOTABEK Urban Development Project (BOTABEK UDP), \$76.1 million, approved January 1991, closed December 1997. This project was implemented almost simultaneously with the SCUDSP. The project covered eight towns (Balaraja, Bekasi, Cibinong, Cikarang, Citereup, Depok, Serpong, and Tangerang). It included seven subsectors: water supply, drainage, sanitation, solid waste management, KIP and/or MIIP, urban roads, and GLD. Aside from the usual assistance from implementation and advisory consultants, the project benefited from four related TA operations. The PPER rated the project <i>relevant (except GLD), effective, highly efficient, and likely to be sustainable</i>. Except for the GLD subcomponent, sustainability was likely for all components. GLD facilities were constructed by contractors rather than through self-help efforts of local communities. The project completion was delayed for 12 months. The overall PCR rating was <i>generally successful</i>, and the PPER rating was <i>successful</i>.</p>
8.	<p>1078-INO: Bandar Lampung Urban Development Project (BLUDP), \$30.8 million, approved January 1991, closed October 1997. This project was implemented to support the government's effort to improve the living standard of the urban poor by addressing critical service needs and infrastructure deficiencies. Subsectors covered were water supply, solid waste management, human waste disposal, KIP, urban flood protection, urban drainage, and urban roads. The BLUDP benefited from two advisory TA operations dealing with water supply and sewerage, and urban planning and transportation. Project implementation was characterized by good interagency coordination. Although the executing agency was the central ministry in Jakarta (DGHS), there was good coordination at the local city, led by the head of the planning department (BAPPEDA). According to the PPER, provincial and local staff acquired ample experience through project implementation, and they became more capable of handling integrated investment programs at the local level. This was the last multi-subsector project implemented before the onset of the 1997 Asian financial crisis. The overall PCR rating was <i>generally successful</i>, and the PPER upgraded the overall rating to <i>highly successful</i>.^j Project completion was delayed by 7 months.</p>
9.	<p>1111-INO: Bogor and Palembang Urban Development Project (BPUDP), \$126.5 million, approved 31 October 1991, closed 30 September 1999. The project was aligned with ADB's operational strategy for Indonesia, which emphasized the need to upgrade facilities and review policy-related matters, including urban planning. The overall purpose of the project was to promote the socioeconomic development of the Bogor and Palembang areas, by minimizing impediments to increased productivity by improving urban infrastructure and services. It also aimed to strengthen the institutional capabilities of the agencies involved. The project covered</p>

Item	Project Strengths and Weaknesses
	<p>three cities (Kabupaten Bogor, Kota Bogor, and Kota Palembang) in six subsectors: water supply, sanitation, drainage, solid waste, urban road, and <i>kampung</i> improvement. For the road component, the project provided strategic links within the city network, including the upgrading of an inner ring road, and provided additional access to the toll road from Jakarta (a case of geographical integration). Project implementation was impacted by the reversal of robust growth in the urban economy brought about by the 1997 Asian financial crisis, however, which also caused counterpart funding to decline by 44% compared with the appraisal target. One case of irregular activity involving procurement was found by the state auditor. At their request, ADB Review Committee on Anticorruption conducted an independent investigation of the case, and it was communicated to the government with a request to reimburse \$207,741 to ADB. The project completion was delayed by 24 months.</p>
10.	<p>1198-INO: Central Java and DI Yogyakarta Urban Development Sector Project (CJDYUDSP), \$125.8 million, approved November 1992, closed November 2000. The project covered 37 towns and cities and seven subsectors. The main objectives were to improve the urban environment and urban living conditions, in particular, in low-income areas; and to minimize impediments to economic growth by providing various types of infrastructure (water supply, urban roads, sanitation, KIP, MIIP, solid waste management, and drainage). The project's RRP was the first among ADB's Indonesia urban projects to raise public sector participation as a sector goal, but participation during implementation did not take place as envisaged. Project completion was delayed for 15 months, requiring one loan closing date extension. The project was rated <i>generally successful</i> by the PCR.</p>
11.	<p>1292-INO: Eastern Islands Urban Development Sector Project (EUDSP), \$70.8 million, approved December 1993, closed July 2001. The EUDSP^k was the first ADB multi-subsector project covering the eastern parts of Indonesia. It covered 17 districts in four provinces^l and one former province.^m In terms of geographic area coverage, this was the biggest multi-subsector project funded by ADB. The objective of the project was to help improve the quality of urban infrastructure and service delivery and to stimulate economic development in selected urban centers in the eastern islands. This included (i) urban infrastructure investment in about 17 urban areas, including five provincial capitals; (ii) urban infrastructure programming, financial planning and information management; (iii) local revenue generation and financial management; and (iv) strengthening of local government human resources and institutions in urban development and management. The project was rated <i>relevant, partly effective, partly efficient, partly sustainable, and with marginal impact</i> by the PCR. Both the PCR and PPER ratings were <i>partly successful</i>. The centralized, uniform approach taken under the project failed to recognize that local government capacity was variable in the selected towns, and particularly limited in the eastern islands. To minimize delays normally associated with the preparation of the detailed engineering design (DED), DGHS, the executing agency, initiated advance action to recruit consultants, who prepared the DED. Project completion was delayed for 16 months. According to the PPER, the socioeconomic survey revealed that around 70% of the respondents were willing to pay high for quality service, but the PDAMs have not raised the tariff to recover the capital costs.</p>
12.	<p>1383-INO: Sumatra Urban Development (Sector) Project (SUDSP), \$87.9 million, approved September 1995, closed September 2004. The SUDSP was ADB's biggest project in terms of the number of cities covered—67 cities under 62 local governments.ⁿ PMUs were established in each of the eight provinces, while PIUs were established in each of the 62 local governments. The SUDSP was one of four projects affected by the government's decentralization initiatives, which weakened the status of the provinces; the PIUs then developed a tendency to bypass the PMUs and communicate directly with the executing agency, thereby breaching procedures. Due to some irregularities in procurement, ADB suspended loan disbursement for 6 months. The overall PCR rating was <i>partly successful</i>. In June 2002, ADB suspended withdrawals from the loan account, citing procurement irregularities, declaring the EA lacked adequate internal controls to prevent irregularities, and concluded that the EA was in breach of the loan agreement. The Minister for Settlement and Regional Infrastructure replied to the ADB letter citing (i) the size and complexity of the project, (ii) number of participating local governments, (iii) impact of decentralization, and (iv) EA's lack of authority to control local government procurement actions as reasons for irregularities. In October 2002, ADB and the EA signed an</p>

Item	Project Strengths and Weaknesses
	MOU, in which the government agreed to an external assessment of internal management controls and oversight systems (local government procurement committees with independent members) within the EA. Shortly afterwards, ADB removed the suspension of withdrawals. Project completion was delayed by 25 months. This project also suffered from low tariff increases and the lack of an O&M budget.
13.	1384-INO: West Java Urban Development Sector Project (WJUDSP), \$49.4 million, approved September 1995, closed February 2004. The project's objective was to improve the quality of life and public health of the residents of selected cities in western Java through an investment program combining institutional development with the provision of improved urban infrastructure services. The institutional improvement component was more pronounced in this project. It included (i) strengthening the role of provincial and local governments and their agencies in subproject preparation, implementation, and monitoring; (ii) improving the operational performance of local government agencies, including reducing nonevenue water (NRW) in PDAMs; (iii) expanding private sector and community participation in the provision of urban services; and (iv) strengthening the financial management of local agencies by improving revenue collection, monitoring costs, and cost recovery for services. This showed good vertical integration of water resources management—which encompassed source development, treatment, and distribution—with strong leadership and long-term vision by the project director. The project covered 20 cities and towns under 17 local governments and seven subsectors. In some cases, the procurement processes had to be repeated due to irregularities. It experienced a 14-month delay in the completion of the subcomponents. The project's overall PCR rating was <i>partly successful</i> . There was no PPER.
14.	1511-INO: Metropolitan Bogor, Tangerang, and Bekasi Urban Development Sector Project (Metro BOTABEK UDSP), \$39.7 million, approved December 1996, closed March 2004. The project objectives were to (i) enhance the capacity of sector institutions, particularly PDAMs to (a) provide, operate, maintain, and finance urban infrastructure services; (b) enter into public-private partnerships (PPPs) for the provision of such services; and (c) manage the urban environment; and (ii) accelerate the provision of essential urban infrastructure in the project area. The project scope included institutional development of central, provincial, and local governments and their enterprises, and rehabilitation and expansion of infrastructure services such as water supply, roads and bridges, drainage, solid waste, sanitation, KIP and MIIP, and bus terminals. The project was implemented from March 1997 to September 2003, with a delay of 12 months from the original completion date (land acquisition of the access road to the bus terminal and SLAs were the main cause). This project was deeply affected by the financial crises of 1997. Of the approved ADB loan of \$80 million, \$40.31 million (50.4%) was cancelled, resulting in a much reduced scope of works for all subsectors except KIP and MIIP. Of the planned 11 SLAs, only three were realized. Of the originally envisaged 11 PSP projects, two small-scale contracts (build-and-transfer) were implemented. The project implementation coordination set-up was complicated, with rather unclear authority of the PMU in the provincial capital (Bandung). The PCR rated it <i>successful</i> , while the PPER rated it <i>partly successful</i> .
15.	1587-INO: Metropolitan Medan Urban Development Project (MMUDP), \$116 million, approved December 1997, closed April 2007. The project objectives were to improve living conditions and access to basic services and to generate public health and hygiene, environmental, and economic benefits to a growing urban population, including urban poor, women, and children in the Metropolitan Medan area, covering the municipalities of Binjai and Medan and part of the district of Deli Serdang. It had two main components, covering: (i) infrastructure, comprising water supply, sanitation, flood control, drainage, solid waste management, and roads; and (ii) institutional development, covering project implementation assistance, preparation of action plans, and preparation of a benefit monitoring and evaluation system for use by development-oriented institutions. During the PCR, the project was rated <i>less relevant, less effective, less efficient, likely sustainable</i> , and with <i>positive</i> impact. ADB and executing agency performance were <i>partly successful</i> . The PCR validation rated it <i>partly successful</i> .

ADB = Asian Development Bank; BAPPEDA = Badan Perencana Pembangunan Daerah (local government development planning department), BOTABEK = Bogor, Tangerang, and Bekasi; DGHS = Directorate General of Human Settlements; GLD = guided land development; IED = Independent Evaluation Department; INO = Indonesia; KIP = *kampung* improvement program; MIIP = market infrastructure improvement program; MPW = Ministry of Public Works;

O&M = operation and maintenance; PCR = project completion report; PDAM = Perusahaan Daerah Air Minum (local government water supply enterprise); PIU = project implementation unit; PMU = project management unit; PPER = project performance evaluation report; REPELITA = Rencana Pembangunan Lima Tahun (national Five-Year Development Plan); RRP = report and recommendation of the President; SLA = subsidiary loan agreement; TA = technical assistance.

^a Bandung is located in West Java, while Medan is located in North Sumatra.

^b Land acquisition problems, delayed recruitment of consultants, and inadequate counterpart funds.

^c The island of Java constitutes only 20% of Indonesia's land area, but is home to about 60% of the total population. Java is divided into four provinces: West Java, Central Java, East Java, and Banten.

^d Directorate General of Housing, Building, Planning and Urban Development, Ministry of Public Works.

^e To offset this capacity issue, key persons in the PMU could have come from staff of the BUDP or MUDP.

^f Some PMU heads and staff gained experience from working in several multi-subsector projects. For example, PMU heads and staff of Loan 1384 also worked for Loan 1511.

^g The SBUDP (\$132.4 million at appraisal) was four times the BUDP.

^h The SMUDP loan (\$175.0 million at appraisal) was 4.5 times the MUDP.

ⁱ The SCUDSP loan (\$120.0 million at appraisal) was 3.3 times the STUDSP.

^j The PPER evaluated three loans—984, 1077, and 1078—with overall ratings of *partly successful*, *successful*, and *highly successful*, respectively. Loan 1078 was the best among the three in terms of physical completion, and the city government played a major role in implementing some components under a clearly defined division of responsibilities.

^k The EUDSP loan was for \$70.8 million after \$4.7 million was cancelled.

^l West Nusa Tenggara, East Nusa Tenggara, Maluku, and Irian Jaya.

^m Formerly East Timor Province but renamed Timor-Leste after independence.

ⁿ The number of cities covered was increased during implementation. Based on the RRP, only 50 cities under 50 local governments in eight provinces in Sumatra were covered. Only two subproject appraisal reports (SPARs) were prepared during the project preparatory TA. Subsequent SPARs were prepared by the local governments and/or PDAMs with assistance from the advisory TA consultants.

Source: Special evaluation study team.

B. Summary Results

53. ADB has adopted the government-initiated multi-subsector approach for urban services projects for over 30 years but the performance has been weak particularly in the years compared to other sectors in Indonesia.³⁸ There have also been substantial implementation delays in the urban sector—averaging 24 months (Table 4)—compared with ADB's average implementation delay of 19 months during this period.³⁹ Figure 1 shows that the implementation delays were not driven by the number of cities covered by the project or the number of subsectors. Therefore, the evaluation examines (in chapter VI) other characteristics of the multi-subsector approach to understand the reasons for the poor performance. However, explicitly isolating these factors in the Indonesian context is difficult, because the country also experienced the financial crisis and decentralization during the same period. Nevertheless, a detailed examination of the multi-subsector approach in Indonesia (which had the highest number of multi-subsector projects for the provision of urban services among ADB developing member countries) is useful in two ways: (i) it will highlight the lessons for urban services projects in Indonesia, and what is important to consider in designing and implementing future urban services projects; and (ii) it will provide insights to a larger regional evaluation study on the suitability of the multi-subsector approach for urban sector projects (para. 9).

³⁸ Prior to 2000, "successful" projects were rated "generally successful." Since 2000, both "highly successful and "successful" have been classified as "successful." There was no change in the "partly successful" and "unsuccessful" categories in the two periods.

³⁹ This figure is calculated from all ADB projects that were approved between 1979 and 1997, using the Central Operations Services Office' database used in IED's ADB. 2009. *Annual Report on 2008 Portfolio Performance*. Manila.

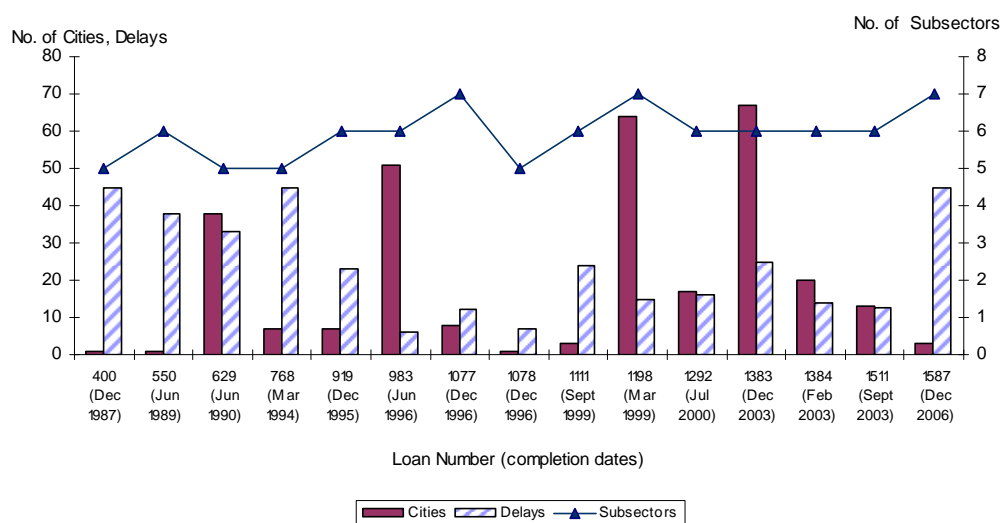
Table 4: Approved and Disbursed Amounts at Completion for Urban Multi-subsector Projects, (1979–1997)

Loan No.	Project Name	Approved Amount (\$ '000)	Utilized Amount (\$ '000)	Percent Utilized	Percent Disbursed at Original Closing	Number of Months Delay in Project Completion
400	Bandung Urban Development	32,300	28,585	88.5	...	45
550	Medan Urban Development	39,300	31,249	79.5	10.4	38
629	Small Towns Urban Development Sector	36,700	34,247	93.3	25.4	33
768	Second Bandung Urban Development	132,400	108,150	81.7	41.8	45
919	Second Medan Urban Development	175,000	171,710	98.1	69.9	23
983/984	Secondary Cities Urban Development	120,000	117,035	97.5	...	6
1077	Bogor, Tangerang, and Bekasi Urban Development	80,000	76,120	95.2	...	12
1078	Bandar Lampung Urban Development	33,000	30,766	93.2	...	7
1111	Bogor and Palembang Urban Development	140,000	126,489	90.3	73.3	24
1198	Central Java and D.I. Yogyakarta Urban Development	150,000	125,782	83.9	80.2	15
1292	Eastern Island Urban Development Sector	85,000	70,767	83.3	71.0	16
1383	Sumatra Urban Development	130,000	87,917	67.6	52.0	25
1384	West Java Urban Development Sector	70,000	49,402	70.6	62.0	14
1511	Metropolitan Bogor, Tangerang and Bekasi Urban Development	80,000	39,688	49.6	48.0	12
1587	Metropolitan Medan Urban Development	116,000	74,536	64.3	13.0	45
Average		94,647	78,163	82.4	49.7	24

... = not available.

Source: Asian Development Bank database.

Figure 1: Project Delays Against the Number of Cities and Subsectors Covered by the Project



Source: Asian Development Bank database.

VI. KEY FINDINGS RELATING TO PROJECT DESIGN AND IMPLEMENTATION

54. Given the poor performance of multi-subsector urban services projects in Indonesia (para. 53), this chapter highlights the key findings relating to project design and implementation that could improve the performance of such projects. These findings have been compiled through an analysis of the information obtained from field visits and a desk review of the projects. It is noted that much improvement in urban multi-subsector project implementation can be initiated at the time of project design. Citing some post-project findings, IED lists concrete steps to enhance project outcomes and explains these using case study examples.

55. **Assessing institutional capacity.** When defining the project implementation organization, it is very important to assess who has decision-making authority in the project area, where the key departments or divisions are placed, and what the setup of the PMU or PIU is within the city or the district. Given the characteristics of urban institutional structure, political sensitivities play a significant role in the prioritization of subprojects. In Appendix 6, the organizational chart for Bandung City shows that a municipality has many departments, offices, and agencies under the mayor (or governor in the case of a province). For multi-subsector projects, key departments are the (i) local government development planning department (BAPPEDA), (ii) transportation agency, (iii) spatial and human settlements (*cipta karya*) agency, (iv) roads (*Bina Marga*) and irrigation agency, and (v) PDAM. *Cipta karya* is responsible for major urban infrastructure (e.g., sanitation, drainage) except water supply (which is under the PDAM). *Bina Marga* is responsible for urban roads, whereas the transportation agency handles road network planning, public transportation, and traffic control. BAPPEDA is where the master plans are drafted, coordinated, and discussed.

56. The general rule is that each service department prepares the initial subproject appraisal report (SPAR) with cost estimates and schematic designs. The submitted SPARs are screened and prioritized in BAPPEDA based on the existing master plan approved by the local parliament. After significant consultation across departments and agencies, a SPAR is given to the mayors for approval through the secretary's office. ADB urban projects are usually implemented over a span of 5 years, during which many steps take place before civil works are completed. In most cases, the initial SPAR was not of good quality—quantities are not accurate or a major design change is needed during the detailed design stage. In addition, the master plan is often not a final document, and its sequential priorities are not always respected. The decision whether or not to participate in an ADB project tends to be changed many times during project preparation, depending on the local situation, political sensitivities, and other urgent urban problems.

57. In other countries (e.g., Bangladesh and India), governments and international financial institutions (including ADB) set up a third-party agency specialized in appraising the technical and financial viability of subproject proposals to mitigate political influence in prioritization and enhance coordination among various infrastructure departments. In other cases (e.g., Georgia and Sri Lanka), ADB has helped the government run a municipal development fund mechanism to enable semi-independent project appraisal.

58. There are differences in the way central government financing is made available in terms of grants and loans, depending on the subsector focus of a particular subproject. These funding processes need to be carefully programmed and followed up by the PMU or PIU heads and BAPPEDA. In cases where the PMU or PIU head was part of BAPPEDA, or one agency was given the overriding coordination role, overall coordination went well (as in the 1098-INO BLUDP), compared with cases where the PIU head was assigned, but did not have a past association with internal coordination mechanisms (as with Loans 1383-INO SUDSP and 1511-INO Metro BOTABEK UDSP), when coordination took much longer. Naturally, when the PIU or PMU or the relevant authority was directly under the mayor, the communication channels were much better established and decision making more rapid compared with cases where the PIU or PMU was in an ad hoc structure, and where heads of departments and agencies met and discussed issues only when necessary. The readiness of PMU and/or PIU for multi-subsector project implementation is important.

59. **Assessing demand and readiness.** It is important to have some criteria to verify the level of local beneficiary demand and verify the readiness of the area to accept the subprojects. In a SPAR, assessments of demand are usually embedded in the calculation of the financial or economic internal rate of return. The key assumptions that are typically made in forecasting demand for infrastructure must be realistic. In the case of urban roads, vehicle operating cost assumptions need to be clearly stated and recorded; in the case of sanitation and solid waste,

prerequisites—such as progress with land acquisition—need to be confirmed (Loan 768-INO: SBUDP and the bus terminal component in Loan 1511-INO: Metro BOTABEK UDSP). In some projects (e.g., 1587-INO: MMUDP), the initial SPAR findings on urban facilities or infrastructure were overestimated or did not have a proper demand assessment. Urban projects take place amidst various social, economic, and political problems, and it is not always easy to integrate various subcomponents—different nongovernment organizations (NGOs) may put pressure on certain components, and the level of actual demand for various components may vary greatly. Local demand for urban roads and water supply is typically high at the beginning, while the demand for sanitation and SWM lags behind. There is also often opposition in urban areas to the construction of new solid waste FDS or wastewater treatment plants from residents who live in the vicinity, as these facilities often generate bad smells and soil contamination if operated without proper and regular maintenance. These considerations affect the demand for some subcomponents and jeopardize overall project implementation.

60. **Assessing opportunities.** Although they pose a challenge, natural disasters or major urban degradation can constitute an opportunity to promote the need for infrastructure investment, and for agencies to work together. At such times, it is easier to mobilize local beneficiary support and civil society organization and NGO cooperation. Instead of viewing negative environmental impacts as challenges, government officials, particularly at the local level, need to use such impacts to raise awareness about proper long-term investment. In Bogor, garbage is currently transported to an open dumpsite in the neighboring city of Bekasi. In 2009, NGOs blocked access to the city's FDS. The confrontation resulted from environmental concerns and demands for compensation by the residents. Bogor City is now planning to join in an integrated SWM scheme encompassing four cities to solve the mounting SWM issue. Greater Jakarta and West Java Province are facing the problem of how to contain and where to dispose of the volume of waste. Municipalities are no longer able to address SWM individually, and the problem has to be addressed at a wider, regional level. Long-term planning would help residents to be aware and supportive of the government's initiatives. There is a real need for strategic preparation (e.g., due diligence, impact assessment, and land acquisition) under strong local leadership.

61. **Addressing sustainable environmental issues.** Given the thrust of Strategy 2020 on sustainable development,⁴⁰ there is a need during project design to pay attention to environmental degradation that is evident in Indonesian urban areas. Although the local electorate's support for sanitation and SWM is still not high compared with water supply and urban roads, urban environmental degradation is becoming increasingly visible and is more regularly featured in mass media. Despite efforts by the government and municipalities to mitigate the negative risks associated with open dumping, given the sheer volume of urban waste, there is far less capacity of the municipality (in terms of resources and suitable land) to treat, process, and landfill garbage. It has become increasingly difficult to find land for a landfill site and to keep operating it without obstruction from local opposition groups. River pollution is also increasingly apparent. There is a role for international financing institutions such as ADB to work together and advise the Indonesian government through a process that requires innovation and new approaches, such as the clean development mechanism initiative (Box 1). It is also important for BAPPEDA and each responsible division to keep good maps and records, including the location and severity of hazardous incidents, and to constantly update funding requirements and land acquisition needs. When potential funding is in the pipeline (e.g., foreign aid or a loan is proposed), needs can then be swiftly outlined and prioritized.

