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Technical Assistance Performance Evaluation Report
Environment Capacity Development Projects in
Indonesia and the Philippines
(TA 3252-INO, TA 3837-INO, TA 2623-PHI,
and TA 3469-PHI)

The attached Report is circulated at the request of the Director General, Independent Evaluation Department. The report is also being made publicly available.

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November 2010

Environment Capacity Development Projects in Indonesia and the Philippines

Independent Evaluation Department

Asian Development Bank

CURRENCY EQUIVALENTS

Indonesia

Currency Unit – rupiah (Rp)

		At Approval	At Completion	At Evaluation
TA 3252-INO		August 1999	September 2002	May 2010
Rp1.00	=	\$0.000132	\$0.000112	\$0.000109
\$1.00	=	Rp7,550	Rp8,969	Rp9,819
TA 3837-INO		January 2002	April 2005	May 2010
Rp1.00	=	\$0.000097	\$0.000105	\$0.000109
\$1.00	=	Rp10,350	Rp9,533	Rp9,189

Philippines

Currency Unit – peso (P)

		At Approval	At Completion	At Evaluation
TA 2623-PHI		July 1996	November 1998	May 2010
P1.00	=	\$0.038	\$0.025	\$0.022
\$1.00	=	P26.14	P39.46	P45.52
TA 3469-PHI		March 2000	October 2002	May 2010
P1.00	=	\$0.0244	\$0.019	\$0.022
\$1.00	=	P40.91	P52.94	P45.52

ABBREVIATIONS

ADB	–	Asian Development Bank
AMDAL	–	Analisa Mengenai Dampak Lingkungan (environmental impact assessment process)
ANDAL	–	Analisis Dampak Lingkungan (environmental impact assessment study)
APRCP	–	Asia–Pacific Roundtable on Clean Production
BANGDA	–	Direktorat Jenderal Pembangunan Daerah, Departemen Dalam Negeri (Directorate General of Regional Development)
BAPEDAL	–	Badan Pengendalian Dampak Lingkungan (Environmental Impact Management Agency)
BAPEDALDA	–	Badan Pengendalian Dampak Lingkungan Daerah (Regional Office of BAPEDAL)
BAPPENAS	–	Badan Perencanaan dan Pembangunan Nasional (National Planning and Development Agency)
BDS	–	Business Development Services
CEA	–	country environment analysis
CPAS	–	computerized permit administration system
CPS	–	country partnership strategy
CSS	–	country safeguards system
Danida	–	Danish International Development Assistance Agency
DAO	–	Department Administrative Order

DBM	– Department of Budget and Management
DBP	– Development Bank of the Philippines
DENR	– Department of Environment and Natural Resources
DMC	– developing member country
DOST	– Department of Science and Technology
DTI	– Department of Trade and Industry
EIA	– environmental impact assessment
EIS	– environmental impact statement
EMB	– Environmental Management Bureau
EMS	– environmental management system
EPA	– environmental preservation area
ICPC	– Indonesia Clean Production Center
IEM	– independent evaluation mission
IEM GIS	– Industrial Environmental Management Geographic Information System
KLH	– Kementerian Lingkungan Hidup (Ministry of Environment)
LGU	– local government unit
LLDA	– Laguna Lake Development Authority
MIT	– Ministry of Industry and Trade
MMAQIP	– Metro Manila Air Quality Improvement Project
MMDA	– Metropolitan Manila Development Authority
MTPDP	– Medium-Term Philippine Development Plan
NGO	– nongovernment organization
NPC	– National Power Corporation
NRM	– natural resource management
PRDP	– Pasig River Development Plan
PROPER	– Program for Pollution Control, Evaluation, and Rating
PRRC	– Pasig River Rehabilitation Commission
PRRP	– Pasig River Rehabilitation Program
RETA	– regional technical assistance
RRP	– report and recommendation of the President
SDP	– Sector Development Program
SEA	– strategic environmental assessment
SME	– small and medium-sized enterprise
TA	– technical assistance
TCR	– technical assistance completion report
TOR	– terms of reference
URA	– urban renewal area
USAID	– United States Agency for International Development

NOTE

In this report, “\$” refers to US dollars.

Key Words

capacity development, adb, asian development bank, capacity building, environment, impact, indonesia, philippines, monitoring, performance evaluation, technical assistance

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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. Ivan Ruzicka and Rasmiah Malixi 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.

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BASIC DATA

Capacity Building for Decentralization of the Environmental Impact Assessment Process (TA 3252-INO)

Cost (\$'000)	Estimated	Actual
ADB Financing (through ACCSF)	420	413
Foreign Exchange Cost	227	221
Local Currency	193	192
Government Financing	105	...
Total	525	...

Number of Person-Months (Consultants)	28.0	35.5
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Executing Agencies Environmental Impact Management Agency and Directorate General for Regional Development of the Ministry of Home Affairs

Milestones	Date
President/Board Approval	3 September 1999
Signing of TA Agreement	16 November 1999
Fielding of Consultants	24 April 2000
TA Completion: Expected	31 December 2001
Actual	30 June 2002
TCR Circulation	5 September 2002

Mission Type	Number	Date
Fact-Finding	1	7–21 April 1999
Review	1	July 2000
Independent Evaluation	1	24–28 May 2010

TCR Rating	Successful
TPER Rating	Partly Successful

... = not available, ACCSF = Asian Currency Crisis Support Facility, ADB = Asian Development Bank, EIA = environmental impact assessment, INO = Indonesia, TA = technical assistance, TCR = technical assistance completion report, TPER = technical assistance performance evaluation report.