⁴⁰ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

Box 1: Case of New Initiatives: The Clean Development Mechanism in Solid Waste Management

The Independent Evaluation Mission has observed that several pilot schemes initiated and tested the clean development mechanism (CDM) in Indonesia. One was brokered by the World Bank (in Bekasi, on the outskirts of Jakarta). The CDM in Bekasi is generating additional revenue of \$100,000 per year for the central government and \$70,000 for the municipality. It has availed of the trust fund from the Government of the Netherlands. The facility is extracting methane gas from the landfill site; generating power; selling it to a power grid; and raising extra income for the central government, the municipality, and the foreign operators on a long-term contract. Photos are in Appendix 7.

Source: Special evaluation study team.

62. **Promoting vertical and geographical integration.** If a multi-subsector project strives to achieve either vertical or geographical integration, it is necessary to confirm the existence of a local champion to drive and coordinate the process. Both forms of integration were advocated by the government as strong justification for the multi-subsector approach. However, across all Indonesian multi-subsector projects, the success rate for either type of integration has been very low. Out of the 15 case study projects, only two (Loans 1111-INO: BPUDP and 1384-INO: WJUDSP) managed to have either vertical or geographical integration. These types of integration were successful where a local champion was present to support the plan for vertical or geographical integration in the delivery of urban infrastructure. The champion can be a strong and responsible local political figure—or the incumbent and well-experienced head of BAPPEDA, (Loan 1384-INO: WJUDSP's water supply component)— who can negotiate skillfully with all relevant departments and agencies during the prioritization process. Subprojects are submitted by different agencies, SPARs are prepared by different sector departments, and the coverage of central government or ADB loan proceeds varies depending on the sector. Appendix 3 details the normal guidelines on which urban subsector projects can avail of a loan or grant from the central government. In WJUDSP, a city applied for ADB loan financing for a consolidated project that would include the FDS or landfill site construction with an access road. The general rule is that any FDS component has to avail of financing as onlending from the central government, but an "urban road" is financed on a grant basis, as these roads are not revenue generating. The application procedures are different, and the relevant approval authorities in the central government also differ slightly. Thus, use of the multi-subsector approach in the implementation of urban projects is not supported by a common financing procedure and funding mechanism. The whole implementation process is not generally based on the concept that different subsectors can be packaged as one completely integrated project.

63. Despite this challenging environment, there were cases of partial integration, where different subcomponents were implemented simultaneously. An example of vertical integration is evident in Loan 1111-INO: BPUDP, where the water supply components for Bogor and Palembang sought to undertake holistic area-based water resources management. This was a comprehensive water resources management project starting from (i) a small dam constructed in the nearby mountains (25 km away), (ii) the main transmission pipe, (iii) the water treatment plant, (iv) a reservoir, (v) reticulation pipes, and (vi) house connections. The whole package was based on an earlier master plan that presented a long-term vision for the entire city. The project director of the ADB project is now the head of the PDAM; strong institutional continuity also contributed to the successful vertical integration. The municipality had a local champion to realize the vision of the master plan. The PMU succeeded in packaging realistic subcomponents within the ADB project duration of 5–6 years. Photos are in Appendix 7 (Bogor).

64. In geographical integration, different subcomponents in the same location are jointly developed under one project. This was observed in a few projects. In WJUDSP, FDS was combined with construction of a new access road in an example of good geographical integration. On the other hand, geographical integration was unsuccessful in Loan 1511-INO: Metro BOTABEK UDSP,

which included a long-distance bus terminal and an access road. It faced some land acquisition problems and resulted in major delays, as the municipality did not acquire the land well in advance. As a result, the unavailability of land resulted in the access road layout being not technically ideal, as traffic had to make a sharp u-turn when entering the bus terminal. The land acquisition for the bus terminal and the access road should have been planned and coordinated at a much earlier stage as one integrated development prior to ADB project preparation. This case shows the intrinsic difficulty of geographical integration, unless there is (i) a comprehensive master plan for all relevant subsectors, (ii) an endorsement of integrated development, and (iii) a commitment to prepare the developments for all linked subsectors in parallel.

65. **Assessing financing arrangements.** During project preparation, the targeted municipality's debt positions on past capital investment loans should be checked to see whether financing procedures can create a problem for project implementation. The municipality's history concerning SLAs should be checked. If records show that the local parliament rejected a motion for an SLA in recent years, it is likely that passing another SLA approval will be difficult. In recent years, more local authorities appear to be rejecting onlending projects, despite onlending arrangements being generally agreed upon during appraisal. In Loan 1511-INO: Metro BOTABEK UDSP, despite obtaining permission from the central government for onlending, the local parliament rejected the SLA arrangement for water supply expansion projects (after the financial crisis, many local parliamentarians did not want to assume more debt). As a result, only three out of 11 planned SLAs were signed: (i) PDAM Bogor, (ii) Kota Tangerang for a bus terminal, and (iii) PDAM Kota Tangerang. Originally, all the water supply projects and revenue-generating subcomponents (including SWM) had been on an onlending basis. Kota Bekasi PDAM was able to avoid an SLA and obtain a central government grant because in the previous BOTABEK I Project, the city had already assumed many SLAs and was unable to take on anymore loans. This was an exceptional case for a water supply project.

66. A major portion of a local authority's budget is supported by the general budget allocation from the central government for capital investment, as local taxes can only partly cover local recurrent expenditures. In 1511-INO: Metro BOTABEK UDSP, analysis of the financial internal rate of return revealed that subsidies and grants to local governments were growing at about 18% per year until 2006: they made up between 33% (Tangerang District) and 57% (Bogor District) of local government income, revealing a high degree of financial dependency on the central government. In principle, based on Law 25/1999, revenue-generating sectors like water supply, sanitation, market improvement, and bus terminals should be approved on an onlending basis. Onlending applications and approval mechanisms differ from those for grants. Even with the approval of central ministries, (i.e., BAPPENAS, Ministry of Finance, and MPW), some past ADB multi-subsector projects that were meant to be undertaken on an onlending basis did not happen. This problem increased after decentralization, because SLA arrangements had to be approved by the local parliament.

67. **Financial sustainability and tariff setting.** The possibility of independent operation of some revenue generating utilities—through separation of the management of their revenues and expenditures from the general urban area pool, and allowing tariff increases to ensure cost recovery—should be explored. Some subsectors can generate their own revenues, and municipalities can then increase the independence of those operations or profit centers; separate accounts can be maintained for each such subsector to reflect their costs and revenues in order to improve their efficiency and profitability. In Loan 1511-INO: Metro BOTABEK UDSP, the Tangerang City Bus Terminal is the most financially successful. The terminal is used mainly for long-distance bus services (from North Java or even Sumatra Island); many passengers change buses to continue to the central Jakarta area, or further eastward on Java Island. The terminal began operations in November 2003 after a 2-year construction period. Thereafter, revenues grew rapidly from Rp98.5 million in 2004 to Rp815.2 million in 2008. Entrance tariffs were

increased only once, in 2007. However, all revenues go to the city. As revenues are bundled in the municipality, the bus terminal lacks an incentive to manage its finances efficiently or reduce operational costs.

68. Revenue-generating agencies like water supply enterprises should be given greater autonomy in tariff setting (to avoid the difficulties observed in 629-INO: STUDSP and 1383-INO: SUDSP), subject to lifeline supplies. Water supply is a monopolized service provision, and an independent regulatory body should be established to make recommendations regarding appropriate tariff levels. In Bogor (Loan 1111-INO: BPUDP), the city council issued a local government decree (PERDA) allowing the PDAM to increase its tariff rate every year by a maximum of 25%. This allowed the PDAM to cover its total operating costs and earn a profit (Appendix 9). As in many countries, Indonesia is reluctant to charge tariff levels sufficient to cover water supply, maintenance, and service. However, the local parliaments currently have the final authority for tariff approval, and many PDAMs are not making a profit and are highly indebted.

69. IED's socioeconomic survey in the PPER for Loan 1511-INO: Metro BOTABEK UDSP shows that willingness-to-pay in areas other than Bogor City significantly exceeded (and ranged from 1.5 to 3.8 times) the current average tariff of Rp1,664 (Table 5). The government needs to strategize how it should engage and convince the public and local politicians to allow tariff levels to be set at a cost-recovery basis at a minimum. Similar willingness-to-pay was also confirmed in EUDSP. There is resistance to a rapid increase in tariffs from those who already have a connection. Thus, initially, there has to be slightly different pricing for existing and new connections, to be justified by the level of new capital investment. As the quality is improved, the two pricings should gradually merge. That is the strategy taken in many developed countries (e.g., the United Kingdom).

Table 5: Willingness to Pay

Willingness to Pay	Depok City	Tangerang City	Bekasi City	Bogor City	BOTABEK Average
WTP for clean, potable water with good pressure (%)	95	53	68	44	65
WTP/m ³ (Rp)	4,405	2,510	6,355	1,693	3,741
Have house connection (%)	78	88	1	66	58
PDAM should concentrate on:					
- improving quality of water (%)	64	72	61	18	54
- improving quantity of water (%)	29	66	50	24	42

BOTABEK = Bogor, Tangerang, and Bekasi; m³ = cubic meter; PDAM = Perusahaan Daerah Air Minum (local government water supply enterprise); WTP = willingness-to-pay.

Source: Special evaluation study team.

70. **Assessing resource adequacy.** The shortcomings of past projects indicate that future multi-subsector projects will require more staff resources from various disciplines. A much more rigorous dialogue with other aid agencies and recipient municipality staff is needed to assess their human resource capacity during the project preparation. The timing of the AFC dampened the highly anticipated PSP in the late 1990s. However, in Loan 1511-INO Metro BOTABEK UDSP (which was implemented in the midst of the AFC), ADB depended on TA provided through the United States Agency for International Development (USAID) to prepare sample legal and tendering documents for PSP projects. ADB lacked its own detailed assessment or sector market study to determine the feasibility of this specific PSP venture, and the USAID study was not sufficiently detailed. In IED's view, the preparation was not thorough, especially because ADB did not send an experienced PSP expert or legal specialist to review and make recommendations to

effectively mitigate risks facing the private sector. ADB's project preparation for PSP components and packaging of various subcomponents in the projects was based on inaccurate assumptions, and lacked a strategy and rigorous assessment. This was due in part to the very short project conceptualization and incubation period, and the short preparation time (usually less than a year) for processing projects.

71. **Beneficiary involvement in projects.** To accommodate beneficiary participation, more time needs to be allowed for project design or implementation, especially for large infrastructure projects. Small-scale neighborhood improvement multi-subsector projects (such as the KIP component of Loan 550-INO: MUDP), which typically had about an implementation period of about 5 years, have shown that beneficiary participation during project design, implementation, and maintenance has been effective and essential for future maintenance and expansion of project benefits. The scale of urban infrastructure improvement in these projects is at the neighborhood level, with visible direct benefits to residents. In many of the large multi-subsector projects examined through field visits and document review, IED was unable to trace strong evidence of the participatory involvement of beneficiaries in the project design and implementation stages. In larger infrastructure projects in urban areas (as in Loan 1587-INO: MMUDP)—involving in-city urban road traffic, district-level water supplies, district-level sanitation, or comprehensive sanitation for the entire city—direct resident participation is difficult to sustain, as beneficiaries are unclear about the direct benefits they would receive. As such, municipalities do not know how best to use the opportunity to involve residents. Within the relatively short period of 5 years usually planned for ADB project implementation (even for large projects), it is difficult to accommodate beneficiary participation unless active participatory involvement was present before ADB preparation commenced. Given that some level of beneficiary involvement and ownership is essential to ensure project effectiveness and sustainability, it is essential to either arrange for beneficiary ownership and partnership during the project design stage, or to plan for a longer implementation period to accommodate participation. In either case, processing or implementation time would have to be extended to ensure sustainability of these investments. More time to involve local beneficiaries during project design and the early stages of implementation should be allocated, as there is a great need for coordination within municipalities across all relevant departments and agencies. In the projects reviewed, the solicitation of beneficiary participation in larger projects was typically left to consultants, and there were very few government officials or ADB staff involved in the process.

72. **Realistic project expectations.** It is essential to be realistic about the benefits projects can achieve, given the arrangements made with implementing agencies. The ongoing Loans 2072/2073-INO: Neighborhood Upgrading and Shelter Sector Project is a large-scale version of the KIP initiative. Its components include civil works, capacity building, consulting services, and microfinance, all of which are on track except for microfinance. Of the 30,000 households targeted, only 1,500 (5%) have availed of the microfinance loans. The main reason for the shortfall is that the actual interest rate charged from the borrowers ranged from 20% to 60%, due to charges added on by several intermediaries before the funds reached end-users; interest rates were therefore unattractive under the existing market conditions. In contrast, the civil works component was based on the Neighborhood Upgrading Plan prepared with assistance from local facilitators. The plan addressed subsectors such as water supply, small-scale sanitation, drainage, *kampung* roads, street lighting, and communal toilets. The project target was 300 communities, but the component reached 900 communities because it met the expectations of the beneficiaries. In another case, in 1511-INO: Metro BOTABEK UDSP (Bogor City), in areas where more groundwater was available, many people (including the poor) opted not to connect to the available water network, as the connection charge and fees were too high. This shows the need to ascertain upfront which customers are willing to pay for the services provided.

73. **Challenges for private sector participation.** In designing urban sector projects for PSP, it is imperative to consider the following aspects: (i) obtaining a clear understanding and a plausible commitment on tariff setting, given that this is a highly political and sensitive issue (for example, in Loan 1511-INO: Metro BOTABEK UDSP); (ii) assessing whether there are economies of scale in operations to achieve the revenue-base needed for PSP (as in Metro BOTABEK UDSP);⁴¹ (iii) assessing the financial and economic returns based on the viewpoints of the government and the end users; and (iv) ascertaining the enabling environment for PSP and whether there is capacity and knowledge of the legal provisions and risk sharing among the parties at the local level (Loan 1587-INO: MMUDP). Box 2 gives examples of how these criteria affected the project performance of Loan 1511-INO: Metro BOTABEK UDSP.⁴² Unless these aspects are assessed and necessary steps are taken before the project design phase, PSP would remain challenging in most urban projects, especially in the WSS sector. Many multi-subsector projects that were processed in the 1990s included PSP. ADB initially engaged in policy dialogues with the government jointly with other aid agencies (the first being the USAID's Private Participation in Urban Services [PURSE] Project).⁴³ At the time, when twin projects (such as Loans 1383-INO: SUDSP and 1384-INO: WJUDSP) were approved, ADB also provided TA 2016-INO: Private Sector Participation in Urban Development (Bandung and Semarang) for \$600,000—which in this case reviewed and prepared sample project packages for water supply, nonrevenue water (NRW) reduction, solid waste, and a passenger terminal. ADB relied on USAID's review of the legal and regulatory framework. Also, in Loan 1511-INO: Metro BOTABEK UDSP, PSP components (mostly in the water supply subsector) were stressed. However, only a handful of small-scale PSP contracts were actually signed and implemented.

Box 2: Unrealized Public Sector Participation Efforts in the Metropolitan Bogor, Tangerang, and Bekasi Urban Development Sector Project

At the time of appraisal, the Metropolitan Bogor, Tangerang, and Bekasi Urban Development Sector Project (Loan 1511-INO: Metro BOTABEK UDSP) had 11 subprojects, mainly in the water supply subsector, with private sector participation (PSP) objectives. At the closing stage, only two small water supply subprojects were implemented, which were given to private contractors for fairly straightforward civil works. The main reason for the lack of PSP was because project proposals did not have feasibility studies, commercial and risk evaluation procedures, and standard contracts. There seems to have been uncertainty regarding tariff-setting authority due to political concerns. Meanwhile, reform of the national water sector regulatory system as a precondition for successful PSP was beyond the project scope. Due to the unsuccessful outcomes of planned PSP investments in the water sector, the project loan amount was drastically reduced (from \$71 million to about \$10.4 million).

In the sanitation sector the same project targeted 14,000 households and tendered a proposed "build-and-transfer" (BT) scheme in September 2002. Although, it was awarded to a private contractor, they were willing to take on the associated risks of investment for only 1,500 households, given the absence of an enabling environment for PSP. In the existing environment, only short-term PSP efforts were possible, with the private construction company investing its own money to construct the network and connect households within 1 year. The municipality repaid the whole debt with agreed upon interest during the first 3 years of service.

⁴¹ Due to decentralization, several planned PDAM territories were separated, affecting the ability to gain economies of scale.

⁴² Japan International Cooperation Agency. 2009. Preparatory Survey on Public-Private Partnership [PPP] Infrastructure Development Projects. A presentation material – Executive Summary on PPPs for Infrastructure Development Projects. Jakarta. Some key findings were as follows: (i) Indonesia's investment environment for PPP infrastructure development projects has been improving; there are constant initiatives to refine policies, build capacity, and generate new PPP projects; (ii) the speed of progress is still below expectations; (iii) water tariffs are below cost—inflationary adjustments are not automatic, and tariffs are kept low; some municipalities still insist on local parliament approval, despite the fact that this is not required by regulations; and (iv) many water supply agencies (PDAMs) may not have sufficient management skills. Appendix 7 contains a list of JICA and World Bank urban projects.

⁴³ The PURSE Project was financed by a USAID grant for \$20 million in September 1991.

There was also a large-scale PSP opportunity in Kabupaten Tangerang (the Ciputat, Pamiulang, Pondok Aren area). Due to its scope of 900,000 households, the 25-year build-operate-transfer (BOT) concession scheme attracted interest from some potential major international water companies. ADB had some initial informal meetings with potential firms during preparation. The BOT scheme was tendered in March 2001, and a winner was identified; but in October 2002, the company withdrew, largely due to disagreement on tariff levels. While the government would only agree only to a maximum of Rp700/cubic meter, the private sector claimed that Rp1,000 was needed for feasible business operations.

Source: Special evaluation study team.

74. **ADB'S commitment to capacity building.** During implementation, both ADB headquarters and the resident mission should scrutinize and rigorously follow up on the effectiveness of ADB's intervention in the TA as a part of project investment. The focus should be on institutional capacity building, rather than short training courses. Infrastructure construction can be completed in 5–6 years, but technical aspects (e.g., NRW reduction) and capacity building cannot be fully effective if limited to the provision of a few weeks of training sessions or an international consultant's assignment in Indonesia for a few months. It is better to build partnerships for cofinancing with bilateral aid agencies, which tend to favor a longer-term strategy. ADB preparation needs to carefully look at the needs of each staff member with a different background, rather than thinly spreading training resources (e.g. sessions or workshops). In addition to the capital investments, which have focused on civil infrastructure construction, almost all multi-subsector projects had TA elements. Most dealt with (i) financial management improvement, (ii) NRW reduction initiatives, and (iii) PSP sample package preparation in later projects (as in Loans 1198-INO: CJDYUDSP and 1292-INO: EUDSP), but actual training was of short duration.

75. ADB advisory technical assistance projects (TA 1471-INO, TA 1475-INO, and TA 2016-INO) for PDAM financial management and NRW management have yielded little. Most PDAMs that ADB assisted still have relatively high NRW ratios (about 35%), and in many cases, after the ADB project, the figure has reverted back to 40%.⁴⁴ They cannot sustain their normal daily recurrent costs without a subsidy from the central government or general account transfers from the municipal annual budget. Early projects benefited from the introduction of computer hardware and software applications to keep track of key technical and financial standings. Training and various opportunities provided by the projects did not penetrate into the institutional management and the responsible staff. Consultants engaged under the TAs have produced reports, for example, on (i) suggestions for institutional reform, (ii) suggestions for masterplan guidelines, and (iii) potential lists for PSP; however, the succeeding loan results show that recommendations from those technical assistance were rarely taken into action, or led to actual reform.

76. There is a high turnover of staff within local authorities—on average, they move every 3 years. Some remaining staff recall their participation in the training sessions, but that has not produced any sustainable improvements in efficiency. It appears that the training and capacity-building measures provided by ADB have not been sustainable. It would be more useful to undertake institutional capacity building by which the systems and procedures in the institution are upgraded, rather than focusing on training a few individuals who are unlikely to stay on in the longer term. The Independent Evaluation Mission also observed that some local authorities have been given more long-term capacity building, including NRW reduction and financial management initiatives by bilateral agencies, particularly the Government of the Netherlands. Many local authority officials received regular consultant support in their respective workplaces. In some cases, local authorities were also given opportunities to go to European countries to receive

⁴⁴ IED interviews with PDAMs and government officials indicate that (at most) 10–20 PDAMs in Java and Sumatra have overall NRW of less than 40%, with higher NRW percentages in other islands.

medium-term training and on-the-job training on how to mitigate technical and financial losses. Also, other technical staff received scholarships or stipends for 1 or 2 years to earn degrees or diplomas in their technical fields. Those staff have remained with their respective PDAMs, and committed to further improving their performance using the skills and knowledge they gained overseas.

77. **Monitoring project benefits and impacts.** In order to regularly monitor the outcomes of the projects and confirm if the intended benefits have been achieved, there is a need to collect various project impact data, including health and socioeconomic statistics. Outcomes and results monitoring should be taken more seriously by the government and municipalities and arrangements should be in place before implementation. The government and ADB need to agree on how to measure benefits and economic values, and what types of investment work better for Indonesia. IED examined the impact of ADB multi-subsector projects on achievement of the Millennium Development Goals (MDGs). However, city-level MDG data are nonexistent. Little effort is made to trace the causal effects of public service investments and public health improvement in an organized way. In addition, even if city-level data were available, it would be difficult to directly attribute impacts to the project investment, as no initial baseline data were collected during the project.

78. Even with focused efforts on urban services development in a particular area, it has not been possible to show projects had a positive impact on health and socioeconomic conditions. A 2007 government update on MDG achievement (Appendix 8) contained MDG data for West Java Province.⁴⁵ Seven of the 15 completed Indonesian multi-subsector urban projects in West Java Province were assisted by ADB operations. West Java showed a slight improvement in the MDG child mortality rate indicator during the project implementation period, but the mortality rate remained worse than the national average. West Java counted 50 deaths in 2003 and 47 in 2005, compared to the national average of 33.9 in 2003. In 1992, with respect to access to safe drinking water, the percentage of households using nonpiped protected drinking water was 68.6%, while in 2006, the figure had dropped to 51.0%, which was below (worse than) the national average of 57.2% in 2006. The percentage of households having access to adequate sanitation in West Java was 61.1% in 2005–2006, while the national average was 69.3%. Again, West Java was lower than the national average. These data do not reflect very favorably on ADB projects, as it appears that the services provided have not been maintained, or not kept pace with the increasing demand. Had the proper project performance indicators been monitored regularly, the authorities concerned would have noted the deterioration, and may have taken action.

VII. PERFORMANCE ASSESSMENT BASED ON EVALUATION CRITERIA

79. The SES assessed how ADB multi-subsector projects in Indonesia have not fared very well against the evaluation questions raised at the outset (para. 21). The following discussion is structured under the three key evaluation criteria (relevance, resources, results) mapping the questions under each of these headings.

A. Relevance

80. **Poverty reduction.** ADB assistance took the form of a response to the Government of Indonesia's five-year plans, and it is not evident that ADB made an effort to promote a new product intended to steer Indonesia in a new direction, one that would show how urban development should be tackled to achieve the best results. The government led experimentation with various schemes (e.g., GLD, KIP, and IUIDP) until the late 1990s. The Independent

⁴⁵ United Nations. 2007. *Report on the Achievement of Millennium Development Goals Indonesia*. Jakarta.

Evaluation Mission did not see strong evidence that the multi-subsector approach was especially effective in targeting the poor. As time passed, many officials did not have a clear recollection of the locations of the KIPs; in one extreme case, a KIP site was later converted into a shopping mall complex, as the residents had never obtained legal land titles. Even after decentralization, poverty components are subsidized by the central government to local authorities as "grant" projects. Effectively tackling the issue of poverty requires that projects have a more detailed grasp of the conditions of poor households. Even addressing issues at the community level requires more dialogue, follow-up, constant assistance, and advice, especially during project design and in the early stage of implementation. The multi-subsector approach is not ideal, given the limited availability of experienced staff at the municipal level, and the many layers of approval required for multi-subsector projects from the PMU and central government agencies. Poverty components will need much more consultation, planning, and coordination.

81. **Synergy effects.** The effectiveness of the multi-subsector approach in yielding synergy effects during the project design stage across various subsectors depended on the capacity of the local authorities or PIU officials. According to a central government official who conceptualized the multi-subsector approach in the 1980s, it was introduced to facilitate equitable growth in the country during the oil boom, and the central government wanted to give new opportunities to local authorities to enable them to determine local priorities, under the constraints of limited purchasing power and capacity of municipal staff to plan, implement, and maintain projects. Views about multi-subsector benefits are mixed. While some value the synergy and independence at the local level, others recognize that these projects are difficult to implement, as coordination across various divisions and agencies within the municipality is too difficult, and decision-making processes are complicated. In practice, if there is a local champion, synergy among various subsectors can be achieved, but this needs long-term vision and planning, and tenacity to coordinate and follow up with many departments.

82. **Vertical and geographical integration.** The few projects where IED saw vertical or geographical integration being achieved had particularly experienced staff (para. 62). In addition, the following are essential elements for vertical or geographical integration: (i) a comprehensive master plan, already vetted by the local parliament (which guarantees political support); (ii) an established coordination mechanism across various infrastructure departments within a locality, with a strong local leader; and (iii) advance preparation for land acquisition and other safeguard measures.

83. **Community participation.** Except for neighborhood-level sites and services and GLD, achieving beneficiary participation at the city level was challenging, as focus and momentum are easily lost. The multi-subsector approach can be effective following a crisis or natural disaster, when the local population's interests are focused toward a particular sector, improving specific problems, or addressing the aftermath of the disaster. In terms of ADB's overall conformity with the government's policy, relevance was high, as ADB followed the government's vision diligently. ADB followed the government's shift in focus from the KIP and sites and services (GLD) to the IUIDP, PSP, and then to CDD, with little in terms of innovation, significant policy dialogue or strong leadership in introducing new initiatives in urban multi-subsector projects; rather, ADB steadily financed the government's directions. Based on all of the above, the Indonesia multi-subsector project performance overall rating is *relevant* (2 out of 3 points).

B. Resource Use

84. **Reducing implementation delays.** The multi-subsector approach did not impact positively on project implementation delays, as the main causes of ADB urban project delays—land acquisition, consultant recruitment, and counterpart funding—were generally similar to those in single-sector

projects.⁴⁶ Land acquisition is a common problem for urban infrastructure projects, as locations are densely populated, and without thorough planning for land-use control and various incentives for release of land, land acquisition is increasingly difficult in the Indonesian urban context. Consultant recruitment is a highly administrative issue, and delays can be avoided with careful preparation. In the history of multi-subsector projects in Indonesia, it was expected that individual PMUs would learn from previous projects and avoid delays. There was no significant improvement, due to turnover in government staff. In three projects (Loans 1198-INO: CJDYUDSP, 1383-INO: SUDSP, and 1384-INO: WJUDSP), there were cases of misprocurement and irregularities in bidding. The government cited (i) the size and complexity of the project, (ii) number of participating local governments, (iii) impact of decentralization, and (iv) EA's lack of authority to control local government procurement actions as reasons for those irregularities.

85. Improving coordination. The multi-subsector project approach originated in the IUIDP concept, and the requisite condition for success was that there would be good coordination among the concerned departments. As discussed in para. 56, the application for ADB loans was based on separate SPAR processes, the funding requirements differed across various subsectors, and there were no process or funding-related incentives to integrate various subsectors.

86. Funding. There were no internal incentives to combine subsectors, as different subcomponents (e.g., roads, solid waste, and water supply) were handled by different divisions, and each subsector had different funding requirements and guidelines. This made it very difficult for multi-subsector projects to integrate different components into a single area-based subproject, or a subproject with a combination of upstream and downstream components. Few exceptions were observed (paras. 63–64). The government has sought to address implementation delays in recent years by introducing new project-readiness criteria,⁴⁷ which specify stringent conditions before availing of any official development assistance or government infrastructure loans. The government is also providing stimulus package grants to strong, well-performing PDAMs to strategize their business plans and restructure debts. The decentralization system does not yet have an adequate mechanism to reduce horizontal fiscal disparities, and disparities between regions in public services and standards of living remain considerable. ADB must (i) strategize how its loan projects can select target cities (in concert with the government) to maximize ADB value-addition, and (ii) identify where it can add the most value.

87. Operation and maintenance sustainability. Multi-subsector projects saw no increase in O&M budget or resources. Use of a basket funding setup for multi-subsector projects would have enabled sharing of surpluses and shortfalls across a project's various subprojects, or apportionment of some savings for O&M. Such an approach could potentially have had a positive impact on infrastructure sustainability, but was disallowed by the rigid financing rules accompanying decentralization, and the government's funding flow guidelines.

88. Private sector participation. Multi-subsector projects must deal with many departments. Including a PSP component in a multi-subsector project would add a considerable number of clients, as there are different transaction advisories to be prepared for PSP components. PSP initiatives in the 1990s seemed to have left bitter memories with local officials, who were not well equipped to deal with the negotiations and tough revenue conditions imposed by foreign investors. Unlike the toll road sector, the water supply sector still lacks a good sample project approach for others to follow

⁴⁶ A direct comparison between multi-subsector and non-multi-subsector projects in Indonesia is difficult, as projects in the two categories were implemented in very different eras.

⁴⁷ They include (i) a detailed engineering design done before the application; (ii) performance indicators for monitoring and evaluation prepared; (iii) local government letter of willingness to provide funds based on the implementation schedule; (iv) local counterpart funds for the first year of implementation available; (v) land acquisition and resettlement plan completed; (vi) organization for implementation set up (i.e., PMU, PIU); and (vii) management activity plan done.

(Appendix 9). At this time, PSP can be better implemented through much simpler projects with few components, such as a project concentrated in water supply or SWM (Appendix 10), where demand projection can be thoroughly assessed, and the revenue base is clear. The overall resource use rating of multi-subsector projects in Indonesia is *less efficient* (1 out of 3 points).

C. Results

89. **Achieving Impact.** Multi-subsector components did not yield visible improvements in various indicators and impacts defined in the project documents (e.g., livelihood and health). The links between public health and project subcomponents were not a top priority for local government officials. It is worth noting that the piped PDAM water supplies are not potable, and the IED socioeconomic survey conducted during the PPER on Loan 1511-INO: Metro BOTABEK UDSP confirmed that many people boiled the water or purchased bottled water from vendors for drinking. Once proper water is secured by a network or good quality shallow-tube wells (e.g., in Bogor), waterborne diseases are well contained. However, despite education and awareness-raising campaigns by ADB, other aid agencies, and government projects, awareness of sanitation and public hygiene remains very low. Even in peripheral areas with many migrants from the provinces, progress in achieving the MDGs is very poor. ADB can work with other development partners to assist the government in effectively prioritizing resources to generate interest and awareness in public health and hygiene. Among all the subsectors, the urban road component was most strongly based on municipality master plans, which aimed to reduce traffic congestion and streamline inner-city traffic. However, the increase in vehicles, especially motorcycles (due to cheaper imports) has overshadowed any added capacity in the expanded roads, and congestion levels have worsened over the years. As debated widely in local media and overseas, Jakarta and other major cities must have a long-term vision of how they will introduce and finance inner-city mass transit systems.

90. **Long-term effect of training component.** ADB organized project implementation workshops and seminars on financial reporting, procurement, and consultant recruitment. In addition, international and local consultants were hired for institutional strengthening, including master plan production, NRW reduction, and sanitation awareness campaigns. However, the TA was project-based in each case, and thus mostly involved only the concerned PMU or PIU. As time passed, central, provincial, and local government staff were transferred to other posts (typically at least once over the lifetime of a project). Most training occurred only once, and ADB lacked a long-term plan for (i) institutional capacity development, (ii) gradually changing the content of the capacity-building component, (iii) providing incentives to participants, or (iv) sustaining commitment. Some bilateral donors have a much longer-term perspective, and combine in-country and overseas training sessions, offer multiple months of training in overseas institutions, or provide opportunities to complete a degree. Many staff who benefited from those opportunities, especially technical staff, have remained with the same city or agency. In those cases, IED was able to see some lasting capacity improvement, more than what resulted from ADB's training and international consultant assignments.

91. **Capacity-building support from ADB vs. other donors.** ADB support for NRW reduction was limited. Bilateral intervention (such as that from the Netherlands) was longer term, and more consistent and engaging, including generous study visits to Europe and assistance on technical knowledge transfer that lasted for more than a few years. ADB previously worked with bilateral agencies, in which an agency (e.g., USAID) funded the feasibility study. This trend seems to be reoccurring, with the recent Australian Agency for International Development scheme, in which there is a condition for a secured multilateral financial institution (e.g., ADB or World Bank) loan guarantee. ADB should actively explore this, as ADB tends to have comparative advantage in physical investments, but not necessarily in the on-the-ground, time consuming, capacity-building

interventions and human resource building. The overall rating for implication for results is *less likely* (1 out of 3 points).

VIII. SUGGESTIONS FOR FUTURE PROJECT FORMULATION

92. Based on the analysis of project design, implementation, past records, and experiences, it is evident that the launch of the multi-subsector approach was based on a good intent and undertaken with high expectations. Local authorities in Indonesia lacked adequate capacity to plan, coordinate, and implement projects across a wide range of urban subsectors, and could not therefore effectively reap the benefits, intended outcomes, and impacts. The projects' poor success, as reflected in project performance evaluation reports, also reflects the overall difficult realities facing urban projects, including the development of the government's infrastructure financing system and the decentralization movement. The above lessons on implementation were also generally valid for ongoing projects approved since 2000 although the design was somewhat different. Some projects have a more participatory approach and others were program loans with a reform agenda. Four urban projects have been approved in the past decade compared to 9 in the previous decade, the decrease being mainly on account of a slowdown in the total number of projects in Indonesia from 86 to 44 in the same two periods. However, the reduction in the share (by number) of urban projects relative to other sectors (from 10% in the 1990s to 9% in the 2000s) is not very significant indicating therein the continued importance of urban projects in ADB assistance to Indonesia.

93. **The multi-subsector approach (vis-à-vis other approaches) should not be adopted in urban projects unless there are agreements between the government and ADB on all of the following:**

- (i) *Experience:* There is adequate capacity in the PMU and/or PIU, especially a project director with sufficient experience in designing, planning, packaging, and implementing multi-subsector projects.
- (ii) *Procedures:* There are clear application procedures, requirements, and rules for financing mechanisms for a multi-subsector project; for better resource utilization, there are incentives of a flexible mix of grants and onlending, organized not by subsector, but by level of vertical and/or geographical integration.
- (iii) *Strategy:* There is (a) a local figure to champion the project based on a strategic, long-term plan for prioritization of subcomponents; and/or (b) an existing master plan that stipulates the prioritization or sequencing, which has already been vetted by the local parliament, general public, and civil society.
- (iv) *Implementation Management:* Especially for externally-funded projects which have relatively shorter expected implementation periods (5–6 years), it is important to have a single authority that has the powers to prioritize subprojects (and determine which components to proceed with first) so that delays are minimized.

94. **If local conditions do not favor adoption of a multi-subsector approach, then ADB should adopt a sector-specialized approach with fewer components (e.g., the conventional three components of water supply, sanitation, and capacity building).** ADB urban projects in Indonesia need to be specialized, rather than comprehensive. ADB's scale of operations is limited against the total infrastructure needs. ADB urban projects should be more strategic, selective, and realistic in what can be done, and in understanding the best means to impact the most people.

95. **There should be a financing scheme that strongly supports the multi-subsector approach.** If a city or a district meets the agreements above, then the availability of flexible financing—such as a loan or grant that could be used across various subsectors to allow cost savings from capital expenditure in one subsector to be flexibly transferred for investment in

another, and thus realize vertical or geographical integration—would constitute an opportunity to adopt the multi-subsector approach. Such type of capital-expenditure-financing scheme intended for multiple-subsector currently does not exist in the local authority budget.

96. **A focused and long-term vision of ADB's role in capacity building should be developed.** The needs assessment for capacity building should be more rigorous, and an analysis made of what constitutes the added value of ADB TA in terms of knowledge and skills compared with other aid agencies. Partnerships with other agencies may be developed for longer-term capacity building to enhance the local capacity for engagement as indicated by the Paris Declaration. Bilateral donors (e.g., the Netherlands) have been effective and have provided significant capacity building in nonrevenue water reduction campaigns. In addition, ADB should critically examine how it can achieve better results through short-term capacity-building efforts within the span of project implementation.

URBAN MULTI-SUBSECTOR PLUS WATER SUPPLY AND SANITATION PROJECTS

Table A1.1: Loan Amount and Ratings

SES	Loan No.	Project Name	Net Loan Amount (\$ million)	Approval Date	Date Closed	PCR		PPER	
						Year	Rating	Year	Rating
		Multi-subsector Projects							
	271	Bandung Urban Development and Sanitation	0.1	26 Aug 76	18 Oct 79				
1	400	Bandung Urban Development	28.6	29 May 79	26 Feb 88	1988	NR	1989	GS
2	550	Medan Urban Development	31.2	26 Nov 81	11 Oct 89	1990	NR	1991	GS
3	629	Small Towns Urban Development Sector	34.2	9 Jun 83	18 Dec 90	1992	NR	1994	GS
	725	Multisector Program (TA Loan)	19.8	18 Dec 84	19 Dec 91			1993	PS
4	768	Second Bandung Urban Development	108.2	12 Dec 85	11 Jul 94	1995	GS		
5	919	Second Medan Urban Development	171.7	10 Nov 88	25 Jun 96	1997	GS		
6	983	Secondary Cities Urban Development (Sector)	68.5	9 Nov 89	25 Mar 97	1998		2000	
6	984	Secondary Cities Urban Development (Sector)	54.3	9 Nov 89	25 Mar 97		GS		PS
7	1077	Botabek Urban Development	76.1	31 Jan 91	1 Dec 97	1998	GS	2000	S
8	1078	Bandar Lampung Urban Development	30.8	31 Jan 91	22 Oct 97	1998	GS	2000	HS
9	1111	Bogor and Palembang Urban Development	126.5	31 Oct 91	7 Apr 00	2001	S	2004	S
10	1198	Central Java and DI Yogyakarta Urban Development (Sector)	125.8	26 Nov 92	28 Nov 00	2000	GS		
11	1292	Eastern Islands Urban Development Sector	70.8	21 Dec 93	15 Jul 01	2002	PS	2004	PS
12	1383	Sumatra Urban Development Sector	87.9	26 Sep 95	10 Sep 04	2005	PS		
13	1384	West Java Urban Development Sector	49.4	26 Sep 95	20 Feb 04	2005	PS		
14	1511	Metropolitan Bogor, Tangerang, and Bekasi Urban Development (Sector)	39.7	19 Dec 96	4 Mar 04	2005	S	2009	PS
15	1587	Metropolitan Medan Urban Development	116.0	8 Dec 97	2 Apr 07	2008	PS		

SES	Loan No.	Project Name	Net Loan Amount (\$ million)	Approval Date	Date Closed	PCR		PPER	
						Year	Rating	Year	Rating
(✓)	2072	Neighborhood Upgrading and Shelter Sector Project	68.6	19 Dec 03					
	2073	Neighborhood Upgrading and Shelter Sector Project	20.0	19 Dec 03					
(✓)	2263	Infrastructure Reform Sector Development Program (Subprogram I)	400.0	21 Nov 06	29 Nov 06				
	2264	Infrastructure Reform Sector Development Program (Project Loan)	26.5	21 Nov 06					
(✓)	2361	Poverty Reduction and Millennium Development Goals Acceleration Program (Subprogram 1)	400.0	30 Oct07	31 Mar 08				
(✓)	2475	Infrastructure Reform Sector Development Program (Subprogram 2)	280.0	27 Nov 08	18 Dec 08				
			2434.7						
Single sector focus (non Multi-subsector)									
(Water Supply and Sanitation, Waste Management)									
	195	Bandung Water Supply	10.0	7 Nov 74	20 Aug 85			1987	PS
	401	Bandung Water Supply (Supplementary)	6.5	29 May 79	10 Sep 86				
	493	Small Towns Water Supply Sector	25.4	11 Dec 80	31 Jan 90			1992	PS
	547	Semarang Water Supply	27.4	25 Nov 81	12 Jul 90			1994	PS
	731	IKK Water Supply Sector	34.3	17 Jan 85	15 Mar 93				
	1069	Second IKK Water Supply Sector	37.4	18 Dec 90	21 Feb 97	1997	GS	2001	S
	1158	Water Pollution Control	7.4	4 Feb 92	15 Jul 97	1999	PS		
	1352	Rural Water Supply and Sanitation Sector	66.6	2 Feb 95	1 Nov 02	2002	PS	2004	PS
	1527	Capacity Building of Water Supply Enterprise for Water Loss Reduction	0.1	17 Jul 97	16 Jul 98				
			215.1						

✓ = loans included in the study with "urban" orientation, GS = generally successful, HS = highly successful, IKK = Ibu Kota Kecamatan (administrative area); NR = not rated, PCR = project or program completion report, PNPM = Program Nasional Pemberdayaan Masyarakat (National Program for Community Empowerment), PPER = project or program performance evaluation report, PS = partly successful, S = successful, TA = technical assistance, U = unsuccessful. Source: Asian Development Bank database.

HISTORY OF SECTOR CLASSIFICATION

1. In 2004, a revision of the Asian Development Bank's (ADB) sector classification took effect.¹ The updated sector classification abolished the former "social infrastructure" category and introduced three new categories: (i) "education"; (ii) "health, nutrition, and social protection"; and (iii) "water supply, sanitation, and waste management." A new category was also added—"law, economic management, and public policy" (LEMPP)—to accurately capture operations in these areas, which are important entry points for addressing governance in operations. The updated classification provided more detailed subsectors for each sector in order to track what types of support are covered under them. The "multisector" category was retained but was required to indicate up to three predominant sectors that received ADB support. The "other" category was removed.

2. In 2009, a revised classification was again formulated² to align the project classification system better to Strategy 2020³ and other reporting requirements and to improve the consistency and efficiency of the system. Compared with the 2004 system, the sector and subsector classification was rationalized, adding other subsectors to the classification (Table A2.1). In the Staff Instructions for the Revised Project Classification (footnote 2), it was noted that one of the rationale for the change of categorization is that more recent urban development projects were a combination of several (sub) sectors, such as water, sanitation, shelter, transport and capacity building investments. In the 2004 classification, such projects were often classified under the water and sanitation sector or as multisector projects and their contributions to multidimensional impacts on other sectors were not monitored adequately.

Table A2.1: Comparison of Pre-2004, 2004, and 2009 Sector Classification Categories

Pre-2004	2004	2009
1. Agriculture and Natural Resources	1. Agriculture and Natural Resources	1. Agriculture and Natural Resources
2. Energy	2. Energy	2. Energy
3. Finance	3. Finance	3. Finance
4. Industry	4. Industry and Trade	4. Industry and Trade
5. Transportation and Communications	5. Transport	5. Transport and ICT
6. Social Infrastructure	6. Education	6. Education
	7. Health and Social Protection	7. Health and Social Protection
	8. Water Supply, Sanitation, and Waste Management	8. Water Supply and Other Municipal Infrastructure and Services
7. Others	9. Law, Economic Management, and Public Policy	9. Public Sector Management
8. Multi-sector	10. Multi-sector (2–3 sectors)	10. Multi-sector (multiple sectors)

Source: *Staff Instructions for Revised Project Classification System*.

3. Table A2.2 lists the multisector projects included in the study and shows the ratings in different areas. Where applicable, the reason for any discrepancy in ratings between the project completion report (PCR) and project performance evaluation report (PPER) is explained.

¹ ADB. 2004. *Consolidated Staff Instructions on Project Classification*. Manila.

² ADB. 2009. *Staff Instructions for the Revised Project Classification*. Manila.

³ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

Table A2.2: Ratings for Multi-subsector Loans and Reasons for Project Completion Report and Project Performance Evaluation Report Discrepancies

Loan No.	Project Name	Sustainability		Impact		ADB Performance		EA Performance		Overall		Reason for Discrepancy between PPER and PCR Ratings
		PCR	PPER	PCR	PPER	PCR	PPER	PCR	PPER	PCR	PPER	
271	Bandung Urban Development And Sanitation											No PCR/PPER
400	Bandung Urban Development		likely	positive	positive on SE	quite satisfactory		S		NR	GS	
550	Medan Urban Development		likely	positive	positive	quite satisfactory		S		NR	GS	
629	Small Towns Urban Development Sector		likely	positive	positive	NR		S		NR	GS	
768	Second Bandung Urban Development	good/likely		positive on ENV		NR		NR		GS		
919	Second Medan Urban Development	good/likely		positive on ENV		NR		NR		GS		
983	Secondary Cities Urban Development (Sector)	likely but need maintenance activities	less likely	positive	significant impact on ENV	NR	S	NR	PS	GS	PS	Discrepancy in rating because of less likely assessment in sustainability of project due to lack of government ownership and the partly satisfactory rating of EA performance because of complex implementation arrangements.
1077	Botabek Urban Development	NR	likely except for GLD	positive	satisfactory impact on institutions and policy	NR	HS	NR	S	GS	S	
1078	Bandar Lampung Urban Development	likely	likely	positive	satisfactory impact on institutions and policy	NR	HS	S	HS	GS	HS	

Loan No.	Project Name	Sustainability		Impact		ADB Performance		EA Performance		Overall		Reason for Discrepancy between PPER and PCR Ratings
		PCR	PPER	PCR	PPER	PCR	PPER	PCR	PPER	PCR	PPER	
1111	Bogor and Palembang Urban Development	likely	less likely	little	moderate	NR	S		S	S	S	
1198	Central Java and D.I. Yogyakarta Urban Development (Sector)	NR		positive		NR		NR		GS		
1292	Eastern Islands Urban Development Sector	less likely	less likely	marginal	moderate	PS	PS	PS	PS	PS	PS	
1383	Sumatra Urban Development Sector	less likely		moderate		PS		PS		PS		
1384	West Java Urban Development. Sector	less likely		moderate		PS		PS		PS		
1511	Metropolitan Bogor, Tangerang, and Bekasi Urban Development (Sector)	less likely	less likely	moderate	NR	S	PS	S	S	S	PS	Discrepancy in rating due to the partly satisfactory performance of ADB (lack of review missions, slow response to implementation issues), which could have been remedied if there had been an earlier delegation of project responsibility to the IRM.
1587	Metropolitan Medan Urban Development	likely	likely	positive	positive	PS	PS	PS	PS	PS		

ADB = Asian Development Bank, EA = executing agency, ENV = environment, GS = generally successful, HS = highly successful, IRM = Indonesia Resident Mission, NR = not rated, PCR = project or program completion report, PPER = project or program performance evaluation report, PS = partly successful, S = successful, SE = socioeconomic.

Source: Project completion reports and projects performance evaluation reports.