**Improving the Environmental Performance of Small and Medium Enterprises by
Promoting Cleaner Production (TA 3837-INO)**

Cost (\$'000)	Estimated	Actual
ADB Financing (through ACCSF)	500	484
Foreign Exchange Cost	285	297
Local Currency	215	187
Government Financing	150	...
Total	650	...

Number of Person-Months (Consultants)	25.0	29.9
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Executing Agency Ministry of Trade and Industry

Milestones	Date
President/Board Approval	1 March 2002
Signing of TA Agreement	10 June 2002
Fielding of Consultants	23 September 2002
TA Completion: Expected	30 April 2003
Actual	30 April 2005
TCR Circulation	14 March 2006

Mission Type	Number	Date
Reconnaissance	1	27 March–3 April 2001
Fact-Finding	1	6–13 November 2001
Inception	1	27–29 January 2003
Review	1	16–19 December 2003
Independent Evaluation	1	24–28 May 2010

TCR Rating	Successful
TPER Rating	Partly successful

... = not available, ACCSF = Asian Currency Crisis Support Facility, ADB = Asian Development Bank, INO = Indonesia, TA = technical assistance, TCR = technical assistance completion report, TPER = technical assistance performance evaluation report.

Evaluation of Environmental Standards for Selected Industry Subsectors (TA 2623-PHI)

Cost (\$'000)	Estimated	Actual
ADB Financing	400	378
Foreign Exchange Cost	296	...
Local Currency	104	...
Government Financing	140	...
Total	540	...
Number of Person-Months (Consultants)	24.0	26.2

Executing Agency Environmental Management Bureau, Department of Environment and Natural Resources

Milestones	Date
President/Board Approval	30 July 1996
Signing of TA Agreement	28 August 1996
Fielding of Consultants	10 March 1997
TA Completion: Expected	31 March 1998
Actual	26 November 1998
TCR Circulation	8 December 1998

Mission Type	Number	Date
Fact-Finding	1	14–16 February 1996
Inception	1	18 July 1997
Independent Evaluation	1	17–19 May 2010

TCR Rating	Successful
TPER Rating	Partly successful

... not available, ADB = Asian Development Bank, PHI = Philippines, TA = technical assistance, TCR = technical assistance completion report, TPER = technical assistance performance evaluation report.

**Capacity Building Support for the Pasig River Environmental
Management and Rehabilitation (TA 3469-PHI)**

Cost (\$'000)	Estimated	Actual
ADB Financing	1,000	998
Foreign Exchange Cost	695	668
Local Currency	305	330
Government Financing	430	...
Total	1,430	...

Number of Person-Months (Consultants)	80.0	76.5
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Executing Agency Pasig River Rehabilitation Commission

Milestones	Date
President/Board Approval	20 July 2000
Signing of TA Agreement	23 August 2000
Fielding of Consultants	15 January 2001
TA Completion: Expected	30 June 2001
Actual	31 October 2002
TCR Circulation	17 July 2003

Mission Type	Number	Date
Review	2	15 February 2001 6 July 2002
Independent Evaluation	1	17–19 May 2010

TCR Rating	Successful
TPER Rating	Partly successful

... not available, ADB = Asian Development Bank, PHI = Philippines, TA = technical assistance, TCR = technical assistance completion report, TPER = technical assistance performance evaluation report.

EXECUTIVE SUMMARY

Background

Although the Independent Evaluation Department (IED) has undertaken technical assistance performance evaluation reports (TPERs) in the environment sectors of the People's Republic of China (1997 and 2003), Mongolia (2001), and the Central Asian republics (2007), and prepared a background paper on the Greater Mekong Subregion's Environment Program in 2009, a similar evaluation of environment capacity development TA has not been done for Indonesia, the Philippines, or South Asia. This TPER fills part of that important evaluation gap.

The late 1990s and the early years of this decade were tumultuous for Southeast Asia—Indonesia and the Philippines included. The region was recovering from the 1997 Asian financial crisis while undergoing a complex mixture of economic liberalization, decentralization, and political change. High annual growth rates averaging more than 7% of gross domestic product (GDP) for most of the 1990s had already taken a toll on the environment in these countries. This and the calls for change toward more consultation, participation, and decentralization were bound to affect their approach to environmental management.

Partly for these reasons, Asian Development Bank's (ADB's) environment-related capacity-development assistance to Indonesia and the Philippines was timely. The movement toward decentralization and more powers for the provinces in Indonesia led to changes in government processes, procedures, and implementing regulations that presented a major challenge to the country's administration. Some continue to this day.

ADB has implemented 12 advisory and small-scale TA projects in environmental capacity development in Indonesia since 1990 and six in the Philippines. However, since 1996 only two environmental TA were approved by ADB for each country. These four TA projects were selected as case studies for evaluation because they focused on capacity development (i.e. skills development and institutional strengthening) in environment. They were (i) Capacity Building for Decentralization of the Environmental Impact Assessment (EIA) Process (Indonesia), (ii) Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production (Indonesia), (iii) Capacity Building Support for the Pasig River Environmental Management and Rehabilitation (Philippines), and (iv) Evaluation of Environmental Standards for Selected Industry Subsectors (Philippines).