Table A2.3: Findings from the 15 Selected Urban Projects

Project	Pros (Positive Results)	Cons (Negative Results)
Loan 400: Bandung Urban Development	<p>The project improved the living conditions of a substantial number of people belonging to low-income groups living in poor environmental conditions.</p>	<p>The project may have benefited nonpoor households, which means that limited funds were not properly used.</p>
	<p>Being the first integrated urban development project undertaken by ADB with relatively favorable results, the project encouraged the government to implement integrated urban development in other areas.</p>	<p>The project was complex and difficult to implement.</p>
	<p>Through the coordinated efforts required by the project, there were indications that the government was beginning to exhibit greater decentralization.</p>	<p>Delayed hiring of consultants, inadequate counterpart funds, land acquisition problems, and the government's lengthy procurement process contributed to the project's delay.</p>
Loan 550: Medan Urban Development	<p>The project served as a considerable learning experience for the government in terms of project preparation, implementation, and coordination.</p>	<p>Coordination between central and local governments and between different central government agencies involved in the project was difficult.</p>
	<p>For the KIP components, direct benefits were realized by about 198,000 persons (mostly urban poor in 16 <i>kampungs</i>), and 6,244 core houses (15–36 square meters each) were built.</p>	<p>The drainage component was weak, because the city's public works department was not yet prepared in terms of personnel and budget.</p>
	<p>The existing water supply system was already vertically integrated, and the project tackled water resources management in a holistic manner, from water extraction to distribution to consumers.</p>	<p>Procedural complications in the engagement and fielding of consultants contributed to overall delay.</p>
		<p>The KIP EIRR was negative.</p>
Loan 629: Small Towns Urban Development Sector	<p>Sites and services with core housing (KIP) were successful in the sense that the quality of the houses was above the project standards, houses had twice the floor space planned, and occupants made comparatively large additional investments to access higher quality housing.</p>	<p>The sites and services subsector did not necessarily cater to the poor.</p>
	<p>Components addressing market improvement and solid waste removal from markets improved the sanitary conditions of the market vendors and customers.</p>	<p>Delays were experienced, despite awareness by the Ministry of Public Works of ADB procedures.</p>
		<p>Water supply coverage targets were not met.</p>
Loan 768: Second Bandung Urban Development	<p>KIP consultation and a more intensive public campaign were conducted.</p>	<p>Delayed hiring of consultants, land acquisition problems, delays in the finalization of the loan from the Netherlands, and a revision in engineering design contributed to the project's delay.</p>
	<p>Interagency coordination was generally good.</p>	
	<p>DGHS skilled staff were deployed to the PMU; experienced and knowledgeable local staff were deployed to the PIU. The project was more comprehensive in coverage than Loan 400: Bandung Urban Development Project.</p>	

Project	Pros (Positive Results)	Cons (Negative Results)
Loan 919: Second Medan Urban Development	<p>All physical targets were achieved except for sewerage.</p> <p>Institutional sustainability was considered to be generally good. All agencies had an adequate number of personnel with necessary skills to operate and maintain the project facilities.</p> <p>KIP generally improved the health of the poor in the project areas, improved access by the community, increased land prices, and helped develop a culture of cleanliness.</p> <p>MIIP improved the sanitary conditions of markets and their environments and increased convenience for public users through improved access to markets.</p>	<p>Delays were experienced in the recruitment of consultants.</p> <p>The project design mentioned community involvement, but there was no mention of nongovernment organizations during project implementation.</p>
Loan 983/984: Secondary Cities Urban Development (Sector)	<p>The project improved living conditions, which benefited low-income people.</p>	<p>Local government involvement was limited and community consultation was minimal, resulting in a lack of ownership of completed infrastructure.</p> <p>Poor coordination between the PDAM and the cleansing agency hampered sanitation operations.</p> <p>The capacity of local governments for O&M was not substantially improved by the project, and was considered negligible.</p> <p>DGHS staff had limited experience within PMUs and PIUs, which made coordinating the project difficult, as arrangements were complex and involved many agencies from many cities,</p> <p>The project incurred delays because executing agencies were unfamiliar with ADB procedures.</p>
Loan 1077: BOTABEK Urban Development	<p>The project was rated relevant, effective, highly efficient, and likely sustainable (except for GLD).</p> <p>Subprojects were formulated by local governments and approved by the central government.</p> <p>Communities were largely responsible for O&M of most KIP sites (but levels of community involvement varied among sites).</p> <p>The financial performance of the local governments was generally sound in all subprojects.</p>	<p>GLD did not exhibit good results because the facilities were constructed by contractors rather than through self-help efforts of local communities, as in the KIP.</p> <p>The sanitation and solid waste components were operating less than satisfactorily.</p> <p>KIP sites in Tangerang needed local government support for maintenance.</p>
Loan 1078: Bandar Lampung Urban Development	<p>The project was rated as highly relevant, highly efficacious, highly efficient, and most likely sustainable.</p> <p>The project was completed as planned (no loan closing date extension was requested).</p>	<p>The delay in household connections to the water supply system was caused by a delay in the completion of the water treatment plant.</p> <p>UFW reduction for the water supply was not attained.</p>

Project	Pros (Positive Results)	Cons (Negative Results)
Loan 1111: Bogor and Palembang Urban Development	<p>Physical targets were achieved. SWM and KIP were above the target, except urban flood protection (79%) and drainage (94%).</p> <p>The local government financed O&M of all sectors covered under this project except water supply.</p> <p>Interagency coordination was generally good.</p> <p>Road projects provided strategic links within the city network, including the upgrading and construction of an inner road; provided additional access to the toll road from Jakarta; and improved traffic flow.</p> <p>Health conditions improved as a consequence of the project.</p>	<p>The overall design of the project was too ambitious.</p> <p>Community participation was minimal, apart from the KIP component.</p> <p>Centralized design and implementation of the institutional strengthening components and reliance on consultants for almost all facets of implementation limited the transfer of skills to local government staff.</p>
Loan 1198: Central Java and DI Yogyakarta Urban Development (Sector)	<p>Institutional capacity-building efforts at the local level under the project improved the capability of local government staff to implement urban infrastructure projects and manage their own finances.</p> <p>The project benefited the poor communities within the project area, especially smaller municipalities, which have lower tax revenues and thus could not afford to provide adequate infrastructure facilities to their residents.</p> <p>The poor have been paying 30%–40% lower transport cost per kilometer as a result of the construction of local roads under the project.</p>	<p>Delays resulted from complex government procedures at the central, provincial, and local levels; inadequate interagency coordination; insufficient numbers of skilled staff; and inadequate counterpart funds.</p> <p>Insufficient funding and inadequate programming are still common weaknesses in some local governments.</p>
Loan 1292 : Eastern Islands Urban Development Sector	<p>Urban roads benefited residents and improved economic activities.</p> <p>Waterborne diseases in target areas declined.</p>	<p>The approach was highly centralized and prescribed nationally formulated standards and approaches for subprojects, which resulted in a lack of ownership by several local governments and in turn had a negative impact on their commitment to funding O&M, affecting the sustainability of projects.</p> <p>Inadequate local government capacity in remote areas impeded the collection of timely and accurate data.</p>
Loan 1383: Sumatra Urban Development (Sector)	<p>The multisector approach addressed the need for increased access to improved urban infrastructure services in the selected cities.</p>	<p>The choice of an inappropriate disposal site and lack of interest by SWM agencies in environmentally friendly waste disposal technologies were among the major technical constraints in the SWM component.</p>

Project	Pros (Positive Results)	Cons (Negative Results)
Loan 1384: West Java Urban Development Sector	The project was assessed as relevant, as it contributed to the meeting of the government's priority needs in the urban sector.	<p>Sanitation services such as sludge treatment and sludge trucks were unsustainable; component selection was supply driven.</p> <p>Local governments offered little support for the project. Project implementation was complex, given that 20 towns were covered.</p> <p>The institutional capacities of participating local governments to manage, operate, and maintain their investments were overestimated, resulting in the provision of insufficient and improper training.</p> <p>Funds provided by the participating local governments were well below the level needed to operate the services effectively and establish a reserve for future investment.</p> <p>A lack of coordination among agencies, late issuance of counterpart funds, and protracted consultant recruitment caused delays.</p>
Loan 1511: Metropolitan Bogor, Tangerang, and Bekasi Urban Development (Sector)		<p>The project was deeply affected by the financial crisis of 1997. The original budget of \$80 million was cut by 50.4%, resulting in reduced scope of works for all subsectors except KIP/MIIP.</p> <p>The impact of the water subproject at the district level was insignificant.</p> <p>The project had to receive approval from many layers of government under the new decentralized approach to ODA projects in urban infrastructure.</p>
Loan 1587: Metropolitan Medan Urban Development	<p>Promotion of public-private partnerships was pursued.</p> <p>The project improved water services in the city of Medan; UFW was reduced in the three local water enterprises.</p>	<p>Government ownership of the project became questionable, as it was difficult to determine who was responsible for certain work.</p> <p>The executing agency did not function as expected.</p> <p>Some activities were cancelled (e.g., the preparation of LIDAPs and RIAPs) because of the delay in the recruitment of consultants.</p> <p>Lack of coordination among the provincial PMU, PMUs, and PIUs and other concerned agencies caused misunderstandings and delays in project implementation.</p> <p>The project did not improve sanitation.</p>

ADB = Asian Development Bank; BOTABEK = Bogor, Tangerang, and Bekasi; DGHS = Directorate General of Human Settlements; EIRR = economic internal rate of return; GLD = guided land development; KIP = Kampung Improvement Program; LIDAP = local government institutional development action plan; MIIP = Market Infrastructure Improvement Program; O&M = operation and maintenance; ODA = official development assistance; PDAM = perusahaan daerah air minum (local water supply enterprise); PIU = project implementation unit; PMU = project management unit; RIAP = revenue improvement action plan; SWM = solid waste management; UFW = unaccounted-for-water.

Source: Project completion reports and project performance evaluation reports.

Table A2.4: Project Cost Difference at Appraisal vs. Completion and/or Evaluation, by Subsector (\$ million)

Loan No.	Project Name	Target Cities	Water Supply		Sanitation		Sewerage		Flood Control		Drainage		Solid Waste	
			RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER
Multi-subsector														
271	Bandung Urban Development and Sanitation	1 (Kotamadya Bandung and adjoining areas)	no data available in document											
400	Bandung Urban Development	1 (Kotamadya Bandung and adjoining areas)					12.8	11.2			2.3	1.5	7.1	3.0
550	Medan Urban Development	1 (Medan city)	15.2	12.2			4.9	5.5			9.6	6.2	3.4	2.7
629	Small Towns Urban Development Sector	38 towns in Central Java	2.8	2.8							8.5	10.4	1.8	2.8
725	Multisector Program	Nationwide in scope												
768	Second Bandung Urban Development	Kota Bandung, Cimahi, Soreang, Banjaran, Majalaya, Buahbatu, and Dayeuhkolot	69.8	35.6			18.6	25.5			5.2	7.6	4.6	5.8
919	Second Medan Urban Development	City of Medan and Binjai and the 5 subdistricts of Kabupaten Deli Serdang.	50.0	42.3	11.8	19.9					21.7	21.0	7.4	3.9
983	Secondary Cities Urban Development (Sector)	51 secondary cities in 9 provinces of West Java and Sumatra	28.9		3.4						25.7		8.7	
984	Secondary Cities Urban Development (Sector)													
1077	BOTABEK Urban Development	Bekasi, Cikarang, Depok, Cibinong, Citereup, Balaraja, Tangerang, Serpong	45.8		4.6						7.0		6.6	
1078	Bandar Lampung Urban Development	1 (city of Bandar Lampung)	7.8	10.4							4.0	5.3	3.0	3.1
1111	Bogor and Palembang Urban Development	Kota Bogor, Kabupaten Bogor, and Kota Palembang	45.0	53.5	4.2	2.2					14.5	17.3	10.8	7.9
1198	Central Java and DI Yogyakarta Urban Development (Sector)	64 secondary cities	42.0	54.6	14.0	17.4					38.0	23.9	25.0	16.2

Loan No.	Project Name	Target Cities	Water Supply		Sanitation		Sewerage		Flood Control		Drainage		Solid Waste	
			RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER
1292	Eastern Islands Urban Development Sector	18 urban areas, including five provincial capitals	34.6	26.6	8.3	6.1					32.8	13.8	8.8	10.6
1383	Sumatra Urban Development Sector	Sumatra (67 cities)		50.1		1.7						6.1		9.6
1384	West Java Urban Development Sector	West Java (20 cities)		40.8		1.1						2.7		7.0
1511	Metropolitan Bogor, Tangerang and Bekasi Urban Development (Sector)	13 cities in Jakarta	71.9	10.4	4.1	1.3					13.8	4.7	13.2	5.3
1587	Metropolitan Medan Urban Development	Binjai, Medan, Deli Serdang		20.1		0.2			10.5			21.4		0.8
Loan No.	Project Name	Target Cities	Urban Road		KIP/MIIP		Sites and Services, including Core Housing		GLD		Institution/Others		Remarks (source of actual data)	
			RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER		
271	Bandung Urban Development and Sanitation	1 (Kotamadya Bandung and adjoining areas)												
400	Bandung Urban Development	1 (Kotamadya Bandung and adjoining areas)			2.7	1.2	13.9	9.6			2.8	1.3	Reevaluation report	
550	Medan Urban Development	1 (Medan City)			2.1	1.0	15.3	9.9	0.3	0.4	1.5	2.0	PCR; the Urban Land Mgt Study is under GLD	
629	Small Towns Urban Development Sector	38 towns in Central Java			12.1	13.7	11.9	14.3					PCR	
725	Multisector Program	Nationwide in scope												
768	Second Bandung Urban Development	Kota Bandung, Cimahi, Soreang, Banjaran, Majalaya, Buahbatu, and Dayeuhkolot			1.4	1.3					3.8	10.9	PCR; small towns are under "Others"	
919	Second Medan Urban Development	City of Medan and Binjai and the five subdistricts of Kabupaten Deli Serdang.	24.0	24.2	3.9	4.4					30.1	29.3	PCR; "Others" includes small towns at \$11.1 million (appraisal) and \$12.7 million (actual).	

Loan No.	Project Name	Target Cities	Urban Road		KIP/MIIP		Sites and Services, including Core Housing		GLD		Institution/ Others		Remarks (source of actual data)
			RRP	PCR/ PPER	RRP	PCR/ PPER	RRP	PCR/ PPER	RRP	PCR/ PPER	RRP	PCR/ PPER	
983	Secondary Cities Urban Development (Sector)	51 secondary cities in 9 provinces of West Java and Sumatra	40.4		12.3						13.5		Actual cost data by component provided only at appraisal, not in the PCR/PPER,
984	Secondary Cities Urban Development (Sector)	51 secondary cities in 9 provinces of West Java and Sumatra											
1077	BOTABEK Urban Development	Bekasi, Cikarang, Depok, Cibinong, Citereup, Balaraja, Tangerang, Serpong	16.7		2.1				1.7		7.3		Actual cost data by component provided only at appraisal, not in the PCR/PPER.
1078	Bandar Lampung Urban Development	1 (city of Bandar Lampung)	9.3	8.9	0.6	1.3					3.1	4.9	PCR
1111	Bogor and Palembang Urban Development	Kota Bogor, Kabupaten Bogor, and Kota Palembang	66.9	54.7	2.4	3.9					14.1	5.5	PPER
1198	Central Java and DI Yogyakarta Urban Development (Sector)	64 secondary cities	67.0	32.0					16.0	10.7			PCR (Cost under GLD also included KIP/MIIP)
1292	Eastern Islands Urban Development Sector	17 urban areas, including five provincial capitals	28.0	22.6	6.8	9.4							PCR
1383	Sumatra Urban Development Sector	Sumatra (67 cities)		15.3		2.1						2.1	PCR; project costs by subcomponent not provided at appraisal; schools are under "Others"
1384	West Java Urban Development Sector	West Java (20 cities)		10.8		1.2							PCR; project costs by subcomponent at appraisal not provided.

Loan No.	Project Name	Target Cities	Urban Road		KIP/MIIP		Sites and Services, including Core Housing		GLD		Institution/Others		Remarks (source of actual data)
			RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	RRP	PCR/PPER	
1511	Metropolitan Bogor, Tangerang and Bekasi Urban Development (Sector)	13 cities in Jakarta	71.8	26.3	5.5	1.0					4.0	3.8	PCR; under "Others" are bus terminals
1587	Metropolitan Medan Urban Development	Binjai, Medan, Deli Serdang		33.3						28.4			PCR; project costs by subcomponent at appraisal were not provided

BOTABEK = Bogor, Tangerang, and Bekasi, GLD = Guided Land Development, KIP = Kampung Improvement Program, MIIP = Market Infrastructure Improvement Program, PCR = project/program completion report, PPER = project/program performance evaluation report, RRP = report and recommendation of the President.
Source: Asian Development Bank database.

DECENTRALIZATION

1. Indonesia's decentralization has been referred to as "big bang" decentralization, because of the enormity of the impact of this shift, which happened in a populous country in a short span of time. The country evolved from a centralized form of government under President Suharto to President Sukarnoputri's decentralized regime in a little over 3 years. The decentralization took effect on 1 January 2001. Efforts to shift to decentralization began in 1999 with the adoption of two laws: (i) Law 22/1999 on Regional Governance, and (ii) Law 25/1999 on Fiscal Balance.

A. Laws, Decrees, and Regulations

2. Additional laws, decrees, and regulations were adopted that promoted local participation in the governance of urban affairs, resulting in changes in the duties and responsibilities of the different levels of government (central, provincial, and local).

1. Regional Finance

a. Regulations

3. **Regulation 104/2000.** This regulation focuses on "fund of balance" funds originating from the state revenue and expenditure budget (APBN) and allocated to the regions to finance decentralization. It provides the formulas to be used to distribute central government transfers to the regions: general allocation funds, special allocation funds, shared revenues from land and building taxes, fees for acquisition of rights to land and buildings, and revenue from natural resources.

4. **Regulation 105/2000.** This regulation focuses on regional financial management and accountability. It provides a guide for preparing local government budgets, procurement of goods and services, as well as standards of financial management for local officials. Its goal is to ensure transparency and accountability. As a safeguard against corruption, the regulation requires that local officials ensure that the goods and services they procure are necessary for public policy.

5. **Regulation 106/2000.** This regulation focuses on financial management and responsibility in the implementation of deconcentration and secondment. It deals with deconcentrated tasks and the central government's spending on development, for which almost all funding comes from foreign sources with partial cofinancing by the central government. The government retains control over the funds, and subcontracts projects to the regions as deemed necessary.

6. **Regulation 107/2000.** This regulation focuses on regional government loans. It sets limits on local borrowing; the regions may receive long-term loans for financing infrastructure that is designated as a regional asset and is revenue-generating, i.e., can generate sufficient revenue to repay the loans and finance operations and maintenance of project. The projects must also provide benefits to the public. The maximum available limit for short-term regional loans is one-sixth of the regional revenue and expenditure budget funds from the current year. Total debt can never exceed 70% of the previous year's APBD general revenues; the ratio of revenues to debt service payments in a given year is limited to 2.5:1. Further, Ministerial Decree KMK35/2003 clarifies the rules for lending to the regions. Local governments may borrow from foreign sources only with the approval of the central government.

7. **Regulation 11/2001.** The regulation on local government financial management focuses on regional finances. It encourages full cost recovery for services wherever appropriate. To clarify the link between inputs and expected outputs, it also specifies that local governments will use performance-oriented budgeting for budgeting and reporting financial performance. Also, it obligates the regions to submit information about their finances, including regional borrowings, to the central government, and it specifies the format and periodicity. It also defines measures of recourse that the central government can invoke in the event the regions fail to submit the needed information.

8. **Government regulation 54/2005 on regional borrowing.** This regulation was issued by the government as an implementing guideline for Law 32/2004 and Law 33/2004, and regulates the realization of regional loans,¹ including the conditions and purpose under which a loan may be requested and the overall procedure or mechanism for the regional government to apply for allocation of a loan to the central government. It also states that regional governments are not allowed to borrow directly from foreign sources. The regulation emphasizes limiting outstanding regional debt to 75% of the previous year's non-earmarked regional revenue and expenditure budget and explicitly prohibits a regional government from borrowing as long as it has outstanding arrears on government loans. The cumulative lending limit for regional loans is stipulated by the Minister of Finance, and the cumulative lending limit of the central government and regional government shall not exceed 60% of the gross domestic product in the existing year.

9. **Government regulation 2/2006.** The government regulation on procedures for realization of loans and/or grants and allocation of foreign loans and/or grants regulates the flow of foreign loans and/or grants at the central government level. The minister for National Development Planning and the minister of finance act as representatives for the central government. As regulated, the government is authorized to receive foreign loans, and this authority is operated by the minister of finance (chapter II, article 2, paras. 1–2). Institutions that are eligible to make requests to the central government for allocation of foreign loans and/or grants are state ministries/institutions, state enterprises (BUMN), and regional governments. Having reviewed the proposals, the central government then decides on the implementation of loans and/or grants.

10. **Ministry of Finance regulations 52/PMK.010/2006 and PMK 53/PMK. 010/2006.** These regulations are superseded by PMK 52 and PMK 5. Ministry of Finance (MOF) Decree 52/PMK010/2006 deals with guidelines on projects with foreign aid grants, while MOF Decree 73/PMK02/2006 focuses on fiscal capacity mapping for the passing of foreign loans from the central government to regional governments in the form of grants (on-granting).

b. Laws and Decrees

11. **Law 25/1999 on fiscal balance.** This law provides the legal foundation for fiscal decentralization, delineating the new division of revenue sources and intergovernmental transfers. The law provides for (i) sharing property and natural resource revenues (land and buildings, property transfers, forestry, mining, fisheries, gas and oil); (ii) creation of a general allocation fund (*Dana Alokasi Umum*); and (iii) creation of a special allocation fund (*Dana Alokasi Khusus*).

¹ Source: Government Regulation 54/2005 on Regional Borrowing. Regional loans are defined in chapter 1, article 1, para. 9 as all transactions resulting in a region receiving a certain amount of funds, or to receive benefit that has monetary value from another party, and for which the region will be held accountable to repay. The general principles of regional loans (chapter II, article 2, paras. 1–2) are that (i) the loan shall be an alternative source to finance APBD, and (ii) the loan is used to finance activities initiated by and under the authority of a region.

12. **Ministry of Finance Decree 347a/2000 concerning regional development accounts.** This decree identifies sectors eligible for local development account loans and sets the limits on outstanding regional debt at 75% of the previous year's regional revenue and expenditure budget.

13. **Law 34/2001.** This is the most relevant legislation on regional taxes, which expands on the Fiscal Balance Law and revises Law 18/1997 to provide the legal framework for all regional government taxation and charges. It makes a number of significant changes to local taxing and charging authority and to the allocation of tax bases across provinces and local governments. Most important, the law empowers local governments to create their own new taxes subject to limits on tax rates by the central government for purposes of nationwide conformity. Local governments must also meet certain criteria for DPRD (elected people's regional representative councils) approval. In addition, the law insists that any local government regulation (PERDA) creating a new tax must be presented to local citizens before it can be enacted. Finally, the law requires local governments to submit any new tax-related PERDA to the central government for review after DPRD ratification. The central government retains the power to revoke any new tax that contravenes the public interest and/or contradicts laws of a higher order.

14. **Law 33/2004 concerning fiscal balance.** This supersedes Law 25/1999 and deals with the fiscal balance between the central government and the regions (formerly provincial and local governments) as well as regional borrowing. According to Law 33/2004, regions may borrow directly from domestic sources but must channel external loans through the central government. The law also mentions that long-term loans may be contracted only for projects that are revenue generating or are short-term loans for bridging finance.

2. Regional Government

a. Regulations

15. **Regulation 25/2000.** This regulation supports the Regional Governance Law regarding the authority and functions of the central government and the provinces as autonomous regions. It assigns specific service responsibilities to the central and provincial levels, with local governments responsible for "everything else."

16. **Regulation 20/200.** This regulation focuses on fostering and supervising local governance. It ensures that local governments function in accordance with the plans and stipulations of existing laws and regulations. The regulation authorizes the central government's regional representative. The "fostering" referred to in the regulation pertains to guidance, training, directives, and supervision of local government.

17. **Draft regulation on urban management and governance.** This requires urban governments to involve and consult the public in planning, implementation, and monitoring. A key feature of this regulation is the convening of an urban forum (*forum kota*) for stakeholder participation.

18. **Ministry of Home Affairs regulation 13/2006.** The Local Government Financial Management regulation focuses on the management of local government finance.

19. **Peraturan Pemerintah 38/2007.** This regulation deals with the division of government affairs among the central government, provincial governments, and district and city local governments.

b. Laws and Decrees

20. **Law 22/1999 on regional governance.** This law specifies the political and administrative responsibilities of the central, provincial, and local governments within a decentralized structure of government. This law eliminates the hierarchical relations between the provincial and local governments. The local governments, previously known as *kotamadya* and *kabupaten* (city and rural districts), have become fully autonomous, with *walikota* (mayors) and *bupati* (rural district heads) selected by elected local assemblies (*dewan perwakilan rakyat daerah*). Instead of the previous practice of reporting to provincial governors, these heads now report to the local assembly, making them responsible to the local electorates. In the new system, the provinces have no hierarchical relationship with the local governments; they have a coordinating role and perform what the local governments are not yet equipped to undertake. However, the provinces retain their hierarchical relationship with the central government and continue to have the status of self-directed regions and administrative regions under the President.

21. **Draft law on regional government-owned enterprises.** This law empowers local governments to establish, dissolve, or restructure regional government-owned enterprises (BUMDs) without the approval of the central government. It also vests them with full authority to select from various existing organizational forms—*dinas*, Unit Pengelola Teknis Daerah (UPTD), unit *swadanas*, BUMD, Badan Pengelola (BP)—to provide for services without prior approval of the central government.

22. **Undang Undang 32/2004 concerning regional government.** This supersedes Law 22/1999 and defines the delegation of government authority from the center to the regions and explains the division and delegation of government affairs.

B. Counterpart Funds

23. The various laws, decrees, and regulations adopted concerning decentralization have also impacted how counterpart funds are shared among the different levels of government and on their duties and responsibilities with regard to development projects.

1. Before Decentralization

24. Based on the Asian Development Bank's (ADB) business plan, the loan ceiling for Indonesia and the funding share between ADB and the Government of Indonesia is set on a nationwide basis. The funding ratio in each project can differ as long as the nationwide ratio is constant.

25. During subproject appraisal report (SPAR) preparation, financing of subsectors is based on the above maximum limit and the limit per category as shown in Table A3.1. The ADB funding share for civil works—the category that forms the bulk of the total project cost for urban infrastructure—varies depending on the capacity of the provincial and local governments to provide counterpart funds. Equipment and materials, which generally have a high proportion of foreign currency cost, are financed 100% by ADB (with the exception of the tax portion). The same is true for consulting services, which are also fully financed by ADB. Incremental administration,² land acquisition, and resettlement are financed 100% by the government.

² Government staff seconded to the project management unit and project implementation unit including operational costs.

Table A3.1: Funding Share between ADB and the Government of Indonesia

Category	ADB Share (%)	Government Share (%)	Remarks
Civil Works	60	40	Sample ratios; varies per project
Equipment and Materials	100	0	ADB portion excludes tax
Consulting Services	100	0	ADB portion excludes tax
Incremental Administration	0	100	
Land Acquisition and Resettlement	0	100	

ADB = Asian Development Bank.

Source: ADB database.

26. The government share comes from the central government, provincial government, local government, and local water supply enterprises (PDAMs). Funds from the local government and PDAMs are either from internally generated funds or from loans.³ For revenue-generating subsectors, ADB funds will be passed on to the local government and PDAMs in the form of a loan through a subloan agreement between the local government, PDAM and the central government. The size of the loan is contingent on the borrowing capacity of the local government or PDAM. The loan is processed and approved during project implementation. A disapproved loan means that the local government or PDAM should find an alternative source of funds to finance the subsector. Project components that are supposed to be funded by the loan but were not approved can still be implemented during the year if the local government or PDAM can find an alternative source of funds. Otherwise, the component is either cancelled or implementation is moved to the next fiscal year.

27. The above rules are not rigid. There have been cases in which a revenue-generating subsector received a grant after having received an assessment that its current and future financial sustainability is weak. Table A3.2 shows the indicative sources of funds for each subsector. The final sources of funds for each subsector are decided by the Ministry of Public Works, provincial government, local government, and PDAMs during SPAR preparation.

Table A3.2: Sources of Funds by Subsector

Subsector	Revenue-Generating	Funding		Remarks
		ADB	Government	
Water supply	Yes	SLA	LG, PDAM	Revenue from customers based on water consumption
Sanitation	Yes ^a	SLA	LG	Revenues from emptying septic tanks and fees for treatment of sewage brought to the sewage treatment plant.
Drainage	No	Grant	LG	
SWM	Yes	SLA	PG, LG	Revenue from customers provided with SWM service
Urban roads	No	Grant	CG, PG, LG	national, provincial, and local roads
KIP	No	Grant	LG	
MIIP	Yes	SLA	LG	Revenues are minimal and come from rental of market stalls
Bus terminal	Yes	SLA	PG, LG	Revenue from fees paid by transport operators and rental of food stalls inside the terminal

ADB = Asian Development Bank, CG = central government, KIP = Kampung Improvement Program, LG = local government, MIIP = Market Infrastructure Improvement Program, PDAM = perusahaan daerah air minum (local water supply enterprise), PG = provincial government, SLA = subsidiary loan agreement, SWM = solid waste management.

^a Depends on the proposed investment, i.e., sewage treatment plant, desludging trucks.

Source: Independent evaluation mission.

³ The local government or PDAM execute a subloan agreement with the central government. The proceeds of the loan are used to finance the project investment in each local government.

2. After Decentralization

28. For projects funded by loans from foreign agencies, the National Development Planning Agency (BAPPENAS) has established guidelines (BAPPENAS–005/2006) before a local government can be included. The following must have been accomplished, set up, and made available (so called project readiness criteria):

- (i) detailed engineering design;
- (ii) performance indicators for monitoring and evaluation;
- (iii) local government letter of willingness to provide funds based on the implementation schedule;
- (iv) local counterpart funds for the first year of implementation;
- (v) land acquisition and resettlement plan;
- (vi) organization for implementation (i.e., project monitoring unit, project implementation unit); and
- (vii) management activity plan.

29. Sources of funds for each subsector are based on the investment components. For water supply projects, central government funds will finance only the raw water abstraction, water treatment plant, and main transmission pipes components. The local government will finance the distribution pipes, while the PDAM and the community will finance the reticulation pipes and the service connection. However, if the local government and PDAM have sufficient funds, they may finance project components assigned to the central government. Table A3.3 shows the indicative funding sources for water supply systems.

Table A3.3: Sources of Funds for Water Supply Systems

Item	Funding Source	Remarks
Raw water abstraction	central government	from internal funds or loan
Water treatment plant	central government	from internal funds or loan
Main transmission pipes	central government	from internal funds or loan
Distribution pipes	local government	from internal funds
Reticulation pipes, service connections	PDAM, community	from internal funds or loan

PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: Independent evaluation mission.

30. Wastewater treatment projects have four major components: wastewater treatment plant, main transmission pipes, secondary or lateral pipes, and service connections. The sources of funds for this subsector are the central government, provincial government, local government, and PDAMs. Table A3.4 shows the indicative sources of funds for the wastewater subsector.

Table A3.4: Sources of Funds for the Wastewater Treatment Subsector

Item	Funding Source	Remarks
Wastewater treatment plant	central government	from internal funds or loan
Main transmission pipes	central government	from internal funds or loan
Secondary or lateral pipes	provincial government	from internal funds
Service connections	local government, community	from internal funds

Source: Independent evaluation mission.

31. Solid waste management subsector projects have five major components: final disposal sites, temporary disposal sites/transfer stations, waste transport vehicles, final disposal site operational equipment, and waste bins. The indicative sources of funds for this subsector are shown in Table A3.5.

Table A3.5: Sources of Funds for the Solid Waste Management Subsector

Item	Funding Source	Remarks
Final disposal site (FDS)	local government	Source of funds is central government if FDS has regional coverage
Temporary disposal site/transfer stations	local government	from internal funds
Waste transport vehicles	local government	from internal funds
FDS operational equipment	local government	from internal funds
Waste bins	local government, community	from internal funds

Source: Independent evaluation mission.

EXTERNAL INVESTMENT ASSISTANCE TO THE URBAN SECTOR

Table A4.1: Loans and Grants

Project	Source	Date Approved	Amount
Loans from JICA (¥ million)			
Social Services: Water Supply, Sewerage, and Sanitation			
Consulting Engineering Services of Djakarta Water Supply Project	JICA	15 April 1971	142
Djakarta Water Supply Project	JICA	9 February 1972	547
Jakarta Water Supply System Project (Initial Phase)	JICA	21 November 1972	487
Consulting Services for Jakarta Water Supply Project	JICA	30 May 1974	231
Jakarta Water Supply System Project 1 st Phase of 1 st Stage	JICA	31 January 1977	2,796
Engineering Services for the Jakarta Water Supply System Project	JICA	31 March 1977	147
Jakarta Water Supply Project, Part One of Second Phase (First Stage)	JICA	26 August 1980	2,670
Jakarta Water Supply Project, Part Two of Second Phase (First Stage)	JICA	24 June 1981	3,064
Equipment Supply for Standardized Package Water Supply for Medium and Small-Sized Towns	JICA	24 June 1981	559
Jakarta Water Supply Project Part Three of Second Phase (First Stage)	JICA	30 April 1982	5,730
Engineering Services for Umbulan Spring Bulk Water Supply System Project	JICA	30 April 1982	280
Jakarta Water Supply Development Project (Immediate Project of 2 nd Stage)	JICA	15 February 1985	4,500
Jakarta Water Supply Development Project (1 st Phase of 2 nd Stage)	JICA	27 December 1985	10,923
Engineering Services for Ujung Pandang Water Supply Development Project	JICA	13 January 1987	701
Ujung Pandang Water Supply Rehabilitation Project	JICA	5 July 1988	1,364
Jakarta Water Supply Distribution Pipeline Project	JICA	14 December 1990	6,446
Engineering Service for Jakarta Solid Waste Management System Improvement Project	JICA	14 December 1990	271
Wastewater Disposal Project in the City of Jakarta (I)	JICA	8 October 1992	2,121
Ujung Pandang Water Supply Development Project (Stage I)	JICA	4 November 1993	7,034
Jakarta Solid Waste Management System Improvement Project	JICA	4 November 1993	3,863
Denpasar Sewerage Development Project	JICA	29 November 1994	5,400
Denpasar Sewerage Development Project II	JICA	28 March 2008	6,004
Social Services: Urban–Rural Community Infrastructure			
Surabaya Urban Development Project (I)	JICA	26 February 1993	11,251
Human Settlements Improvement Project for Urban and Rural Areas	JICA	4 November 1993	7,798
Rural Areas Infrastructure Development Project	JICA	29 November 1994	21,000
Human Settlements Improvement Project (I)	JICA	1 December 1995	12,220
Rural Areas Infrastructure Development Project (II)	JICA	28 January 1998	29,738
Rural Areas Infrastructure Development Project (III)	JICA	5 July 2001	20,039
Regional Infrastructure for Social and Economic Development Project	JICA	29 March 2007	23,519
Loans from World Bank (\$ million)			
East Java-Bali Urban Development Project	World Bank	19 March 1991	180.3
Sulawesi-Irian Jaya Urban Development Project	World Bank	6 June 1991	168.9
Surabaya Urban Development Project	World Bank	12 April 1994	617.6
Semarang-Surakarta Urban Development Project	World Bank	7 June 1994	174.0
Kalimantan Urban Development Project	World Bank	21 March 1995	251.3
Second East Java Urban Development Project	World Bank	16 May 1996	142.7
Bali Urban Infrastructure Project	World Bank	6 May 1997	110.0
Municipal Innovations Project	World Bank	9 February 1999	5.0
National Program for Community Empowerment in Urban Areas (PNPM)	World Bank	20 May 2008	252.7
National Program for Community Empowerment in Urban Areas (PNPM II)	World Bank	14 April 2009	225.0

JICA = Japan International Cooperation Agency.

Source: JICA and World Bank annual reports.

Table A4.2: Urban Sector Projects – World Bank

Project	Date Approved	Date Closed	Project Cost (\$ million)	Sectors Covered (% coverage)	Cities Covered
East Java–Bali Urban Development Project	19 March 1991	30 September 1997	180.3	<ul style="list-style-type: none"> • Water, sanitation, and flood protection (57%) • Transportation: Roads and highways (34%) • Public administration, law, and justice: Subnational government administration (4%); and central government administration (4%) • Industry and trade: agro industry (1%) 	45 local governments in East Java and Bali and a limited expansion of the water distribution system in the city of Surabaya
Sulawesi–Irian Jaya Urban Development Project	6 June 1991	31 March 1999	168.9	<ul style="list-style-type: none"> • Water, sanitation, and flood protection: (46%); sewerage (16%); and solid waste management (4%) • Transportation: Roads and highways (30%) • Public administration, law, and justice: Subnational government administration (4%) 	Nine cities in Sulawesi and water supply system rehabilitation and investments in eight cities in Irian Jaya
Surabaya Urban Development Project	12 April 1994	30 September 2000	617.6	<ul style="list-style-type: none"> • Water, sanitation, and flood protection (67%) • Transportation: Roads and highways (24%) • Public administration, law, and justice: Subnational government administration (5%); and central government (1%) • Health and other social services (3%) 	Project implementation units: Eastern Java, Surabaya local government and Kota Surabaya Coverage of road implementation in K. Perbatasan, J. Kenjeran, J. Banyu Urip, Jalan Margomulyo, DG Pengairen, Kali Kedurus, Kali Wonorejo, Kali Kebonagung
Semarang–Surakarta Urban Development Project	7 June 1994	30 September 2001	174.0	<ul style="list-style-type: none"> • Water, sanitation, and flood protection (60%) • Transportation: Roads and highways (27%) • Public administration, law, and justice: Subnational government administration 	Semarang and Surakarta Coverage of Water supply: Central Java, Maluku, East Nusa Tenggara, North Sulawesi, Central Sulawesi, Southeast Sulawesi

Project	Date Approved	Date Closed	Project Cost (\$ million)	Sectors Covered (% coverage)	Cities Covered
				(7%) <ul style="list-style-type: none"> • Industry and trade: Housing construction (3%) • Health and other social services (3%) 	
Kalimantan Urban Development Project	21 March 1995	31 December 2002	251.3	<ul style="list-style-type: none"> • Water, sanitation, and flood protection (50%) • Transportation: Roads and highways (20%) • Public administration, law, and justice: Subnational government administration (10%); and central government (10%) • Industry and trade: Housing construction (10%) 	Cities of Balikpapan, Banjarmasin, Palangka Raya, Pontianak, Samarinda
Second East Java Urban Development Project	16 May 1996	31 December 2001 (delayed by 21 months)	142.7 (67.3 cancelled)	<ul style="list-style-type: none"> • Water, sanitation and flood protection (59%) • Transportation: roads and highways (29%) • Public Administration, law and justice: sub-national government administration (11%) • Health and other social services (1%) 	29 kabupatens (95 urban areas) in East Java
Bali Urban Infrastructure Project	06 May 1997	30 September 2004 (delayed by 21 months)	110.0 (37.9 cancelled)	<ul style="list-style-type: none"> • Water, sanitation and flood protection: water supply (30%) • Water, sanitation and flood protection: solid waste management (30%) • Water, sanitation and flood protection: flood protection (15%) • Transportation: roads and highways (15%) • Health and other social services (10%) 	Bali
Municipal Innovations Project	09 February 1999	30 June 2003 (delayed by 18 months)	5.0 (0.3 cancelled)	<ul style="list-style-type: none"> • Water, sanitation and flood protection (60%) • Public Administration, Law and 	22 local governments

Project	Date Approved	Date Closed	Project Cost (\$ million)	Sectors Covered (% coverage)	Cities Covered
				Justice: sub-national government administration (30%) • Agriculture, fishing and forestry (10%)	
National Program for Community Empowerment in Urban Areas (PNPM)	20 May 2008	31 December 2011 (target)	252.7	<ul style="list-style-type: none"> • Transportation: Roads and highways (27%) • Health and other social services: Health (27%) • Education: General education (27%) • Health and other social services: (13%) • Public administration, law, and justice: Subnational government administration (6%) 	1,145 subdistricts The development objective of the PNPM-Urban Project for the Government of Indonesia is to ensure that the urban poor in PNPM-Urban locations benefit from improved socioeconomic and local governance conditions. The additional loan will help finance the costs associated with scaled-up activities to enhance the impact of a well-performing project. The project scope will be expanded to (a) provide supplemental block grants to approximately 4,593 existing PNPM-Urban wards to accelerate the implementation of ongoing midterm village poverty reduction programs; (b) finance a full community development cycle of PNPM-Urban in about 1,575 additional wards to prepare them to participate in the PNPM beginning in FY09 (corresponding to the Government of Indonesia's FY2010); (c) incorporate awareness of disaster risk management and emergency preparedness in the community socialization process; and (d) institute enhancements to the revolving funds component to make it more sustainable. These revisions are consistent with the project's objectives, and will improve the effectiveness of project implementation.
National Program for Community Empowerment	14 April 2009	Not Applicable	225.0	<ul style="list-style-type: none"> • Health and other social services: Other social services 	

Project	Date Approved	Date Closed	Project Cost (\$ million)	Sectors Covered (% coverage)	Cities Covered
in Urban Areas (PNPM II)				(25%) <ul style="list-style-type: none"> • Transportation: General transportation sector (20%) • Water, sanitation, and flood protection (20%) • Health and other social services: Health (20%) • Public administration, law, and justice: Subnational government administration (15%) 	

Source: World Bank website: ([www: worldbank.org](http://www.worldbank.org)).

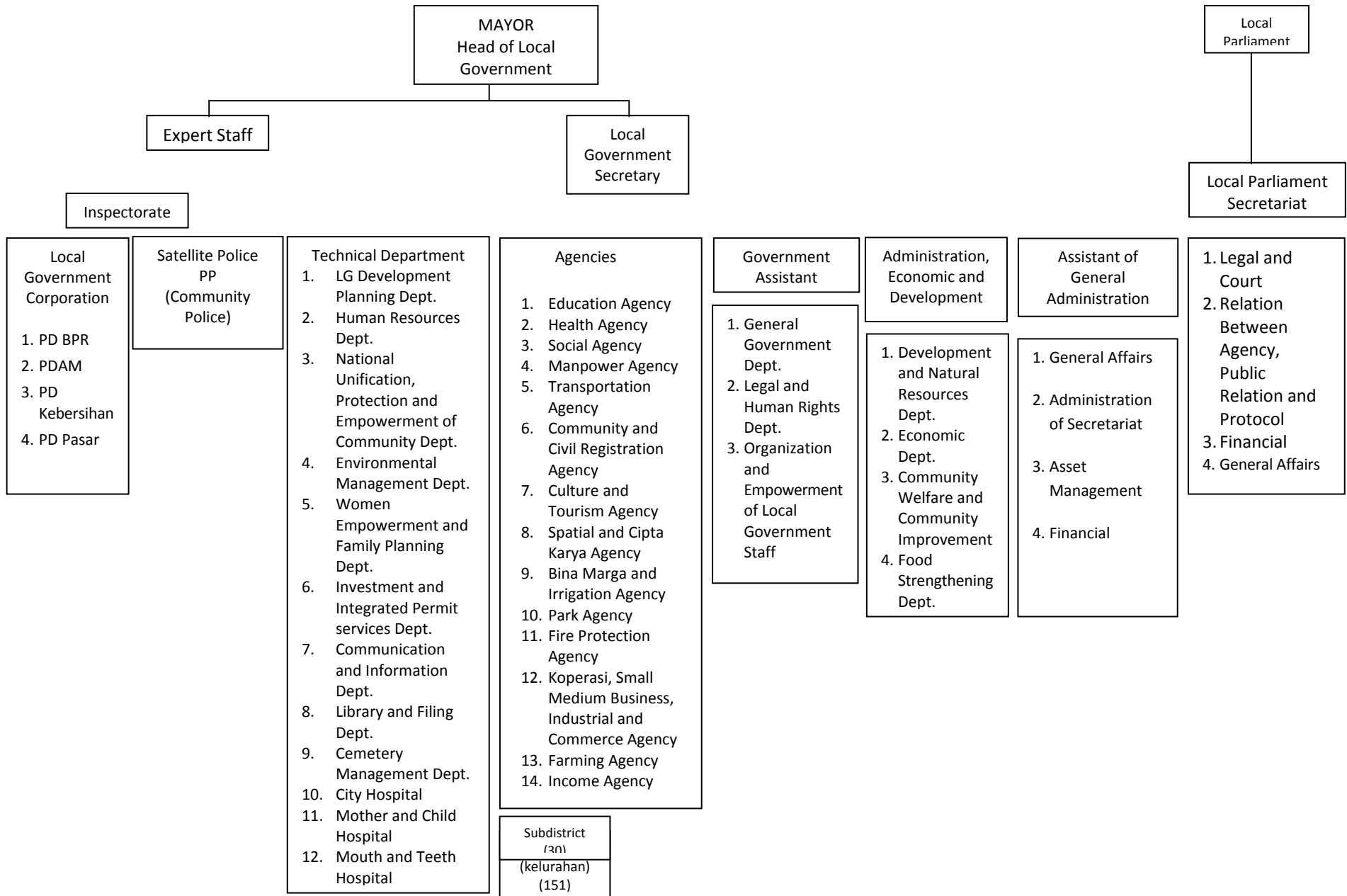
IMPLEMENTATION SCHEDULE OF MULTI-SUBSECTOR PROJECTS (months)

Sector/ Loan Number	Project Name	From RRP to Hiring of Consultants			From Hiring of Consultants to Completion of Designs			From Completion Designs to Initiation of First Civil Works			From Initiation of First Civil Works to Construction Implementation			Total Time to Completion from RRP			From Hiring Consultants to First Civil Works			From Appraisal to Initiation of Civil Works			From Appraisal to Effectiveness			
		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	
Multisector																										
Loan 0400	Bandung Urban Development Project	(4.93)	27.07	32.00	(15.00)	NA	0.00	NA	NA	0.00	47.60	92.60	45.00	57.07	102.07	45.00	(20.00)	(17.60)	2.40	11.27	13.67	2.40	7.83	8.83	1.00	
Loan 0550	Medan Urban Development Project	0.17	48.17	48.00	(21.00)	30.00	51.00	(71.00)	(68.00)	3.00	42.00	80.00	38.00	52.17	90.17	38.00	(41.00)	(38.00)	3.00	11.80	14.80	3.00	8.30	6.90	(1.40)	
Loan 0629	Small Towns Urban Development Sector Project	0.00	12.73	12.73	(18.00)	0.00	18.00	(11.00)	4.00	15.00	34.00	67.00	33.00	50.73	83.73	33.00	(11.00)	4.00	15.00	7.83	22.83	15.00	9.73	8.87	(0.87)	
Loan 0768	Second Bandung Urban Development Project	(3.37)	4.63	8.00	10.00	94.00	84.00	(101.00)	(91.00)	10.00	46.00	91.00	45.00	53.63	98.63	45.00	(7.00)	3.00	10.00	2.53	12.53	10.00	9.20	9.80	0.60	
Loan 0919	Second Medan Urban Development Project	(1.30)	12.70	14.00	0.00	3.00	3.00	(12.00)	(1.00)	11.00	47.00	70.00	23.00	61.70	84.70	23.00	(9.00)	2.00	11.00	7.43	18.43	11.00	7.60	7.90	0.30	
Loan 0983	Secondary Cities Urban Development	(3.27)	12.73	16.00	10.00	30.00	20.00	(41.00)	(28.00)	13.00	58.00	64.00	6.00	72.73	78.73	6.00	(77.00)	(64.00)	13.00	7.23	20.23	13.00	12.90	12.90	0.00	
Loan 1077	BOTABEK Urban Development Project	0.03	8.03	8.00	43.00	49.00	6.00	(55.00)	(49.00)	6.00	50.00	62.00	12.00	58.03	70.03	12.00	(6.00)	0.00	6.00	8.03	14.03	6.00	10.00	8.37	(1.63)	
Loan 1078	Bandar Lampung Urban Development Project	8.03	19.03	11.00	0.00	0.00	0.00	0.00	0.00	0.00	54.00	61.00	7.00	63.03	70.03	7.00	(14.00)	(10.00)	4.00	12.67	16.67	4.00	11.63	10.00	(1.63)	
Loan 1111	Bogor and Palembang Urban Development Project	0.03	16.03	16.00	33.00	45.00	12.00	(53.00)	(39.00)	14.00	48.00	72.00	24.00	63.30	87.30	24.00	(8.00)	6.00	14.00	12.17	26.17	14.00	13.80	12.37	(1.43)	
Loan 1198	Central Java and D. I. Yogyakarta Urban Development (Sector) Project	(10.83)	17.17	28.00	7.00	1.00	(6.00)	(12.00)	(9.00)	3.00	51.00	66.00	15.00	60.17	75.17	15.00	(11.00)	(8.00)	3.00	10.23	13.23	3.00	9.57	8.00	(1.57)	
Loan 1292	Eastern islands Urban Development Sector	2.33	7.90	5.57	19.40	60.37	40.97	(55.47)	(62.27)	(6.80)	57.30	73.33	16.03	63.30	79.33	16.03	4.90	(1.90)	(6.80)	20.13	13.33	(6.80)	12.67	11.03	(1.63)	
Loan 1383	Sumatra Urban Development Sector Project	8.17	16.97	8.80	(1.80)	(3.20)	(1.40)	36.40	78.40	42.00	(18.00)	7.00	25.00	74.17	99.17	25.00	33.20	75.20	42.00	54.03	96.03	42.00	10.83	11.27	0.43	
Loan 1384	West Java Urban Development Sector Project	8.17	15.17	7.00	35.00	62.00	27.00	(69.00)	(53.73)	15.27	50.73	64.73	14.00	74.17	88.17	14.00	(7.00)	8.27	15.27	12.03	27.30	15.27	10.83	11.27	0.43	
Loan 1511	Metropolitan Bogor, Tangerang, and Bekasi Urban Development (Sector) Project	(11.60)	10.13	21.73	40.27	71.23	30.97	(73.17)	(71.40)	1.77	58.90	71.40	12.50	68.87	81.37	12.50	(1.93)	(0.17)	1.77	12.20	13.97	1.77	7.70	6.80	(0.90)	
Loan 1587	Metropolitan Medan Urban Development	3.77	11.43	7.67	10.33	90.33	80.00	(95.00)	(92.00)	3.00	54.00	99.00	45.00	63.77	108.77	45.00	(4.67)	(1.67)	3.00	11.33	14.33	3.00	8.30	8.30	0.00	
Total		(4.60)	239.90	244.50	152.20	532.73	365.53	(612.23)	(482.00)	130.23	680.53	1041.07	360.53	936.83	1297.37	360.53	(179.50)	(42.87)	136.63	200.93	337.57	136.63	150.90	142.60	(8.30)	
Average		(0.31)	15.99	16.30	10.15	35.52	24.37	(40.82)	(32.13)	8.68	45.37	69.40	24.04	62.46	86.49	24.04	(11.97)	(2.86)	9.11	13.40	22.50	9.11	10.06	9.51	(0.55)	

Note: A = projected at appraisal, B = actual, C = delay.