The TPER assesses the performance of TA projects in terms of relevance, effectiveness, efficiency, and sustainability of their contribution to the countries' capability to manage their environment within the context of ADB and national government's environment policy to support implementation of major environment improvement programs. Another key evaluation goal was to assess how ADB's assistance has helped Indonesia and the Philippines develop their country safeguards system and procedures and to say what more is required to bring their current approaches into line with international good practice.

The wider socioeconomic and political context and similarities between Indonesia and the Philippines should be noted in this evaluation:

- (i) The two capacity-development projects (EIA capacity building in Indonesia and environmental standards in the Philippines) were second-generation TA. The first generation came in the late 1980s and early 1990s during the formative years of the EIA process in the region and helped create its foundations. Because of this, ADB, the governments concerned, and the second-generation TA could build on previous experience to some degree.

- (ii) The TA projects evaluated here were implemented in the midst of political and macroeconomic events in Indonesia and the Philippines, both hit hard by the 1997 Asian financial crisis. In Indonesia, the crisis gave additional impetus to the decentralization drive to which the EIA capacity-building TA was closely linked. In the Philippines, the crisis led to greater pragmatism in the approach by the authorities to environmental compliance, which was reflected in the design of the environmental standards TA.
- (iii) Significant non-EIA inputs and factors helped shape government and civil society perception of environmental problems and possible solutions in the two countries. The Environmental Impact Management Agency (BAPEDAL) and its innovations, such as the Clean River Program (PROKASIH), were a strong influence in Indonesia. In the Philippines, the experience of the Laguna Lake Development Authority was used in the design of the Pasig Environment Management TA. Preliminary efforts to address Metro Manila's air quality influenced both Philippine TA projects.
- (iv) The concept of cleaner production began, albeit slowly at the start, to influence policy makers with encouragement from ADB, which had adopted it as a central theme for support to industrial development in early 2000s. Both the small and medium-sized enterprise (SME) cleaner production TA and the environmental standards TA tapped into that trend.

Key Findings and Overall Assessment

The broad, collective impact of these TA projects was to maintain and, in some cases, refocus the attention of governments and civil society on mainstreaming environmental issues in the renewed development efforts after the Asian financial crisis. This included streamlining environmental approvals to catalyze environmentally sound economic investments. The impact of efforts to strengthen institutional and technical capacity, the underlying theme of all four TA projects, remains weak, especially at the local level. More support from ADB is needed in Indonesia to create a cadre of environmentally skilled professionals at the district and municipal environment offices under the new decentralized governance regime, which like any major administrative reform needs time to demonstrate the desired results. In the Philippines, the Department of Environment and Natural Resources (DENR), assisted by ADB, could benefit by greater devolution of environment and natural resource management functions to local government units and its regional offices, fostering a culture of local ownership and response to environmental threats. While no capacity-development assistance was provided on environmental assessment to these countries; ADB has since given some sectoral assistance in natural resource management in Indonesia.

Each of the four TA project was independently rated *partly successful*. They were rated *successful* in their respective completion reports.

The overall performance of the EIA capacity-building TA in Indonesia was affected by the broader administrative decentralization reform ongoing at the time; while the long term impact of the SME cleaner production TA could not materialize due to the absence of an enabling policy framework and financial incentives for the small and medium sized enterprises. In Philippines, the Pasig environment management TA built the project management capability of the Pasig River Rehabilitation Commission but was not able to influence the land use and urban planning development trends in the Pasig river area. While outputs of the environment standards TA in the Philippines find use to this day, this wider application of environmental standards has not moved the economy toward environmentally sound technologies that could replace inefficient and polluting industries.

Lessons for Environment Capacity-Development Technical Assistance

Environmental reform is vulnerable to broader administrative reform. Capacity development for environmental management is inherently difficult due to its cross-sectoral nature. Success depends greatly on the buy-in from the sector it aims to influence. When capacity development is introduced alongside a broader administrative reform program, such as political decentralization, environmental TA is likely to be closely tied to progress in the wider effort. Indonesia's EIA capacity-building TA, in particular, suffered because the functions of local government remained unclear during reforms; and bureaucratic capacity and efficiency, local technical capacity and transparency, and accountability were insufficient, as was support for learning and innovation. The TA tried to make up for these deficiencies but could not bridge the capacity gap. Hastily executed decentralization, such as the transfer of functions to local levels without clear assignment of roles and the prior capacity development needed, can dilute environment protection efforts.

Sustained funding and policy support is needed for environmental capacity development. Environment management initiatives are typically underfunded due to their externality nature, often considered an unintended consequence of a development activity; making sustainability a crucial factor. Sustainability of TA outcomes which rely on external funding rather than domestically generated resources and policy support will be short-lived. The SME cleaner production TA in Indonesia is an example. A lack of suitable government policies and institutional mechanisms to ensure continued financial and technical support has hampered mainstreaming of cleaner production in the sector. When formulated, the TA did not fully address the question of how to sustain the activities that the project championed. Environmental capacity development generally attracts less sustained funding than capacity development in sectors such as transport and energy, with their potential to generate revenue, for example, through road tolls and the sale of power. Particular attention in environmental capacity development must, therefore, be given to the sustainability of financial support. Successful examples of securing resources for environmental purposes must be drawn upon. These include the use of market-based instruments, environment user fees as pollution charges, and payments for ecosystem services.

Technical assistance sequencing is critical for new environmental concepts. Environmental capacity is still not established in many developing member countries (DMCs), so TA sequencing is critical, especially when introducing relatively new environmental and technological concepts. The example provided by the SME cleaner production TA is typical. It was approved in 2002 only 2 months after another TA on strengthening business development services (BDS) for SMEs. The BDS TA was to support implementation of key recommendations of a medium-term action plan and, in particular, to promote SME BDS, simplify regulations, and ease SME access to credit—an ambitious scope of work in itself. Implementing these two TA projects in parallel with two executing agencies had little justification. By itself, overlapping is rarely synonymous with synergy. This TPER supports the findings of the 2006 special evaluation study on TA performance that recommended that country partnership strategies (CPS) “should include a clear strategy and program for TA with a long-term framework and measurable indicators of expected outcomes.” The TPER does acknowledge that ADB has made progress recently in this regard by using sector assessment strategies and road maps alongside CPS formulation so that TA projects can be more firmly anchored in a DMC's national development planning agenda and long-term sustainability can be made more likely.

Strong provincial capacity is required for efficient country safeguards system. This evaluation has underscored the need to continue developing the capacity of provincial environmental offices in Indonesia and of the Department of Environment and Natural Resources in the Philippines for more efficiency in administering the EIA process, environmental

mitigation planning, and implementation. Any further capacity-development work in Indonesia should ensure that the provinces adapt the national safeguard systems to local conditions without diluting the intent of the safeguards. Although environment safeguard procedures and practices in the Philippines are nearly equivalent to ADB's, improvement can be made in simplifying the EIA process, more efficient project categorization, alternative analysis, and public disclosure. Both countries can benefit from further strengthening of the technical skills of implementing institutions, especially at provincial and regional offices. They also need to improve their use of strategic environment assessment as a tool in regional development planning and enforce post-construction environmental monitoring more diligently.

Lessons for General Capacity Development Technical Assistance

Anticipate change. Anticipating institutional and other changes during a TA project's lifetime should be an inherent goal of TA formulation. Waning interest in TA objectives by an executing or partner agency is not uncommon, as the Metropolitan Manila Development Authority demonstrated to some extent in the Pasig environmental management project. Continuous support of individuals and institutions cannot be taken for granted. Building solid relationships with the executing or implementing agency to shield the TA from the effects of personnel changes should be considered as important as the delivery of the project's technical content. TA team leaders must be more than technicians. They must be able to engage the entire hosting organization. A TA with resiliency built-in will ultimately benefit the client organization itself by also making it less dependent on individuals. Adequate consideration of the dynamics of underlying conditions must remain an essential part of TA design.

A narrow focus is often best for projects and clients. Too many activities tend to weaken TA focus. TA projects usually have a shorter implementation duration than loan projects and need to avoid too wide a scope. Both the EIA capacity-building TA in Indonesia and the Pasig environmental management TA in the Philippines produced more outputs that the target audiences were able to fully use. These TAs also involved more than one executing agency. Reducing the number of participating organizations can often improve focus and lead to better targeting of TA capacity-building resources.

Duration needs to suit the current context. A TA project's duration can have an impact on its performance, especially when it comes to introducing new technologies and addressing capacity issues in a dynamic institutional landscape. The TA projects in Indonesia were both implemented at a time when institutions were assuming new mandates and struggling to address new roles. Decentralization was moving rapidly and taking little account of weak implementation capacity in district and municipal environmental offices. The 1997 Asian financial crisis, moreover, had depleted the financial capacity and workforce of the SME sector, which made its ability to ramp up and engage with the SME cleaner production TA questionable. In both cases, longer duration would have improved TA impact and the sustainability of the outcomes.

Recommendations

The following recommendations on TA formulation are provided for consideration of ADB Management during CPS formulation for Indonesia and the Philippines.

Develop a TA strategy for environment capacity development that considers the context, funding needs, focus, timing, and capacity, as environmental management is difficult due to its crosscutting nature and is typically underfunded. ADB's CPSs and operations business plans should consider developing TA strategies that allow enough time and

proper sequencing between interventions in the same sector especially for new environment technology concepts to maximize the benefits of each intervention (para. 98).

Draw on ADB resident missions during design and implementation due to the need for strong provincial capacity development including country safeguard systems. More use of ADB resident mission staff should be considered at both the TA design and implementation stages. Resident mission staff can build strong relationships with executing agencies and other local stakeholders and are ADB's front line in ensuring DMC buy-in and continuity of positive environment management outcomes adapted to local conditions (para. 99).

Follow up and build on past progress achieved on environmental management, e.g., developing provincial capacity for country safeguard systems and fee-based approaches for adoption of cleaner production technologies. Building on previous initiatives when formulating new TA projects and collaborating with other development partners creates a solid foundation for TA sustainability. The EIA capacity-building TA helped establish a base from which to launch Indonesia's country safeguards system work. Evaluation of the environmental standards TA in the Philippines and Indonesia's SME cleaner production TA suggest that an opportunity exists to develop a private sector-friendly, fee-based approach to environment-related technical support, especially in the use of cleaner production techniques and International Organization for Standardization and other similar certification systems (para. 100).

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I. INTRODUCTION

A. Evaluation Purpose and Process

1. Although the Independent Evaluation Department (IED) has undertaken technical assistance performance evaluation reports (TPERs) in the environment sectors of the People's Republic of China (1997 and 2003), Mongolia (2001), and the Central Asian republics (2007), and prepared a background paper on the Greater Mekong Subregion's Environment Program in 2009, nothing similar has been done for Indonesia, the Philippines, or South Asia. This TPER fills part of that important evaluation gap.¹

2. Another objective of this evaluation was to assess how ADB's assistance has helped Indonesia and the Philippines develop their country safeguards system (CSS) and procedures and to say what more is required to bring their current approaches into line with international good practice, that which adopts a robust methodology, has analytical rigor, and enables practical application with accompanying strong delivery standards.