Sources: Project completion reports and project performance evaluation reports.

MUNICIPAL ORGANIZATIONAL CHART



BPR = *Badan pembangunan rehabilitasi* (rehabilitation development agency), PD = project director, PDAM = *perusahaan daerah air minum* (local water supply enterprise), PP = *peraturan pemerintah* (government regulation).

Source: Independent evaluation mission.

**PHOTOGRAPHS OF PROJECT FACILITIES VISITED
BY THE INDEPENDENT EVALUATION MISSION**

A. Local Water Supply Enterprise Tirtanadi (Medan) Water Treatment Aeration Pond

Photo A7.1: A well-maintained main plant (1 hectare)



Photo A7.2: Discharge of treated water, which is cleaner than the river water



B. Binjai (Outskirts of Medan) Landfill (Final Disposal Site)

Photo A7.3: Suction trucks procured under the project remain in use



Photo A7.4: Municipal workers cleaning and maintaining the trucks



C. Bogor Pilot Wastewater Treatment Plant—Underutilized and Never Expended

Photo A7.5: Pilot wastewater treatment plant (300 households)



D. Bogor Water Treatment Plant and Laboratory—Well Maintained and Functional

Photo A7.6: Water treatment plant (WTP)—oxidation-flocculation



Photo A7.7: Water quality laboratory



E. Sukabumi PDAM Office and Water Treatment Plants

Photo A7.8: Sukabumi WTP, 2 x 40 liters/second



Photo A7.9: Site of the Sukabumi PDAM Pelabuhanratu Branch WTP



F. Tangerang City—Long Distance Bus Terminal

Photo A7.10: Very few buses use the terminal during the day



G. Bekasi City

Photo A7.11: New Clean Development Mechanism in Sumur Batu final dumpsite



H. Former Kampung Improvement Program (KIP) Sites in Bandung City

Photo A7.12: Neighborhood street



Photo A7.13: Entrance to the KIP area



Photo A7.14: KIP neighborhood



Photo A7.15: Clogged drain in the KIP area



Photo A7.16: Local market under the market infrastructure improvement program. (Pasar Agung)



Photo a7.17: Cipayung final disposal site leachate



MILLENNIUM DEVELOPMENT GOALS

1. The Millennium Development Goals (MDGs) serve as a guiding framework for development, and have been the focus of past Indonesian administrations as they craft development plans. These plans reflect the circumstances that prevail when they are prepared, and the development policies prepared toward the end of the 20th century, when the country underwent a major transition, are also transitional in nature. Policies that were supportive of the MDGs included the implementation of social safety net programs focused on education, health, and regional development for poverty reduction. Implementation of various development policies in the last four decades can be said to have been consistent with the objectives of the MDGs, although the MDGs were formally conceptualized and included in the global development agenda only shortly before 2000. In 2004, Indonesia prepared the National Midterm Development Plan for 2004–2009. Despite enormous problems and challenges that are being faced in the implementation of the development plan, the Government of Indonesia is determined to fulfill its commitment to achieving the MDGs by 2015 (Table A8.1).

2. The National Development Planning Agency (BAPPENAS) has indicated that to reach the MDG targets by 2015, Indonesia needs at least Rp1,830.27 trillion in funding to close the gap in MDG target sectors such as in education, health, consumable water, and basic sanitation. There are three MDG financing sources—the government, private sector participation (in the form of corporate social responsibility), and international loans or grants—but available resources are inadequate.

3. To overcome the funding shortages, BAPPENAS will design an Indonesia MDG roadmap. The roadmap will provide technical information, and information on budgeting and development results. Possible funding sources (from private sector entities) could emerge from society by building self-reliance through education and infrastructure provisions.

A. Comparison of National Average with Jakarta

4. The poverty rate for Jakarta decreased from 5.7% in 1993 to about 5.0% in 2000; it has remained relatively steady for the last decade, and is currently 4.5% (Table A8.2). Jakarta's poverty rate has been better (i.e., lower) than the national average over the years, but this is not the case for the other MDG targets. Jakarta lags behind the national average in status of primary education and gender parity in education. In 2006, the primary school net enrollment ratio for Jakarta was 90.8%, a decline from a high of 94.2% in 1992; over the same 14-year period, the national average primary school net enrollment ratio improved substantially, from 88.7% in 1992 to 94.7% in 2006. The same trend prevailed in gender equality, where the national net enrollment ratio of female to male enrollees was 99.4% in 2006, compared with only 96.5% in Jakarta. However, both the national and Jakarta net enrollment ratios have worsened from their 1992 levels of 100.6% nationally and 99.0% in Jakarta. The 100% participation target in education at all levels may be achieved with adequate infrastructure, facilities, and human resources, but to achieve this special treatment must be given to the disabled, indigenous communities, and other vulnerable groups such as those internally displaced as a result of conflict, riots, and natural disasters.

Table A8.1: Indonesia Millennium Development Goals

Goal	Target	Baseline	Target
Goal 1 Combating poverty and hunger	Target 1 Halve, between 1990 and 2015, the proportion of people whose income is less than US\$1 a day.	Population below \$1/day 1990: 20.6% 2005: 7.5% Poverty headcount ratio (population below national poverty line) 1990: 15.1% 2004: 27.1% Poverty gap ratio (incidence x depth of poverty) 1990: 2.7% 2005:3.0%	2015: 10% 2015: 7.5%
	Target 2 Halve, between 1990 and 2015, the proportion of people suffering from hunger.	Prevalence of moderately underweight children (below 5 years old) 1990: 35.5% 2006: 28.1% Proportion of population below minimum level of dietary energy consumption 1990: 9.0% 2005: 6.0%	2015:18.0% 2015: 5.0%
Goal 2 Achieving universal basic education	Target 3 Ensuring that by the year 2015, all children everywhere, boys as well as girls, are able to complete basic universal education.	Net enrolment ratio in primary education 1990: 88.7% 2006: 94.7% Proportion of pupils starting grade 1 who reach grade 5 1990: 75.6% 2004: 89.0 % Youth literacy rate of ages 15–24 2000: 96.6% 2005: 99.0%	2015: 100% 2015: 100% 2015: 100%
Goal 3 Promoting gender equality and empowerment of women	Target 4 Eliminate gender disparity in primary and secondary education by 2005, and at all levels of education by no later than 2015.	Primary education enrolment (female/male ratio) 1990: 100.6% 2006: 99.4% Secondary education enrolment (female/male ratio) 1990: 101.3%	2015: 100.0% 2015: 100.0%

Goal	Target	Baseline	Target
		2005: 100.0% Ratio of literate women to men 15–24 years old 1990: 97.9% 2005: 100.0% Ratio of women in wage employment in non-agriculture sector 1990: 29.2% 2003: 33.0%	2015: 00.0% 2015: 50.0%
Goal 4 Reducing infant mortality	Target 5 Reducing the mortality rate of children under five by two thirds between the period 1990 and 2015.	Under-five mortality rate (per 1,000 live births) 1990: 81.0 2005: 36.0 Infant mortality (per 1,000 live births) 1990: 57.0 2005: 32.0 Proportion of 1-year old children immunized against measles (%) 1990: 44.5% 2005: 72.0%	2015: 32.0 2015: 19.0
Goal 5 Improving maternal health	Target 6 Reduce by three-quarters, between 1990 and 2015, the maternal mortality rate.	Maternal mortality (per 100,000 live births) 1990: 390 2004: 310 Proportion of births attended by skilled health personnel 1990: 40.7% 2004: 72.4%	2015: 110
Goal 6 Combating HIV/AIDS, malaria, and other infectious diseases	Target 7 Have halted by 2015 and begun to reverse the spread of HIV/AIDS.	HIV prevalence: 2005: 0.1% Condom use rate of contraceptive prevalence rate among women aged 15–49 1990: 1.3% 2005: 0.9%	
	Target 8 Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.	Prevalence of malaria (per 1,000 population) Java and Bali: 1990: 28.1	

Goal	Target	Baseline	Target
		2005: 18.9 Prevalence of tuberculosis (per 100,000) 1990: 786 2005: 262 Proportion of tuberculosis detected under DOTS 2005: 68.0% Proportion of tuberculosis cured under DOTS 1990: 90.0% 2003: 91.0%	
Goal 7 Ensuring the conservation of the environment	Target 9 Integrating the principles of sustainable development in national policies and programs as well and reversing the loss of environmental resources.	Percentage of land area covered by forest 1990: 60.0% 2005: 49.9% Percentage of protected land area: 1990: 26.4% 2005: 29.5% Carbon dioxide emissions (ton/ person) 1990: 2.536 kg/person 2004: 1.7 ton/person	
	Target 10 Reducing by half, the proportion of the population having no access to safe and sustainable drinking water sources and basic sanitation facilities by 2015.	Proportion of population using improved water source (piped drinking water) 1990: 38.2% 2006: 57.2% Proportion of population with sustainable access to basic sanitation 1990: 30.9% 2006: 69.3%	2015: 67.0% 2015: 65.5%
	Target 11 Achieving significant improvements in the lives of the poor population living in slums by 2020.	Proportion of households with house owner or house rent status/access to secure tenure 1990: 87.7% 2004: 84.0%	

Goal	Target	Baseline	Target
Goal 8 Building global partnerships for development	Target 15 Addressing developing countries' debts through national and international effort to develop sustainable debt management in the long term.	Debt service as % of GDP 1990: 8.7% 2005: 6.3%	
	Target 16 Cooperating with other countries to develop and apply strategies to create meaningful and productive job opportunities for the young population.	Unemployment rate among young people, 15–24 years old 2006: 25.4%	
	Target 18 Cooperating with the private sector in utilizing new technologies, particularly information technology and communication.	Telephone lines (per 1,000 population) 1990: 6.0 2005: 58.0 (11.2%) Cellular subscribers (per 1,000 population) 2005: 213 (24.6%) Internet users (per 1,000 population) 1990: 0.0 2005: 73.0 (4.2%)	

DOTS = directly observable treatment, short-course; GDP = gross domestic product.

Note: If data is unavailable for 1990, data closest to this year have been used.

Sources: United Nations. 2007. *Report on the Achievement of Millennium Development Goals Indonesia*. Jakarta; and United Nations Development Programme. 2008. *Human Development Report 2007/2008*. Jakarta.

Table A8.2: Millennium Development Goals Status in Indonesia, by Province

Indicator	Year	National	North Sumatra	West Sumatra	South Sumatra	Jakarta	West Java	Central Java	East Java
People living in poverty (%)	1993	13.7	12.3	13.5	14.9	5.7	12.2	15.8	13.3
	2006	16.6	14.3	11.6	18.2	4.5	12.1	20.2	20.2
Malnourished children less than 5 years (%)	1992	35.6	35.4	30.9	36.8	27.5	34.0	34.4	33.6
	2006	28.1	28.7	30.4	26.1	22.3	22.0	24.0	23.8
Primary school net enrolment ratio	1992	88.7	89.9	90.2	87.0	94.2	87.9	92.8	91.7
	2006	94.7	94.0	94.2	93.0	90.8	94.2	94.1	94.2
Primary school net enrolment ratio (female/male)	1992	100.6	99.5	102.4	98.2	99.0	101.9	100.9	101.0
	2006	99.4	98.5	99.2	99.5	96.5	100.8	98.2	99.0
Infant mortality rate (%)	1994	35.0	42.0	48.0	30.0	35.0	44.0	36.0	43.0
	2005	32.0	26.0	32.0	30.0	18.0	37.0	24.0	32.0
Total cases of AIDS (by headcount)	2007	10,384	416	131	143	2,849	1,445	369	1,043
Total cases of malaria (by headcount)	2005	183,102	11	145	2,246		1,124	1,966	1,822
Piped protected drinking water (%)	1994	38.2	39.6	33.2	32.1	54.8	28.9	39.3	46.9
	2006	57.2	55.2	53.6	50.6	63.0	51.0	65.2	64.8
Adequate sanitation (%)	1992	30.9	41.1	19.8	29.3	82.5	26.4	26.2	27.6
	2006	69.3	76.7	49.8	69.1	93.8	61.1	69.8	72.5
Youth unemployment (15–24 years)	2007	25.4	25.8	29.4	21.4	26.2	37.8	24.0	22.5
Households with fixed line (%)	2006	11.2	9.0	10.1	7.8	38.3	12.7	6.1	12.7
Households with cellular phone (%)	2006	24.6	25.0	27.2	18.3	59.9	22.9	21.7	21.5
Household with access to internet (%)	2006	4.2	1.2	1.7	0.7	8.5	2.2	1.4	1.7

Source: United Nations. 2007. *Report on the Achievement of Millennium Development Goals Indonesia 2007*. Jakarta.

5. Jakarta has the highest number of HIV/AIDS cases, which totaled 2,849 cases by 2007. This illustrates the reality of lifestyles in Indonesia's big cities, with social problems that include high drug use. The sharing of needles by drug users in Jakarta is considered to be the main factor responsible for the spread of HIV/AIDS. Likewise, youth unemployment in Jakarta is higher than the national average, probably due to the high influx of people to the city.

B. Resource Constraints in Reaching the Millennium Development Goals

6. Domestic funding is inadequate to fully fund development, and the government requires continuing international support to realize its development goals.¹ There is also a need to further strengthen regional coordination in Asia and the Pacific. The potential for economic and trade cooperation in the area is huge, and it can play a critical role in assisting countries in the region reach their MDG targets. The realization of the MDGs by 2015 may be doubtful due to very high debt payment obligations. The government will renegotiate its debts in order to reach those targets, but proof must be given that the renegotiation is needed, which BAPPENAS is planning to provide in 1–2 years. As of 31 August 2008, Indonesia's total debt (foreign and domestic) due in 2009–2015 was very high. In 2009, total debt payments would reach Rp97.7 billion, of which \$6,407.38 million or Rp58.65 billion is foreign debt.²

7. According to BAPPENAS, five or six developed countries—chiefly the Scandinavian countries and the Netherlands—have committed to give aid through monetary consensus, setting aside around 0.7% of their gross domestic product to help poor countries. BAPPENAS claims that MDG programs on education, poverty, hunger, health, environment, gender equality, and women empowerment require almost double the usual budget for MDGs, and need a strategic transformation in planning and implementation.

C. Poverty

8. While there has not been a substantial reduction in the number of people living in extreme poverty, Indonesia-specific indexes suggest that progress has been made in this area. The economic crisis in the late 1990s had a major impact on poverty in Indonesia. The proportion of the population living in poverty increased by almost 50% compared with 1996 levels. The largest increases occurred in cities, with the number of urban poor rising by more than 80% in that period. By comparison, poverty in rural areas increased by only 30%. Some provinces have been more successful than others in reducing poverty, including Maluku, South Sumatra, and East Nusa Tenggara. However, some provinces are failing to demonstrate progress in the fight against poverty. DKI Jakarta Province, which has the lowest proportion of people living in poverty in the country, has actually experienced an increase in poverty since 2004.

9. Despite rapid urbanization, 80% of the total world population still lives in rural areas. While half of the rural people who face food security and starvation problems come from poor farmers' families, two-thirds of poor farmers are considered marginalized because they have barren land, are isolated, and/or have no land right security and no access to loans. About 30% of farmers are worse off because they do not have their own land. News about deaths due to starvation and other malnutrition cases in several provinces has been alarming, considering that Indonesia is identified as a rice producer. Agricultural development has become a victim of tariff policies, such as reduced

¹ Available: <http://www.targetmdgs.org/index>

² By 2010, total debt that has to be paid will reach Rp84.11 billion, of which Rp46.99 billion is foreign debt. Furthermore, in 2011, Indonesia will spend Rp81.55 billion to pay off debts, of which Rp41.57 billion or \$4,541.47 million is to pay foreign debt. In 2012, debt that will need to be paid is Rp83.31 billion, of which Rp40.63 billion or \$4,438.94 million is foreign debt.

subsidies and an influx of imports of agricultural products, which have stunted development of this sector.

D. Local Poverty Reduction Efforts in Three Provinces

10. Several of Indonesia's least-developed districts have increased their funds designated for poverty reduction by more than 50%.³ The Pro-Poor Planning, Budgeting, and Monitoring (P3BM) Project offers a simple but effective tool. Developed by the United Nations Development Programme (UNDP), P3BM has reached over 1,000 local government officials and other stakeholders. In Sikka and Lombok Timur districts, local governments have used P3BM to increase their funding for health, education, and environmental programs, and are therefore better able to provide services for their communities. Since Indonesia adopted a decentralized form of governance, local governments are responsible for planning and implementing activities in their own areas. P3BM has encouraged districts in East Nusa Tenggara, West Nusa Tenggara, and Southeast Sulawesi to meet poverty reduction goals by providing skills in data collection and analysis using MDG scorecard, poverty mapping, and simple budgeting software.

11. P3BM has been implemented in cooperation with BAPPENAS and has inspired cooperation between and within local governments. P3BM is seen as a useful tool to develop evidence-based budgets, which provides an opportunity to share and develop plans through open dialogue within communities. One year after the project was introduced, P3BM has also been used in the creation of regional action plans in nine districts and has supported the revision and development of the regional midterm development plan.

12. Specialized training for staff members of local governments has not only empowered those governments to work toward development, but has also successfully increased their capacity to meet the needs of local communities. UNDP expects to train local government staff in more provinces and districts to use P3BM to fulfill Indonesia's commitment to the global MDGs and to meet local priorities in providing all Indonesian people with basic services related to human development.

E. Health

13. Indonesia is still lagging behind its neighbors on major health outcome indicators such as infant and under-five mortality and maternal mortality rates. There are three major reasons: (i) the poor quality of basic healthcare, (ii) the low rate of utilization of secondary healthcare by those in the lowest poverty quintiles, and (iii) low levels of preventive care.⁴

- (i) **Poor quality of basic healthcare.** Local health clinics lack adequate infrastructure such as clean water and regular access to electricity, as well as sufficient stocks of basic medicines. Spending efficiency could be improved by reallocating funds to primary public healthcare services for the poor and focusing on interventions that improve the quality of basic services.
- (ii) **Low utilization of secondary healthcare by the poor.** The poor have low utilization rates for secondary healthcare. Pro-poor financing for hospital care could be implemented through targeted vouchers that allow free care for the poor on a fee-for-service basis.

³ Available: <http://www.undp.or.id/press/view.asp>

⁴ World Bank, 2007. *Spending for Development. Making the Most of Indonesia's New Opportunities*. Indonesia Public Expenditure Review 2007. Jakarta.

- (iii) **Low levels of preventative care.** Indonesia's disappointing health indicators can also be improved by strengthening preventive care and intensifying programs and national campaigns that tackle communicable diseases, particularly in less developed areas of Indonesia.

FINANCIAL ASSESSMENT OF LOCAL WATER SUPPLY ENTERPRISE AND SOLID WASTE MANAGEMENT OPERATIONS

A. Kota Bogor

97. The local water supply enterprise (PDAM) Kota Bogor was one of the subsectors covered under the Bogor and Palembang Urban Development Project (Loan 1111-INO) implemented from July 1992 to April 2000. Physical works completed included water intake improvement of 810 liters/second (70,000 cubic meters [m³]/day), raw water transmission pipe of 5.5 kilometers (km), water transmission pipe of 6.1 km, two water treatment plants with capacity of 200 m³/hour each, water reservoir with a capacity of 12,000 m³, distribution pipe of 139 km, and 9,500 new connections. All physical targets identified during appraisal were attained except for the raw water transmission pipe, of which 92% of the appraisal target was realized. The total actual investment made was \$12.485 million. Before the project (in 1990), PDAM Kota Bogor production capacity was only 43,890 m³/day.

98. Production data provided by PDAM Kota Bogor show that as of December 2008, water production reached 40.099 million m³/year (110,000 m³/day), while nonrevenue water (NRW) was 31.9%. The total number of connections was 79,585 as of December 2008. By August 2009, total connections reached 82,000. The city council of Kota Bogor had issued local government decree (PERDA) 16/2005, allowing the PDAM to increase its tariff rate every year at a maximum rate of 25%. From 2005 to 2008, the average tariff rate was increased from 12.6% to 23.7% (Table A9.1).

Table A9.1: Operations Data

Item	Unit	2004	2005	2006	2007	2008
Water production	1,000 m ³	36,495	36,313	37,038	38,912	40,099
Water sales	1,000 m ³	23,706	24,007	24,723	24,656	25,161
Unaccounted-for-water	%	31.4%	30.7%	29.5%	31.7%	31.9%
Total connections	no.	67,522	70,014	72,924	74,988	79,585
Average revenue per m ³ of water sales	Rp	1,725	1,992	2,353	2,912	3,279
Average revenue increase	%		15.5%	18.1%	23.7%	12.6%

m³ = cubic meter, PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kota Bogor and independent evaluation mission's computation.

99. The annual tariff increases allowed the PDAM's revenues to cover all its operation and maintenance (O&M) costs from 2004 to 2008. Revenues were able to cover O&M and allowance for depreciation from 2007 to 2008.

100. The summary of financial ratios¹ for the PDAM is shown in Table A9.2. PDAM Kota Bogor's liquidity was high from 2007 to 2008. The current ratio was high at 1.54 as of the end of 2008, while the quick ratio was also high at 1.42 for the same period. Total long-term debt (LTD)

¹ Current ratio is current assets divided by total current liabilities. Quick ratio is current assets (excluding inventory) divided by current liabilities (current and quick ratio of 1 or above is desirable). Debt-equity ratio is total long-term debt divided by total equity (ratio of 1.5 or below is desirable). Days in accounts receivable is accounts receivable divided by total water sales multiplied by 365 days (value of 30 days or below is desirable). Working ratio is total operating expenses (excluding depreciation) divided by total operating revenue (working ratio of 0.9 or below is desirable). Operating ratio is total operating expenses divided by total operating revenue (operating ratio of 1 or below is desirable). Rate of return is net operating income divided by average net fixed assets (rate of return of 10% or higher is desirable).

was 53% of total equity as of the end of 2008. Collection of monthly billings averaged 41 days in 2008, while collection efficiency was 92% for the same period.

Table A9.2: Performance Ratios

Item	2004	2005	2006	2007	2008
Current ratio	0.85	0.70	0.76	1.66	1.54
Quick ratio	0.80	0.65	0.72	1.52	1.42
Debt-equity ratio	0.91	0.70	0.47	0.67	0.53
Days in accounts receivable	50	40	44	46	41
Working ratio	0.89	0.85	0.84	0.81	0.74
Operating ratio	1.03	0.97	0.95	0.90	0.83
Rate of return (%)	(1.6)	2.7	5.0	11.0	18.2
Connection-employee ratio	152	152	155	152	161

PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kota Bogor and independent evaluation mission's computation.

101. Working and operating ratios were on a downward trend, due mainly to the annual tariff increases implemented by the PDAM and the steady increase of new service connections. By the end of 2008, working and operating ratios were 0.74 and 0.83, respectively. The rate of return improved from -1.6% in 2004 to 18.2% by 2008. In 2004, the PDAM had 444 personnel, increasing to 495 by 2008. The total number of connections to personnel ratio² ranged from 152 to 161 from 2004 to 2008.

Table A9.3: Income Statements

(Rp million)

Item	2004	2005	2006	2007	2008
Revenue					
Water sales	40,892	47,827	58,181	71,786	82,504
Nonwater sales	3,371	5,406	6,200	6,867	11,206
Total revenue	44,264	53,233	64,381	78,653	93,710
Direct Expense	17,836	20,950	26,569	32,397	32,351
Gross profit	26,427	32,282	37,812	46,257	61,359
Indirect Expense	21,224	24,626	27,469	31,087	36,818
Net profit	5,204	7,656	10,343	15,169	24,541
Other Income (Expenses)					
Other income	196	795	503	604	753
Other expenses	319	275	416	519	640
Profit before income tax	5,080	8,175	10,430	15,254	24,654
Income Tax					
Income tax	1,706	2,687	3,942	4,986	8,215
Deferred tax	32	(43)	3	60	19
Net profit (loss) after tax	3,405	5,445	6,491	10,328	16,458

PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Kota Bogor.

² A ratio of 125 and above is desirable.

Table A9.4: Balance Sheet Statements
(Rp million)

Item	2004	2005	2006	2007	2008
Assets					
Current Assets					
Cash in bank	2,702	1,663	3,953	1,388	6,048
Short-term investment	350	1,100	0	0	0
Accounts receivable	5,622	5,180	6,941	9,142	9,328
Other accounts receivable	70	34	35	20	985
Inventory	494	797	689	1,033	1,431
Deferred interest income	0	1	0	3	4
Prepaid expense	258	1,037	711	728	704
Prepaid tax expense	0	13	0	0	0
Total current assets	9,495	9,825	12,329	12,314	18,501
Fixed Assets					
Accumulated depreciation	(45,348)	(51,752)	(58,771)	(66,392)	(75,345)
Net Fixed Assets	62,488	67,920	69,373	69,908	102,204
Fixed Asset Leasing	0	247	214	180	0
Other Assets	4,530	4,125	4,019	26,967	9,368
Total Assets	76,513	82,117	85,935	109,369	130,073
Liabilities and Equity					
Current Liabilities					
Accounts payable	353	236	924	1,800	1,377
Other accounts payable	2,971	4,456	5,457	522	21
Deferred payable	822	841	2,159	3,301	2,533
Advance payment income	49	49	39	34	29
Tax payable	1,106	762	443	988	1,970
Current maturity of long-term liabilities	4,576	7,116	6,597	250	4,802
Retribution deposits	9	82	144	206	475
Other short-term liabilities	1,307	402	492	331	822
Total Current Liabilities	11,193	13,945	16,256	7,432	12,029
Long-Term Debt	26,653	23,883	18,710	35,445	35,179
Other Liabilities	9,458	10,102	11,378	13,723	15,989
Equity					
Equity	14,348	16,968	19,963	29,081	36,139
Donations	6,633	6,783	7,424	7,750	8,191
General reserve	4,821	4,991	5,264	5,611	6,127
Retained earnings	3,405	5,445	6,941	10,328	16,420
Total equity	29,208	34,187	39,591	52,769	66,877
Total Liabilities and Equity	76,513	82,117	85,935	109,369	130,073

PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Kota Bogor.

B. PDAM Tirtanadi

102. PDAM Tirtanadi³ was one of the PDAMs covered under the three Asian Development Bank (ADB) loans: Loan 550-INO: Medan Urban Development Project (MUDP) implemented from February 1982 to October 1989; Loan 919-INO: Second Medan Urban Development Project (SMUDP) implemented from March 1989 to June 1996; and Loan 1587-INO: Metropolitan Medan Urban Development Project (MMUDP) implemented from March 1998 to April 2007.

103. Table A9.5 shows the appraisal targets and what was attained after project completion under the three loans.

³ This PDAM serves the city of Medan and Binjai.

Table A9.5: Appraisal Targets and Actual Attainments

Item	Appraisal Target	Attained
Loan 550		
Raw water pumping station	26,000 m ³ /day	26,000 m ³ /day
Water treatment plant	26,000 m ³ /day	26,000 m ³ /day
Sand filter	12 units	12 units
Main distribution pipes	70 km	70 km
Service connections	29,250	29,250
Loan 919		
Water treatment plant	90,000 m ³ /day	90,000 m ³ /day
Groundwater reservoir	11,000 m ³	11,000 m ³
Pumping station	11,000 m ³	11,000 m ³
Main transmission pipes	None	3.2 km
Main distribution pipes	None	80.4 km
Minor distribution pipes	None	619 km
Power generator	None	2 units
Three pumping stations and reservoir	None	4,000 m ³ ; 4,000 m ³ ; 5,000 m ³
WTP monitoring system	None	2 units
Service connections	55,000	55,000
Loan 1587		
Additional water supply capacity	2,000 lps (172,800 m ³ /day) under BOT scheme	500 lps (43,200 m ³ /day) under BOT; 500 lps financed by project
Reservoir	None	4,000 m ³
Primary distribution pipes	245 km	36 km
Secondary distribution pipes	400 km	261 km
Service connections	80,000	28,000

BOT = build-operate-transfer, km = kilometer, lps = liters per second, m³ = cubic meter, WTP = water treatment plant.

Note: The number of service connections attained for each loan are from the project completion review, which was done after completion of physical works.

Sources: Reports and recommendation of the President, project completion reports, and project performance evaluation reports for loans 550, 919, and 1587.

104. Data provided by PDAM Tirtanadi show that as of December 2008, water production was 170.54 million m³ per year (467,222 m³ per day), water sales reached 128.26 million m³ per year (351,384 m³ per day), while NRW was 24.8% (Table A9.6). In 1988, water sales had been only 35.29 million m³ per year (96,685 m³ per day). The three ADB projects increased the water supply capacity of PDAM Tirtanadi by about 159,200 m³/day,⁴ or 34% of current capacity. The total number of connections was 391,410 (88.2% residential) as of December 2008. From 2004 to 2008, the number of service connections increased by 14,000 per year on average, the bulk of which came from residential connections, which averaged 11,000 per year. Tariff rates were increased by an average of 22.0% in 2006 and 11.0% in 2007, resulting in an increase in revenue of 19.1% and 14.0%, respectively. As of the end of December 2008, average revenue per cubic meter of water sold was Rp2,110 (Table A9.6).

Table A9.6: Operations Data

Items	Unit	2004	2005	2006	2007	2008
Water production	1,000 m ³	148,888	151,027	162,111	166,918	170,536
Water sales	1,000 m ³	116,230	119,066	123,189	126,555	128,255
Unaccounted-for-water	%	21.9%	21.2%	24.0%	24.2%	24.8%
Total connections	no.	335,339	346,888	360,495	372,721	391,410
Average revenue per m ³ of water sales	Rp	1,544	1,561	1,859	2,120	2,110
Average increase	%			19.1%	14.0%	

m³ = cubic meter.

Sources: PDAM Tirtanadi and independent evaluation mission's computation.

⁴ Excludes the 500 liter per second build-operate-transfer scheme.

105. The summary of financial ratios for the PDAM is shown in Table A9.7. PDAM Tirtanadi's liquidity was low from 2005 to 2008. The current ratio was low at 0.59 as of the end of 2008, while the quick ratio was also low at 0.45 for the same period. This was due mainly to the maturing portion of the LTD, which amounted to Rp38.6 billion in 2008. Total LTD was 73% of total equity as of the end of 2008. Of the total LTD of Rp120.3 billion as of the end of 2008, 85% was from ADB Loan 1587 and 15% was from ADB loans 550 and 919. The collection of monthly billings averaged 22 days in 2008.

Table A9.7: Performance Ratios

Item	2004	2005	2006	2007	2008
Current ratio	0.45	0.39	0.34	0.56	0.59
Quick ratio	0.37	0.32	0.24	0.45	0.45
Debt-equity ratio	0.62	0.77	0.96	0.72	0.73
Days in accounts receivable	18	23	22	24	22
Working ratio	0.87	0.87	0.84	0.85	0.90
Operating ratio	0.96	0.96	0.96	0.96	0.97
Rate of return	5.8%	5.0%	4.7%	4.2%	3.5%
Connection-employee ratio	286	293	295	309	306

PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Tirtanadi and independent evaluation mission's computation.

106. The working ratio averaged 0.87 and the operating ratio averaged 0.96 from 2004 to 2008. The tariff rates from 2004 to 2008 were able to cover O&M including an allowance for depreciation. The rate of return ranged from 5.8% in 2004 to 3.5% in 2008. In 2004, the PDAM had 1,173 personnel, increasing to 1,280 by 2008. The ratio of the total number of connections to personnel was high at 306 by the end of 2008.

107. Aside from water supply, the PDAM also manages the sanitation infrastructure of the city of Medan. Revenue from wastewater charges amounted to Rp3.0 billion in 2008 (about 1% of water sales), which was less than the O&M cost of the sanitation operations (Rp3.1 billion).

108. To further improve its financial sustainability, PDAM Tirtanadi plans to increase its water tariff rate by 30% in 2010 and by another 30% in 2013.

Table A9.8: Income Statements (Rp million)

Item	2004	2005	2006	2007	2008
Revenue					
Water sales	179,487	185,908	229,009	268,249	270,614
Wastewater charge	1,866	1,922	2,677	2,903	2,980
Nonwater sales	18,609	20,280	24,233	24,554	37,066
Total revenue	199,963	208,110	255,919	295,705	310,661
Direct Expense	104,244	110,959	147,299	157,568	162,252
Wastewater O&M Cost	4,226	3,910	3,867	6,173	3,128
Gross profit	91,493	93,241	104,753	131,965	145,281
General and Administration Cost	83,368	86,146	97,525	115,654	116,937
Net profit	8,125	7,095	7,228	16,311	28,344
Other Income (Expenses)					
Other income	914	1,176	4,097	1,200	1,666
Other expenses	292	29	160	4,932	19,368
Net profit before tax	9,331	8,241	11,165	12,579	10,642
Income tax	3,144	3,294	3,883	4,397	4,358
Net profit (loss) after tax	6,186	4,947	7,283	8,182	6,284

O&M = operation and maintenance, PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Tirtanadi.

Table A9.9: Balance Sheet Statements (Rp million)

Item	2004	2005	2006	2007	2008
Assets					
Current Assets					
Cash in bank	6,273	7,829	4,509	17,717	19,570
Short-term investment	8,636	7,636	2,655	1,000	3,000
Accounts receivable (A/R)	8,943	11,509	13,847	17,971	16,661
Other accounts receivable	144	68	68	14	14
Inventory	5,172	6,239	8,650	9,002	12,896
A/R write-off	(1,445)	(1,708)	(1,492)	(2,070)	(2,426)
Prepaid expense	248	210	350	263	1,138
A/R doubtful	621	946	470	843	1,397
Receivables from employees	937	502	1,144	1,141	1,371
Total current assets	29,530	33,231	30,200	45,881	53,621
Fixed Assets	397,128	441,673	594,101	629,056	649,476
Accumulated depreciation	(245,299)	(264,040)	(294,144)	(326,066)	(348,132)
Net Fixed Assets	151,829	177,633	299,957	302,990	301,344
Work-in-Progress	30,035	64,953	0	0	0
Other Assets	14,146	12,598	19,042	17,681	20,724
Total Assets	225,540	288,415	349,200	366,552	375,689
Liabilities and Equity					
Current Liabilities					
Accounts payable	17,549	21,547	10,982	2,394	10,049
Other accounts payable	417	1,566	2,343	935	1,267
Deferred payments	12,253	23,561	31,066	19,104	10,594
Interest payable	12,217	13,494	16,184	20,428	20,847
Taxes payable	994	310	1,828	2,138	130
Current maturity of LTD	7,226	9,444	18,323	29,329	38,590
Customers deposits	15,071	15,340	7,786	7,712	8,714
Maintenance warranty	0	41	41	41	41
Total current liabilities	65,727	85,304	88,554	82,081	90,232
Long-Term Debt	60,934	87,578	127,109	118,874	120,322
Other Liabilities	758	1,230	758	0	0
Equity					
Equity	76,127	87,777	96,777	106,777	116,777
LG contribution	5,005	8,990	14,892	34,990	24,382
General reserve	11,123	12,590	13,826	15,647	17,693
Retained earnings	5,865	4,947	7,283	8,182	6,284
Total equity	98,121	114,304	132,779	165,597	165,135
Total Liabilities and Equity	225,540	288,415	349,200	366,552	375,689

LG = local government, LTD = long-term debt, PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Tirtanadi.

C. Financial Assessment of the Entire PDAM Kabupaten Sukabumi, and Pelabuhanratu Branch

1. PDAM Kabupaten Sukabumi – Whole Operation

109. PDAM Kabupaten Sukabumi was one of the PDAMs covered under Loan 1384: West Java Urban Development Project implemented from May 1996 to February 2004. The investment project targeted only the Pelabuhanratu branch of the PDAM. The PDAM has 10 branches in the different towns of *kabupaten* (district) Sukabumi. This financial assessment covers the entire PDAM, and the Pelabuhanratu branch.

110. Physical works proposed for the Pelabuhanratu branch during appraisal included rehabilitation and upgrade of the existing⁵ water treatment plant (WTP) to 2x30 liters per second

⁵ Twenty liters per second.

(lps), construction of a new 2x40 lps WTP, laying of transmission and distribution pipes, and installation of 6,213 service connections. All appraisal physical targets were attained except, for the installation of service connections, with only 622 (10% of the target) realized after project completion. The main reason for the very low number of connections is the economic crisis that hit Indonesia in 1997. Texmaco, a textile company, planned to build up a factory in Pelabuhanratu, but this did not occur, and projected increases in residential housing complex never materialized.

111. Production data provided by PDAM Kabupaten Sukabumi show that as of the end of December 2006, water production reached 6.4 million m³/year (17,649 m³/day), while NRW was 47.5% of water production. The total number of connections was 14,819 as of December 2006. By August 2009, total service connections reached 17,500. In 2006, a water tariff increase was implemented averaging 12.4% for all customers (Table A9.10).

Table A9.10: Operations Data

Item	Unit	2004	2005	2006
Water production	1,000 m ³	6,186	7,065	6,442
Water sales	1,000 m ³	3,158	3,421	3,655
Unaccounted-for-water	%	50.1%	52.8%	47.5%
Total connections	no.	14,077	13,516	14,819
Average revenue per m ³ water sales	Rp/m ³	...	1,780	2,002
Average tariff increase	%	...	...	12.4%

...= not available, m³ = cubic meter, PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kabupaten Sukabumi and independent evaluation mission's computation.

112. The summary of financial ratios for the PDAM is shown in Table A9.11. The PDAM's current ratio was high (0.74 in 2005, 1.00 in 2006, and .94 in 2007), and then dropped to 0.46 by 2008, while the quick ratio was also high (0.73 to 0.93 for 2005–2007), and then dropped to 0.46 by 2008. Total LTD was only 2%–5% of total equity from 2005 to 2008. Collection of monthly billings ranged from 89 days in 2005 to 45 days in 2008, or an average of 68 days, while collection efficiency was 98% for 2007 and 2008.

Table A9.11: Performance Ratios

Item	2005	2006	2007	2008
Current ratio	0.74	1.00	0.94	0.46
Quick ratio	0.73	0.99	0.93	0.46
Debt–equity ratio	0.05	0.03	0.02	0.02
Days in accounts receivable	89	65	73	45
Working ratio	1.21	1.17	1.10	1.21
Operating ratio	1.41	1.33	1.22	1.36
Rate of return	(26.3%)	(13.5%)	(10.2%)	(16.0%)
Connection–employee ratio	73	81	...	...

...= not available, PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kabupaten Sukabumi and independent evaluation mission's computation.

113. Working and operating ratios were high from 2005 to 2008 (above 1.0), indicating that total revenues were not sufficient to cover total operating costs. This was due mainly to the low water tariff and low number of service connections. Net losses were registered from 2005 to 2008, ranging from Rp1.15 billion to Rp2.58 billion, prompting the local government to inject much-needed funds to increase the PDAM's liquidity. The local government provided Rp0.84 billion in 2005, Rp2.70 billion in 2006, Rp4.60 billion in 2007, and Rp2.80 billion in 2008. The rate of return improved from –26.3% in 2005 to –10.2% in 2007, but slightly deteriorated to –16.0% in 2008. The ratio of total connections to personnel ranged was 73 in 2005, and 81 in 2006. The detailed income statements and balance sheet statements from 2005 to 2008 are shown in Tables A9.12 and A9.13.

Table A9.12: Income Statements (Rp million)

Item	2005	2006	2007	2008
Revenue				
Water sales	6,091	7,316	10,067	11,280
Nonwater sales	479	1,026	916	894
Total revenue	6,570	8,342	10,984	12,174
Direct Expense	3,565	4,607	4,853	6,067
Gross profit	3,005	3,734	6,131	6,107
Indirect Expense	4,650	6,117	7,476	8,358
Net profit	(1,645)	(2,383)	(1,345)	(2,250)
Other Income (Expenses)				
Other income	228	844	192	127
Other expenses	0	0	0	455
Profit before income tax	(1,417)	(1,539)	(1,153)	(2,578)
Income Tax				
Income tax	0	0	0	0
Net profit (loss) after tax	(1,417)	(1,539)	(1,153)	(2,578)

PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Kabupaten Sukabumi.

Table A9.13: Balance Sheet Statements (Rp million)

Item	2005	2006	2007	2008
Assets				
Current Assets				
Cash in bank	1,279	3,427	4,976	1,765
Short-term investment	0	0	0	0
Accounts receivable	1,483	1,296	2,001	1,393
Other accounts receivable	122	189	174	166
Inventory	49	36	44	27
Deferred interest income	1	0	0	0
Prepaid expense	15	25	242	262
Prepaid tax expense	0	0	0	0
Total current assets	2,949	4,973	7,437	3,613
Fixed Assets	30,168	33,588	35,741	43,957
Accumulated depreciation	(8,785)	(10,272)	(11,541)	(13,350)
Net Fixed Assets	21,383	23,316	24,200	30,607
Fixed Asset Leasing	5	287	244	290
Other Assets	5,511	3,298	6,674	4,627
Total Assets	29,848	31,873	38,555	39,137
Liabilities and Equity				
Current Liabilities				
Accounts payable	406	370	2,313	783
Other accounts payable	155	27	1	0
Deferred payable	152	135	210	254
Advance payment income	0	0	0	108
Tax payable	0	0	0	0
Current maturity of long-term liabilities	0	0	0	0
Water meter deposits	734	1,372	2,285	3,239
Other short-term liabilities	2,528	3,078	3,125	3,402
Total current liabilities	3,976	4,982	7,934	7,787
Long-Term Debt	1,158	885	523	573
Other Liabilities	99	231	171	276
Equity				
Equity	23,830	26,530	31,130	33,930
Donations	4,813	4,813	4,813	4,813
General reserve	24	24	24	24
Retained earnings	(4,051)	(5,590)	(6,040)	(8,266)
Total equity	24,615	25,776	29,927	30,501
Total Liabilities and Equity	29,848	31,873	38,555	39,137

PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Kabupaten Sukabumi.

2. Pelabuhanratu Branch

114. Pelabuhanratu, the district capital town, is located in the southern part of Kabupaten Sukabumi. It has a seaport but little maritime traffic, most activity is from fishing boats. PDAM Kabupaten Sukabumi has a total of 10 branches in the Kabupaten served by 15 separate water supply systems. The Pelabuhanratu branch has its own separate water supply system with raw water sourced from the Citapus River. It has a total of 21 personnel. In 1997, before the project, the Pelabuhanratu branch had 2,100 service connections supplied from its 20 lps water supply system. The ADB project provided additional capacity in anticipation of the 6,213 additional service connections projected during the appraisal. After project completion in 2000, only 622 new service connections had been realized. From 2000 to 2009, Pelabuhanratu was able to increase its service connections annually. To serve the current demand, Pelabuhanratu is using only its 2x30 lps WTP. The new 2x40 lps WTP has not been used since its completion in 2000.

115. The Cisolok branch of PDAM Kabupaten Sukabumi is located just to the west of Pelabuhanratu. It has a capacity of 40 lps, serving 2,950 customers. According to the head of the Pelabuhanratu branch, the Cisolok branch is looking for an alternative water source, since its current supply cannot meet the actual demand. The Cisolok and Pelabuhanratu branches are now in the process of interconnecting their separate water supply systems. It is projected that the distribution pipeline between the two branches will be interconnected by September 2009. Pelabuhanratu, using its excess capacity (2x40 liter per second), will then supply part of Cisolok's unmet demand.

116. The head of the Pelabuhanratu branch said that a new housing complex for local government employees is being built in Pelabuhanratu. This could add about 500–1,000 customers to the branch's service area.

117. Pelabuhanratu's 2008 water production reached 1.8 million m³, while water sales were only 0.9 million m³ (Table A9.14). NRW for 2008 was 46.4%. As of August 2009, according to the branch head, NRW was 43.0%, down from a high of 65.5% in 2004. The major reason for the high NRW were defective water meters and old, leaking reticulation pipes. PDAM Kabupaten Sukabumi plans to replace 6,700 water meters in the next 5 years and will cover all the branches, including Pelabuhanratu. From 2004 to 2008, the number of service connections increased by 4.2% per year on average. As of the end of 2008, there were 4,224 connections, 92% of which were residential customers.

Table A9.14: Operations Data

Item	unit	2004	2005	2006	2007	2008
Water production	1,000 m ³	143	1,836	1,598	1,722	1,800
Water sales	1,000 m ³	49	762	726	822	901
Unaccounted-for-water	%	65.5%	53.8%	49.6%	48.0%	46.4%
Total connections	no.	3,584	3,745	3,913	4,044	4,224
Average revenue (all connections)	Rp	...	1,587	1,608	2,092	2,436
Average revenue increase	%	...	...	1.4%	30.1%	16.4%

...= not available, m³ = cubic meter, PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kabupaten Sukabumi and independent evaluation mission's computation.

118. Pelabuhanratu's operating ratio improved to 0.99 in 2008 from a high of 1.55 in 2006 (Table A9.15). The working ratio improved to 0.91 in 2008 from a high of 1.45 in 2006. The financial improvement was due mainly to two water tariff increases implemented in 2006 and 2008. The 2006 tariff increase averaged 40%, while the 2008 increase averaged 47%.

Table A9.15: Financial Ratios

Item	2005	2006	2007	2008
Operating ratio	1.28	1.55	0.98	0.99
Working ratio	1.28	1.45	0.87	0.91

PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kabupaten Sukabumi and independent evaluation mission's computation.

119. The revenue of Pelabuhanratu improved to Rp2.2 billion in 2008 from the 2004 level of Rp1.2 billion—an average annual increase of 23.8% (Table A9.16). The revenue per m³ of water sold increased steadily from 2005 to 2008 at an annual rate of 16.0%. As of the end of 2008, average revenue per m³ of water sold was Rp2,436.

Table A9.16: Revenue

Item	Unit	2005	2006	2007	2008
Revenue					
Water	Rp million	1,128	1,085	1,618	2,025
Nonwater	Rp million	82	82	102	170
Total	Rp million	1,210	1,167	1,721	2,195
Total revenue/m ³ of water sales	Rp	1,587	1,608	2,092	2,436

m³ = cubic meter, PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kabupaten Sukabumi and independent evaluation mission's computation.

120. Total O&M of the Pelabuhanratu branch increased by an average of 13.1% from 2005 to 2008 (Table A9.17). As of the end of 2008, total O&M cost was Rp2.2 billion, or Rp2,414 per m³ of water sales.

Table A9.17: Operation and Maintenance Cost

Item	Unit	2005	2006	2007	2008
Water source	Rp million	7.0	7.0	7.1	7.4
Production	Rp million	840.3	926.1	1,021.6	1,341.5
Transmission and distribution	Rp million	44.0	173.9	384.3	455.0
General administration	Rp million	659.2	734.9	272.5	371.9
Total	Rp million	1,550.5	1,842.0	1,685.5	2,175.8
O&M/m ³ of water sales	Rp	2,034	2,538	2,050	2,414

m³ = cubic meter, O&M = operation and maintenance, PDAM = perusahaan daerah air minum (local water supply enterprise).

Sources: PDAM Kabupaten Sukabumi and independent evaluation mission's computation.

121. Pelabuhanratu has four major types of customers. Table A9.18 shows the water tariff rate per type.

Table A9.18: Water Tariff Rate

Customer Type	Unit	2005	2006	2007	2008
Residential	Rp/m ³	899	1,200	1,200	2,625
Commercial	Rp/m ³	2,247	3,600	3,600	4,375
Industrial	Rp/m ³	8,990	12,000	12,000	12,250
Institutional/government	Rp/m ³	899	1,200	1,200	1,750

m³ = cubic meter, PDAM = perusahaan daerah air minum (local water supply enterprise).