3. ADB's program of technical assistance (TA) to Indonesia and the Philippines has been under way since early 1990s. Twelve advisory and small-scale TA projects in environmental capacity development have been implemented in Indonesia since 1990 and six in the Philippines. The evaluation focused on TA that specifically targeted capacity building and institutional strengthening in environment. The evaluation reviewed all the TA projects in both countries and excluded those that did not meet the criteria (Box 1). Of the 15 advisory TA projects that met the criteria and are listed in Appendix 1, 11 were approved before 1996. The four more recent capacity-development TA projects were selected as case studies for evaluation:

- (i) Capacity Building for Decentralization of the Environmental Impact Assessment (EIA) Process (Indonesia),²
- (ii) Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production (Indonesia),³
- (iii) Capacity Building Support for the Pasig River Environmental Management and Rehabilitation (Philippines),⁴ and
- (iv) Evaluation of Environmental Standards for Selected Industry Subsectors (Philippines).⁵

¹ Another TPER is being prepared for selected countries of South Asia.

² ADB. 1999. *Technical Assistance to the Republic of Indonesia for the Capacity Building for Decentralization of the Environmental Impact Assessment Process*. Manila (TA 3252-INO, \$420,000, approved on 3 September).

³ ADB. 2002. *Technical Assistance to the Republic of Indonesia for Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production*. Manila (TA 3837-INO, for \$500,000, approved on 1 March).

⁴ ADB. 2000. *Technical Assistance to the Republic of the Philippines for the Capacity Building Support for the Pasig River Environmental Management and Rehabilitation*. Manila (TA 3469-PHI, for \$1 million, approved on 20 July).

⁵ ADB. 1996. *Technical Assistance to the Republic of the Philippines for Evaluation of Environmental Standards for Selected Industry Subsectors*. Manila (TA 2623-PHI, for \$400,000, approved on 30 July).

Box 1: Case Study Selection Criteria

Only technical assistance (TA) projects which had environmental capacity development as their objective per se were included. TA projects including regional TAs associated with specific environmental issues such as air quality management in Asia or assistance for a conference or event was excluded. Multitranche financing facilities, grants, and trust funds were also reviewed but none met the criteria of environment capacity development as their primary objective.

Project preparatory TA and small-scale TA projects were not selected because they were associated with delivery of a specific event or project preparation rather than countrywide institutional strengthening.

The time period for approvals was to be primarily 1996–2009 to take into account institutional memory, reliability of information, and availability of stakeholders to consult.

Source: Asian Development Bank. 2010. *Technical Assistance Performance Evaluation Reports of Environmental Capacity Building TA Projects in (i) South Asia, and (ii) Indonesia and Philippines—Evaluation Approach Paper*. Manila.

4. The TPER assesses the relevance, effectiveness, efficiency, and sustainability of the projects' contribution to the ability of the two countries to manage their environment within the context of ADB and national government's environment policy and, in some cases, to implement major environment improvement programs. The selected TA projects in Indonesia were important milestones in strengthening the country's environmental management initiatives. One built EIA capacity across national, provincial, district, and municipal governments under a new decentralization policy. The other promoted the adoption of cleaner production in small and medium-sized enterprises (SMEs) as part of ADB's broad support for cleaner production at the time. The evaluation of the Pasig environment management TA to the Philippines provided insights into how institutional issues such as interagency coordination, multiplicity of authorities, and organizational mandates can affect the delivery of a complex river ecosystem program, as in this case the Pasig River Environmental Management and Rehabilitation Sector Development Program (SDP).⁶ The evaluation of the second Philippine TA, which was implemented during a period of growing demand for power generation and industrial production, highlights the effect environmental quality standards have had on environmentally sound industrial growth.

5. A desk review of the TA documents and relevant studies and papers was conducted in April 2010. An independent evaluation mission (IEM) then held field discussions with representatives of executing agencies, other counterpart agencies associated with TA implementation, officials of the ministries of finance, in-country offices of other multilateral and bilateral funding agencies, nongovernment organizations (NGOs), consultants for the TA projects, and target stakeholders. These discussions were held in a very positive and constructive manner and the information obtained from the IEM has been very useful in developing this TPER; the evaluation criteria of relevance, effectiveness, efficiency and sustainability were explained to the concerned officials prior to the IEM discussions. Questionnaires were also circulated to the executing agencies, TA implementation consultants, and ADB project officers to solicit their views. One limitation the TPER faced was a scarcity of information due to the great amount of time that had elapsed since the TA projects were implemented. Although these were the most recent environment capacity-development TA projects available for these developing member countries (DMCs), the gap of 8–10 years in evaluation made it difficult to reconstruct all the TA details accurately or to correctly assess all of the projects' achievements and failures. Appendix 2

⁶ The SDP comprised two loans and technical assistance. ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and a Technical Assistance Grant to the Republic of the Philippines for the Pasig River Environmental Management and Rehabilitation Sector Development Program*. Manila (Loans 1745-PHI and 1746-PHI, for \$175 million, approved on 20 July); and TA 3469-PHI (footnote 4).

presents the evaluation design matrix adopted for the study. The IEMs to Jakarta and Manila were undertaken in May 2010. By then, all the TA projects had been completed and closed.

6. Copies of the draft evaluation report were provided to the concerned departments in ADB and executing agencies in the two countries to obtain feedback and comments received were considered to the extent possible. The main text of the TPER presents the key findings of the evaluation of the four case-study TA projects in accordance with ADB's *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*.⁷ Details of the individual evaluations of the four TA projects are presented in Appendixes 3–6. The main text discusses summary information, comparing and contrasting the TA projects as needed.

7. **Technical assistance completion reports.** Technical assistance completion reports (TCRs) were prepared for the TA projects in the same year as closure. The TCRs rated the two Indonesia TA projects *successful*. The TCRs suggest that both projects were relevant and effective in terms of the environmental improvement initiatives under way at that time. In the case of the EIA capacity-building TA, this involved strengthening EIA in the context of a regional autonomy law and, in particular, addressing institutional and legislative aspects. The second TA project aimed to improve the environmental performance of SMEs in the manufacturing sector through the new concept of cleaner production. It offered an effective way to meet competitiveness and environmental objectives simultaneously. The TCRs for the Philippine projects rated the Pasig environment management TA *successful* and the environmental standards TA *generally successful*.⁸ It found that the former was instrumental in building capacity for the institutions involved in project implementation. The latter demonstrated the importance of developing appropriate environmental standards for environmentally sound technologies that, if implemented with rigor and discipline, could in time replace more inefficient polluting industries. TCRs were prepared by project officers involved with either design or implementation of the TA or both in the case of EIA capacity-building TA in Indonesia and the environmental standards TA. No separate TCR missions (except for the environmental standards TA) were undertaken. The TCR ratings were higher than those adjudicated by the TPER, which raises questions about the adequacy of self-assessment included in the TCRs.

B. Technical Assistance Objectives

8. The four TA projects sought to develop the capacity of national and provincial environment agencies or purpose-built project delivery organizations like the Pasig River Rehabilitation Commission (PRRC). They aimed to improve their institutional and technical skills so that they could adopt modern EIA and environment management tools and techniques. Whether through introduction of cleaner production technologies for SMEs in Indonesia or the development of appropriate environment quality standards for industry subsectors in the Philippines, the projects' overall goal was to develop and strengthen the institutional framework for environment planning and management within an overall context of ongoing government reform and economic development.

9. The EIA capacity-building TA had the overall objective of supporting the government in the reform of the EIA process through implementation of the new Environmental Management Act (Law 23 of 1999) and the revised EIA regulations and by facilitating decentralization of environmental management in the context of the Regional Autonomy Law. The goal of the SME cleaner production TA was to improve the efficiency of a very large and fragmented SME sector

⁷ ADB. 2006. *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*. Manila.

⁸ Starting 2001, the new rating system has been used in the TCRs and project completion reports.

by introducing cleaner production techniques and building awareness and expertise among SME owners and stakeholders.

10. Similarly, the Pasig environment management TA aimed to develop the planning and project execution capability of key agencies involved with the implementation of the SDP. These were the PRRC, the Metropolitan Manila Development Authority (MMDA), and concerned local government units (LGUs). The objective was to help them achieve targets set out in the Pasig River Development Plan (PRDP). The TA was to ensure that the SDP was efficiently coordinated and sequenced; was implemented effectively; and maximized the potential social, environmental, economic, and financial development benefits of the Pasig River cleanup. The environmental standards TA aimed to help the Environmental Management Bureau (EMB) of the Department of Natural Resources and Environment (DENR) develop appropriate, practical, and enforceable environmental standards and regulations for industries that matched the national economic development agenda.

II. DESIGN AND IMPLEMENTATION

A. Rationale

11. The four TA projects addressed environmental management issues in Indonesia and the Philippines that were and continue to be important to the countries' development environment.

12. The 1997 Asian financial crisis was followed by calls for structural reforms in the affected Southeast Asian economies, complimented in some cases by far-reaching political and administrative reforms as well. These produced a great push toward decentralization of government functions in Indonesia. Environmental management could not remain unaffected by these developments. Regulatory support in the form of the Regional Governance Law and the Law on Fiscal Balance underpinned the decentralization reform.⁹ The Regional Autonomy Law approved in May 1999 gave district and local governments more say in the management of natural resources under their jurisdiction. ADB had earlier supported several EIA-related TA projects in Indonesia, including those directed at infrastructure, agriculture and forestry, mines and energy, and industry. With the accelerating pace of decentralization in Indonesia, the government requested TA in EIA implementation at the provincial and local government levels. ADB's support matched the priority it was giving environment in Indonesia at the time. Capacity development for environmental management at the national, regional, and district levels is a focus of ADB's operational programs.¹⁰

13. The EIA system was expected to change significantly with the introduction of the Regional Autonomy Law.¹¹ Although the law became effective in 2001, it tended to supersede to some degree an ongoing process of strengthening the then only recently established regional offices of the Environment Impact Management Agency (BAPEDALDA) in various provinces.

⁹ Law 22 of 1999 on local government has devolved central government authorities in all government administrative sectors, except for security and defense, foreign policy, monetary and fiscal matters, justice, and religious affairs.

¹⁰ ADB will assist the government in the review of BAPEDAL's organization needs and the development of appropriate systems and procedures at both the regional and district levels. ADB. 1996. *Country Assistance Plan Indonesia (1997–1999)*. Manila.