Source: PDAM Kabupaten Sukabumi.

D. Assessment of Solid Waste Management Component – Bogor City

1. Capital Investment in Solid Waste Management

122. Bogor city was one of the cities covered by the Bogor–Palembang Urban Development Project (Loan 1111-INO), which was implemented from July 1992 to September 1999. The loan covered the following subsectors: water supply, sewerage, drainage, Kampung Improvement Program/Market Infrastructure Improvement Program (KIP/MIIP), urban roads, flood control, and solid waste management (SWM). For the solid waste subsector, the proposed investment during appraisal included 25 hectares (ha) of sanitary landfill, 337 hand carts, 20 garbage trucks, 1 bulldozer, and 1 loader. After project completion, 25 ha of sanitary landfill had been built, and the following items procured: 349 carts, 21 garbage trucks, 1 bulldozer, 1 loader, and 16 container bins.⁶ The total cost of the project was about \$1.18 million. The landfill was operated from 1993 to 1999, but a landslide in the area forced the government to close the site. A new landfill site was developed with an area of 9.2 ha.

123. The Human Settlements and Spatial Planning Agency (HSSPA) of the city of Bogor is in charge of housing and building, solid waste management, fire prevention and control, cemeteries, sanitation, and beautification of the city.

2. Service Coverage and Operations

124. Before the project, the estimated number of persons served by the SWM system was about 206,000 (1990). Based on HSSPA data, the SWM service area was about 8,182 ha in 2008 (Table A9.19). Of the service area population of 905,132, the number of people served was about 629,067 or 69.5% coverage in 2008. From 2004 to 2008, the population served increased by 3.2% on average, resulting in an increase in volume of waste collected to 2,224 m³/day from the 2004 level of 1,950 m³/day. The total number of personnel under the SWM section was 568, composed of 220 regular and 348 temporary personnel.

Table A9.19: Operations Data – Solid Waste Management

Item	Unit	2004	2005	2006	2007	2008
Service area ^a	hectare	7,999	8,060	8,117	8,177	8,182
Service area population	person	820,707	831,571	855,085	879,138	905,132
Population served	person	553,977	565,468	585,733	606,605	629,067
Coverage	%	67.5	68.0	68.5	69.0	69.5
Personnel (regular)	person	228	232	224	228	220
Personnel (temporary)	person	356	348	351	343	348
Personnel (total)	person	584	580	575	571	568
Volume of waste collected	m ³ /day	1,950	2,000	2,185	2,210	2,224
Volume of waste generated	liter/person	3.5	3.5	3.7	3.6	3.5
Increase in population served	%		2.1%	3.6%	3.6%	3.7%
Increase in volume of waste collected	%		2.6%	9.3%	1.1%	0.6%

m³ = cubic meter.

^a Bogor City area is 11,850 hectares.

Source: Bogor City.

⁶ This last item was not in the appraisal report.

3. Revenue, Operation, and Maintenance Costs

125. Annual revenues collected for SWM services from 2004 to 2008 grew at an average rate of 13.3% per year. Total revenues collected from 2004 to 2008 ranged from Rp2.00 billion to Rp3.27 billion. In June 2008, the tariff rates were increased by about 50% for all types of customers. This resulted in an average increase of about 24.4% in revenue from the 2007 level. Table A9.20 shows the range of tariff rates for major customers.

Table A9.20: Tariff Rate (Summary)
(Rp per month)

Consumer Type	2005	2006	2007	2008	2009
Household/dormitory/office	1,500 to 15,000	1,500 to 15,000	1,500 to 15,000	2,250 to 22,500	2,250 to 22,500
Industrial/factory/hospital	7,500 to 40,000	7,500 to 40,000	7,500 to 40,000	11,250 to 60,000	11,250 to 60,000
Commercial/hotel/restaurant	5,000 to 50,000	5,000 to 50,000	5,000 to 50,000	7,500 to 75,000	7,500 to 75,000
Education building	10,000 to 25,000	10,000 to 25,000	10,000 to 25,000	15,000 to 37,500	15,000 to 37,500
Shopping arcade	50,000	50,000	50,000	75,000	75,000
Trees and construction waste (Rp per cubic meter)	10,000	10,000	10,000	15,000	15,000
Mobile merchant outside market area (Rp per day)	250 to 500	250 to 500	250 to 500	375 to 750	375 to 750
Bulk dumping to FDS	5,000				

FDS = final disposal site.

Note: Details are in Appendix 10.

Source: Bogor City.

126. Annual O&M costs, excluding salaries, increased from the 2004 level of Rp6.36 billion to Rp16.47 billion by 2007, then dropped to Rp15.20 billion by 2008 (Table A9.21). The drop was due to a lower budget allocation rather than a reduction in O&M costs. The annual average increase in O&M costs was 27.1% from 2004 to 2008.

127. Based on the project performance evaluation report completed in July 2004, Bogor City SWM operations revenue covered only 41% of O&M costs from 1997 to 2003. Based on 2004 to 2008 data, revenue covered about 15.9%–31.5% of O&M (excluding salaries). If salary costs⁷ are included, revenues were sufficient to cover only between 9.2%–12.1% of the total costs (Table A9.21).

⁷ An estimate of the annual salary costs was made based on the number of personnel, with the salary rate assumed at an average monthly rate of Rp2.5 million for regular and Rp1.25 million for temporary personnel.

Table A9.21: Financial Data

Item	Unit	2004	2005	2006	2007	2008
Local government total budget	Rp million	384,596	421,440	536,012	635,463	668,113
Actual O&M cost for SWM (excluding salaries)	Rp million	6,359	9,160	14,507	16,474	15,200
Estimated salary cost for SWM	Rp million	12,176	12,180	11,989	11,991	11,820
Revenue from SWM fees	Rp million	2,000	2,243	2,537	2,626	3,266
Actual O&M cost/local government total budget	%	1.7	2.2	2.7	2.6	2.3
Revenue from SWM/actual O&M cost for SWM	%	31.5	24.5	17.5	15.9	21.5
Revenue from SWM/actual O&M and estimated salary cost for SWM	%	10.8	10.5	9.6	9.2	12.1
Increase in revenue from SWM	%		12.1	13.1	3.5	24.4
Increase in O&M cost for SWM	%		44.0	58.4	13.6	(7.7)

O&M = operation and maintenance, SWM = solid waste management.

Sources: Bogor City and independent evaluation mission's estimate.

4. Link between Revenue and Operation and Maintenance Costs – Solid Waste Management

128. The annual budget requirement of HSSPA is prepared based on the agency's program as stipulated in the City of Bogor's strategic plan. The budget request is submitted to the city planning board for review and approval. Not all items and amounts requested in the budget proposal are approved. Once the budget is finalized and approved, the funds are disbursed through the financial division of the city based on the approved budget of HSSPA. HSSPA's revenue comes from monthly garbage fees and desludging fees; the money collected goes to the city treasury and not into a fund dedicated for the use of HSSPA. Based on the present setup, there is no indication that the SWM tariffs and revenues were designed to match the level of expenditures required to operate and maintain the existing solid waste infrastructure and equipment. In addition, the amount allocated in the budget is dependent on which sector is given priority in any fiscal year.

E. Assessment of Solid Waste Management Component – Binjai City

1. Capital Investment in Solid Waste Management

129. Binjai was one of the cities covered by the Second Medan Urban Development Project (Loan 919), which was implemented from March 1989 to June 1996, and the Metropolitan Medan Urban Development Project (Loan 1587), implemented from March 1998 to April 2007. Both loans covered the following subsectors: water supply, sewerage, drainage, KIP/MIIP, urban roads, flood control, and SWM. During appraisal of the Second Medan Urban Development Project, Binjai City was not included in the investment plan under the SWM component, but was later included after the project scope was changed. On completion of the project, Binjai City received 6 trucks, 4,330 garbage bins, and 30 *becak sampah* (garbage carts). The following investment programs were proposed for Binjai City during appraisal of the Metropolitan Medan Urban Development Project: an improved solid waste final disposal site (FDS), 4 new transfer depots, 80 small collection vehicles, 16 new containers, 46 trucks, 1 front-loader with back hoe, and 1 inspection vehicle (car). After project completion,⁸ only the solid waste final disposal site was completed, and 1 new bulldozer procured. The bulldozer was not

⁸ Financed by the central government.

included in the appraisal plan. None of the equipment proposed at appraisal was procured, because Binjai City's subsidiary loan application had not been approved by the Ministry of Finance (MOF).⁹

130. The Cleaning and Beautification Agency (CBA) of Binjai City is in charge of sanitation, beautification of the city, O&M of the solid waste FDS in Mencirin, and collection of garbage. While the solid waste FDS was designed as a sanitary landfill,¹⁰ it is now being operated as a controlled landfill because of limited financial resources. The FDS has an area of 5 ha. The adjacent lot owned by the government (about 10 ha) is being leased by a private agricultural firm. With the term of the lease expiring soon, the area can be used as a future FDS for Binjai City.

131. Binjai City has a population of about 260,000. The service area population as of 2008 was about 219,000, of whom about 131,000 are served (Table A9.22). Daily garbage collection covers about 60% of the service area. CBA has 209 temporary and 89 permanent staff. CBA currently has 13 trucks, 11 dump trucks, 2 container trucks, 2 pickups, 1 bulldozer, 1 wheel loader, and 1 excavator.

Table A9.22: Service Coverage

Item	Unit	2004	2005	2006	2007	2008
Service area	hectare	5,413	5,667	5,763	5,945	6,130
Service area population	person	198,113	203,192	208,402	213,745	219,145
Population served	person	118,867	121,915	125,041	128,247	131,487
Coverage	%	60	60	60	60	60

Source: Binjai City.

2. Revenue

132. Annual revenue collection data for the past 5 years are still provided by the local government. During the field visit, the head of CBA said that for 2009, annual revenue collection could reach Rp301 million.¹¹ The actual budget allocation for the SWM O&M cost is Rp268.8 million for 2008 (Table A9.23). Although the budget allocation increased annually (5.7%) from 2004 to 2008, according to the head of CBA, the required O&M funds to maintain the SWM infrastructure and equipment to government standards exceeds the annual budget allocation.¹² As a result, FDS is now operated as a controlled landfill instead of a sanitary landfill.

133. Tariff per month effective 31 October 2008 is Rp7,500 per household. Commercial, industrial, and institutional customers are charged a higher tariff per month (Table A9.24). The last tariff increase was in 2000. The head of CBA said that for commercial and institutional customers, collection efficiency is almost 100%, but for residential customers, it is low due to the reluctance of some residents to pay the monthly garbage fee.

⁹ Binjai had past debt problems with MOF.

¹⁰ In a sanitary landfill, solid waste materials are covered by soil daily; in a controlled landfill, solid waste materials are covered by soil monthly.

¹¹ CBA's revenue comes from monthly garbage fees. The money collected goes to the city treasury and not into a fund dedicated for the use of CBA. Funds for O&M are based on a budget allocation and are not linked to actual revenue collected.

¹² The head of CBA estimated that the O&M requirement is about Rp1,600 million per year.

Table A9.23: Revenue and Budget Allocation for Operation and Maintenance Costs (Solid Waste Management only)
(Rp million)

Item	2004	2005	2006	2007	2008
Revenue from SWM	...	...	...	...	...
Actual budget allocation	216.2	221.6	248.4	253.9	268.8

... = not available, O&M = operation and maintenance, SWM = solid waste management.

Source: Binjai City.

Table A9.24: Tariff per Month (as of 31 October 2008)

Customer Type	City Center		Outside City Center	
	From	To	From	To
Residential	7,500		5,000	
Shopping mall	150,000	250,000	150,000	250,000
Shop	15,000	30,000	10,000	30,000
Bank	30,000		30,000	
Vehicle service center	25,000	45,000	15,000	30,000
Fuel station	15,000	30,000	10,000	20,000
Public school	6,000		5,000	
Private school	10,000		10,000	
Public office	5,000		5,000	
Private office	15,000		10,000	
Restaurant	10,000	30,000	7,500	30,000
Clinic	5,000	15,000	5,000	15,000
Hospital	15,000	20,000	15,000	
Hotel	30,000		30,000	
Ambulant vendor (Rp/day)	1,000	2,500	700	2,000
University	200,000		200,000	

Source: Binjai City.

DETAILED TARIFF RATES PER CUSTOMER (BINJAI)

A. Household Waste

1. Household Waste of Houses by Road Class

Type	1999 to 2007 (Rp per month)	2008 (Rp per month)
A. Class II (National Road)		
1. House type 70 m ² and above	7.500	11.250
2. Middle house type 45–70 m ²	5.000	7.500
3. Small house type 45 m ² and below	3.000	4.500
B. Class III, IV, and V (Provincial Road and Nonstatus)		
1. House type 70 m ² and above	5.000	7.500
2. Middle house type 45–70 m ²	3.500	5.250
3. Small house type 45 m ² and below	2.000	3.000
C. Aisle and Concrete Road		
1. House type 70 m ² and above	3.000	4.500
2. Middle house type 45–70 m ²	2.000	3.000
3. Small house type 45 m ² and below	1.500	2.250

m² = square meter

Source: Independent evaluation mission.

2. Housing Estate/Managed Housing Area

Type	1999 to 2007 (Rp per month)	2008 (Rp per month)
1. Real estate/high class housing	10.000	15.000
2. KPR/BTN and similar (large)	7.500	11.250
3. KPR/BTN and government agency housing (medium)	4.000	6.000
4. Flat, modest house	2.000	3.000

BTN = *Bank Tabungan Negara* (government bank), KPR = Kredit Pemilikan Rumah .

Source: Independent evaluation mission.

3. Dormitory

Type	1999 to 2007 (Rp per month)	2008 (Rp per month)
1. Army dormitory	1.500	2.250
2. Student dormitory	10.000	15.000

Source: Independent evaluation mission.

4. Office

Type	1999 to 2007 (Rp per month)	2008 (Rp per month)
1. Government office	10.000	15.000
2. Private office	15.000	22.500

Source: Independent evaluation mission.

B. Industrial, Factory, Workshop and Hospital Waste

1. Industrial/Factory

Type	1999 to 2007 (Rp/m ³ per month)	2008 (Rp/m ³ per month)
1. Large industry/factory	30.000	45.000
2. Medium industry/factory	20.000	30.000
3. Small industry/factory	15.000	22.500

m³= cubic meter

Source: Independent evaluation mission.

2. Workshop

Type	1999 to 2007 (Rp/m ³ per month)	2008 (Rp/m ³ per month)
1. Welding/iron works	10.000	5.000
2. Car garage	15.000	2.500
3. Motorcycle services	7.500	11.250

m³= cubic meter

Source: Independent evaluation mission.

94 Appendix 10
3. Factory

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Large factory	15.000	2.500
2. Small factory	10.000	5.000

Source: Independent evaluation mission.

4. Clinic/Community Health Center

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Hospital type C	40.000	60.000
2. Hospital type D	30.000	45.000
3. Large maternity clinic	25.000	37.500
4. Small maternity clinic	20.000	30.000
5. Private clinic	25.000	37.500
6. Community health care	10.000	15.000

Source: Independent evaluation mission.

C. Commercial Waste from Hotels and Hostels, Restaurants, Shops, Banks, Cinemas, Shopping Arcades, Etc.

1. Hotel/Hostel

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Hotel/hostel with less than 15 rooms	40.000	60.000
2. Hotel/hostel with more than 15 rooms	50.000	75.000

Source: Independent evaluation mission.

2. Restaurant

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Restaurant with up to 10 tables	25.000	37.500
2. Restaurant with less than 10 tables	50.000	75.000

Source: Independent evaluation mission.

3. Shop

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Shop, pharmacy, salon, and other business	15.000	22.500
2. House shop	25.000	37.500
3. Barber shop with up to 5 workers	10.000	15.000
4. Barber shop with more than 5 workers	15.000	22.500
5. Tailor with up to 5 workers	10.000	15.000
6. Tailor with more than 5 workers	15.000	22.500

Source: Independent evaluation mission.

4. Bank

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Government bank	20.000	30.000
2. Private bank	25.000	37.500

Source: Independent evaluation mission.

5. Cinema

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Class I with more than 4 studios	30.000	45.000
2. Class II with 2 to 3 studios	20.000	30.000
3. Class III with 1 studio	15.000	22.500

Source: Independent evaluation mission.

6. Kiosk, Grocery

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Grocery	40.000	60.000
2. Large store	15.000	22.500
3. Medium store	10.000	15.000
4. Large kiosk	7.500	11.250
5. Small kiosk	5.000	7.500

Source: Independent evaluation mission.

7. Education Building

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
1. Campus	25.000	37.500
2. Kindergarten up to high school	10.000	15.000

Source: Independent evaluation mission.

8. Shopping Arcade

Type	1999 to 2007 (Rp/per month)	2008 (Rp/per month)
Basic tariff for every 3 cubic meters	50.000	75.000

Source: Independent evaluation mission.

9. Trees and debris from construction will be charged for transport and handling fees as follows:

Type	1999 to 2007 (Rp)	2008 (Rp)
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96	Appendix 10 Basic tariff for cubic meter of volume	10.000	15.000
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Source: Independent evaluation mission.

10. Mobile merchant outside market area

Type	1999 to 2007 (Rp/per day)	2008 (Rp/per day)
1. With fixed nonpermanent tent	500	750
2. Without fixed nonpermanent tent	250	375

Source: Independent evaluation mission.

11. Personally dump to final disposal site

Type	1999 to 2007 (Rp/m ³ per month)	2008 (Rp/m ³ per month)
1. Industrial/workshop/similar	10.000	15.000
2. Dormitory/education center	5.000	7.500
3. Debris and cut trees	5.000	7.500

m³= cubic meter

Source: Independent evaluation mission.

MANAGEMENT RESPONSE TO SPECIAL EVALUATION STUDY FOR INDONESIA: HAS THE MULTI-SUBSECTOR APPROACH BEEN EFFECTIVE FOR URBAN SERVICES ASSISTANCE?

On 14 April 2010, the Director General, Independent Evaluation Department, received the following response from the Managing Director General on behalf of the Management:

I. General Comments

1. We appreciate IED's Special Evaluation Study (SES) on the effectiveness of the multi-subsector approach for urban projects in Indonesia. The SES is based on post-completion evaluation results for 21 multi-subsector urban projects approved since 1979. For 15 urban projects approved since 1991, evaluation results show that 44% have been "successful" compared with 68% for projects in other sectors in Indonesia. The SES identifies some important reasons for this relatively poor performance, but it also acknowledges that exogenous factors such as the Asian financial crisis of 1997 and the initiation of full-scale decentralization in 1999 may have negatively affected project implementation. We accept IED's assessment that multi-subsector urban projects in Indonesia have been "partly successful" on the basis of relevance of approach, less efficient resource use, and less likely achievement of results.

2. Because the SES is primarily based on the evaluation results of projects approved between 1976 and 1997, it does not fully capture how ADB's involvement in Indonesia's urban sector has changed over the past decade. It is important to note that in the wake of the 1997 financial crisis and political and administrative changes, Indonesia moved away from project-based borrowing to an increasing share of program loans. For example, of the six loans approved since 2003 and reviewed under the SES, three were program loans; it is also unclear whether they can be categorized as urban. The SES also does not acknowledge that since 1997, ADB's support for multi-subsector urban projects in Indonesia declined significantly with recent projects focusing on a single subsector, or a menu of small-scale subprojects to be selected by a community consistent with Indonesia's block grant financing system (e.g. *Loan 2072/2073-INO: Neighborhood Upgrading and Shelter Sector Project*).

3. Based on ADB's recent experience in Indonesia and the Bank-wide trend to simplify the design of urban projects, IED may wish to reassess the relevance of its plans to "extend the review of the multi-subsector approach to the region by selection of an appropriate sample from key countries."

II. Comments on Specific Recommendations

4. **Recommendation 1. The multi-sector approach (vis-à-vis other approaches) should not be adopted in urban projects unless there are agreements between the government and ADB on all of the following: (i) experience; (ii) procedures; (iii) strategy; and (iv) implementation management.** We agree. Neither the Government of Indonesia nor ADB has considered financing for large-scale integrated urban development projects since 1997. The identification and design of any future projects in Indonesia's urban sector will consider the capacity and experience of the project management unit and/or project implementation unit; the development of clear procedures and requirements for fund utilization; a mechanism to drive the strategy such as a project champion and/or linkage to a master plan; and streamlined implementation arrangements that minimize the number of agencies with decision-making authority. These considerations can be included in project readiness filters agreeable to ADB and the Government.

5. **Recommendation 2. If local conditions do not favor adoption of a multi-subsector approach, then ADB should adopt a sector-specialized approach with fewer components.** We agree. ADB is already applying this condition and following this approach. The design of future urban projects will continue to focus on the need to be more strategic, selective and realistic in terms of what can be achieved, and in the context of Indonesia's shift to highly decentralized administrative arrangements.

6. **Recommendation 3. There should be a financing scheme that strongly supports the multi-subsector approach.** We agree. Having such a financing scheme is reflected in the one new community level urban development project approved following the administrative changes in Indonesia. As experienced during implementation of *Loan 2072/2073-INO: Neighborhood Upgrading and Shelter Sector Project*, the Government's block grant financing system provides flexibility to accommodate various subsector requirements under one single budgetary and implementation mechanism.

7. **Recommendation 4. A focused and long-term vision of ADB's role in capacity building should be developed.** We agree. Urban sector projects are typically a combination of physical investments and capacity development initiatives. Projects such as *Loan 2072/2073: Neighborhood Upgrading and Shelter Sector Project* include capacity building for participatory community level planning, implementation, and monitoring and evaluation, with Government officials trained in project management through the Government training system. However, more can be done to strengthen these country training systems and expand their accessibility. This is being considered in future project design such as for the proposed Metropolitan Health and Sanitation Project currently under preparation.

DEVELOPMENT EFFECTIVENESS COMMITTEE

Chair's Summary of the Committee Discussion on 16 April 2010

Special Evaluation Study - Indonesia: Has the Multi-subsector Approach been Effective for Urban Services Assistance?

Discussion Highlights

1. Director General, IED, noted Management's general agreement to the recommendations of the special evaluation study (SES). He also noted that Management indicated that the use of multi-subsector approach in Indonesia in recent years has declined and that the same trend could apply to ADB's operations in other countries. IED also noted that Management had cautioned IED about this trend in the context of IED's plan for an extended study on multi-subsector approach applied to other countries. IED mentioned that, for the extended study, it would consult with Communities of Practice (CoPs) for urban and water supply areas.
2. DEC Chair noted that the success rate of multi-subsector projects (44 per cent) was lower than that of the other projects in Indonesia. He also noted that the lack of baseline data and targets hindered the assessment of impacts. Some DEC members suggested closer coordination with other donors for possible joint evaluations.
3. DEC recognized the key issues that may have contributed to the low success rate of the multi-subsector approach in Indonesia. One DEC member mentioned that there is an obvious fundamental gap between donor expectations and domestic political and legal environment, e.g. decentralization. The member believed that lack of institutional capacity and changing policy issues in Indonesia deter success of the approach. Another DEC member was of the view that the multi-subsector approach did not fit into the institutional set-up, both at the level of central government and municipalities. Director, SEEW, mentioned that decentralization faced problems in channeling finances from central government to local governments. There is also the need for new regulatory frameworks, particularly on water supply. IED study suggested that ADB closely engage with other bilateral donors for capacity-building interventions.
4. Both IED and DEC members agreed that some basic issues could have been addressed earlier at the design stage of the projects. IED remained firm on the need to address those basic, but core, recommendations, should ADB decide to continue with the approach.
5. Managing Director General referred to some successes of multi-subsector approach in urban projects in India and People's Republic of China. He expressed the view that ADB may continue using this approach in countries where there are sound institutional arrangements.

Conclusions

6. DEC noted the limited success rate of 44 per cent in multi-subsector projects in the context of urban services assistance in Indonesia, compared to the success rate of 68 per cent for other projects in Indonesia.
7. Given that urbanization is progressing rapidly in Indonesia, there will be growing demand for urban services in the country. Members noted that progress would have to be made on several fronts in urban services like water supply and sanitation, waste management, housing, and other municipal services.

8. Given the progress in decentralization in Indonesia, the integrated urban infrastructure development approach will pose challenges. DEC underscored the IED recommendations and urged that maybe lessons could be learned from success in other DMCs.

ASHOK K. LAHIRI

Chair, Development Effectiveness Committee