¹¹ Indonesia's EIA system is known as Analisa Mengenai Dampak Lingkungan (AMDAL). It was officially introduced under the Basic Environmental Law 4 of 1982 at a time of increasing foreign investment, particularly in large-scale and extractive industries. The system has been periodically amended to reflect institutional changes within Indonesia and the evolution in thinking on EIA in Indonesia and abroad but has remained highly centralized with all policy, regulatory, administrative, and institutional measures decided by the central government.

EIA review and approval was largely transferred de facto to Indonesia's local governments.¹² The offices of the Ministry of Environment (KLH) had then to address this issue on two fronts—building EIA capacity at the local government level while streamlining EIA procedures to improve the climate for investment following the 1997 Asian financial crisis. This challenge continues to this day as environment offices seek to administer EIA efficiently while grappling with limited capacity and technological know-how in the local governments.

14. In addition, the Government of Indonesia asked ADB for advisory TA to improve the environmental performance of SMEs in manufacturing by introducing and disseminating cleaner production technologies and processes. The 3.5 million SMEs in Indonesia employ more than 7 million people and constitute a very important element of the industrial community. Indonesia sees a strong SME sector in manufacturing as a potential source of future industrial dynamism. The landscape has changed considerably for SMEs in the last few years, with fresh competition from the opening of Indonesian markets to regional and global trade and the adoption of the ASEAN Free Trade Area policy. A key way for SMEs to build competitiveness is by improving efficiency through production processes that adopt efficient cleaner production technologies. The TA was also important in developing the building blocks for wider adoption of cleaner production techniques in SMEs. These are becoming increasingly important as importing countries demand that environmental norms be met, including but not limited to compliance with the International Organization for Standardization (ISO) 14001.¹³ The TA complemented other ADB support to Indonesia in the sector¹⁴ and formed part of ADB's region-wide support of cleaner production¹⁵ aimed at lowering the intensity of resource use and pollution generation. The overriding goal of the TA to improve the environmental performance of SMEs through adoption of cleaner production was consistent with ADB's general approach to the development of a sustainable and efficient SME sector.

15. Urban pollution was a key environmental issue when the TA projects selected for the Philippines were conceived. The problem was best manifested by the Pasig River system in Metro Manila, which over the years had become the repository of water and waste pollution from domestic, industrial, and commercial sources. It was reported in 1993 that only 15% of household garbage and half of the solid waste generated in Metro Manila was collected. Most household waste went without treatment into the Pasig River water system, causing immense social and health problems. ADB's Philippines country assistance plan of 1997 gave priority to cleaning the river and greening its banks to improve living conditions for the people of Metro Manila.¹⁶ The best way forward was through an integrated approach to urban planning and management that would take land use planning, social considerations, and financing mechanisms into account along with the environmental aspects. The SDP was designed to support the wider government PRDP.

16. Pasig remains an integral part of the lives of the people who live around it to this day. For the poorest of the poor, the river is a source of essential livelihood. For the richest property owners, it presents opportunities to develop high-end properties and amenities that reflect the environmental and aesthetic value of a riverside area in a burgeoning megapolis. The TA was a

¹² Where environment issues cross administrative boundaries, the central office of environment retains its control.

¹³ ISO 14001 gives the requirements for environmental management systems and confirms its global relevance for organizations wishing to operate in an environmentally sustainable manner.

¹⁴ ADB. 2002. *Proposed Technical Assistance to the Republic of Indonesia for Strengthening Business Development Services for Small and Medium Enterprises*. Manila (TA 3829-INO, for \$1.5 million, approved on 9 January).

¹⁵ J.E. Evans and W.B. Hamner. 2003. Cleaner Production at the Asian Development Bank. *Journal of Cleaner Production*, 11 (5) pp. 639–649; ADB. 1999. *Technical Assistance for the Promotion of Cleaner Production Policies and Practices in Selected Developing Member Countries*. Manila (TA 5840-REG, for \$600,000, approved on 20 April).

¹⁶ ADB. 1996. *Country Assistance Plan: Philippines (1997–1999)*. Manila.

vital part of three-pronged assistance—program, project, and TA—offered to the government agencies implementing the PRDP, which was itself a key objective in the SDP program framework (footnote 6). The TA specifically aimed to build the PRRC's long-term capacity for project planning and the management of the social and economic infrastructure interventions envisaged in the PRDP into 2014.

17. As the Philippines emerged from the 1997 Asian financial crisis, the government faced pressure to accelerate economic growth in an environmentally sustainable manner. A signatory to the ASEAN Free Trade Area, the country, like Indonesia, wanted to promote efficient and environment-friendly technologies. To measure the environmental performance of industry, it first needed to set appropriate environmental quality standards, something it had attempted to do in the 1980s and early 1990s with not much success. ADB undertook the environmental standards TA to help the government develop rationale, enforceable environmental standards for the industrial sectors that had received ADB lending and were seen to be at the forefront of post-1997 crisis economic recovery. These included power and industry.

18. The rationale for all the TA projects was sound both at approval and evaluation.

B. Formulation

19. ADB and respective governments collaborated in the formulation of the TA projects through fact-finding missions and consultation workshops.

20. The EIA capacity-building TA benefited from experience gained through ADB's prior involvement in the introduction of environment management and EIA skills in key development sectors. The TA was implemented concurrently with the TA¹⁷ associated with the BAPEDAL Regional Network Project,¹⁸ which aimed to strengthen the regional network of BAPEDALDA offices. An opportunity emerged with the TA to link the KLH, which was the technical custodian of the EIA process in the country, and the Directorate General of Regional Development (BANGDA) of the Ministry of Home Affairs, which was the agency coordinating the decentralization program with ongoing efforts to strengthen the BAPEDALDA offices in the provinces. In 2001, the effects of the regional autonomy law threatened to undermine the gains of BAPEDALDA strengthening. The EIA capacity building TA compensated for this by addressing some of the missing links in the decentralization chain, especially those relevant to improving environmental offices in districts, municipalities, and townships.

21. The SME cleaner production TA also supported other similar ADB efforts in strengthening cleaner production capacity among SMEs and industry generally in Indonesia.¹⁹ The TA developed tools, techniques, and awareness for environmental aspects to complement the business and efficient operational goals of the other TA and the program loan. A TA fact-finding mission visited Indonesia on 6–13 November 2001 to meet with the stakeholders, including officials of the relevant government and external funding agencies, and potential beneficiaries. Processing of this TA was rushed to meet the original schedule of the fourth Asia–Pacific Roundtable on Cleaner Production (APRCP) conference planned for Bali.

¹⁷ ADB. 1996. *Technical Assistance to the Republic of Indonesia for the Master Plan for Establishing BAPEDALDA*. Manila (TA 2598-INO, for \$900,000, approved on 27 June).

¹⁸ ADB. 1996. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Republic of the Philippines for the BAPEDAL Regional Network Project*. Manila (Loan 1449-INO, for \$45 million, approved on 27 June).

¹⁹ TA 3829-INO (footnote 14); ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grants to the Republic of Indonesia for the Industrial Competitiveness and Small and Medium Enterprise Development Program*. Manila (Loan 1738-INO, for \$200 million, approved on 16 March).

22. Both TA projects had relatively good ownership from the executing agencies. The KLH had a clearer road map and agenda for EIA reform. This was in part due to events external to ADB's intervention that helped reinforce the KLH commitment to EIA capacity building. The Ministry of Industry and Trade (MIT), on the other hand, struggled at times to deal with wider aspects of industrial development in the country. Cleaner production, though important, was not an explicit mainstream item on its agenda. Ownership from the SMEs was also questionable because they were struggling to survive in the tough post-crisis economic environment.

23. In the Philippines, ADB's SDP and the government's PRDP were formulated after the 1997 crisis, which had triggered a push for projects that were both economically viable and environmentally friendly. A fresh start toward sustainable development was supported by the office of the president. Urban environmental improvement and adoption of environmentally sound technologies were essential to the country's balanced urban and industrial development agenda. Both TA projects supported this policy objective.²⁰ Ownership from both executing agencies was effective. Both projects succeeded for the most part in their genuine efforts to engage with NGOs in delivering TA objectives. The environmental standards TA opened avenues for intra-government departmental consultation and broad-based activities by the executing agencies in pollution control and monitoring.

C. Cost, Financing, and Executing Arrangements

24. The total cost, actual disbursement, and implementation arrangements of the TA projects are presented in Table 1. Both Indonesian projects and the Pasig environment management TA were financed by ADB on a grant basis from the Asian Currency Crisis Support Facility, funded by the Government of Japan. The environmental standards TA was financed by the Japan Special Fund. There was no cofinancing involved and no changes in the implementation arrangements envisaged at the formulation stage. Disbursement rates for all four TA projects were above 95%, reflecting ownership of their purpose.

Table 1: Approved Amount, Actual Disbursements, and Implementation Arrangements

Technical Assistance	Executing Agency	Approved Amount (\$)	Actual Disbursement (\$)
3252-INO: Capacity Building for Decentralization of the Environmental Impact Assessment Process	Environmental Impact Management Agency (BAPEDAL); and Directorate General for Regional Development of the Ministry of Home Affairs (BANGDA)	420,000	413,714.56 (98.5%)
3837-INO: Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production	Ministry of Industry and Trade	500,000	483,578.60 (96.7%)
3469-PHI: Capacity Building Support for the Pasig River Environmental Management	Pasig River Rehabilitation Commission	1,000,000	997,988.80 (99.8%)

²⁰ Philippine Agenda 21 is the country's blueprint for sustainable development. It describes a path for individuals, families, households, and communities; provides an action plan for each ecosystem (coastal/marine, freshwater, upland, lowland, and urban); and outlines plans across ecosystems in consideration of the interaction of the various life forms and landscapes found therein. Philippine Agenda 21 was adopted on 26 September 1996, with the issuance of Memorandum Order 399 identifying roles of the Philippine Council for Sustainable Development and each sector in the operationalization of Philippine Agenda 21.

Technical Assistance	Executing Agency	Approved Amount (\$)	Actual Disbursement (\$)
and Rehabilitation			
2623-PHI: Evaluation of Environmental Standards for Selected Industry Subsectors	Environmental Management Bureau, Department of Environment and Natural Resources	400,000	380,299.69 (95.1%)

BANGDA = Direktorat Jenderal Pembangunan Daerah, Departemen Dalam Negeri; BAPEDAL = Badan Pengendalian Dampak Lingkungan; INO = Indonesia; PHI = Philippines.
Source: Asian Development Bank database.

D. Consultants and Scheduling

25. Selection of international and national consultants for all TA projects was in accordance with ADB's *Guidelines on the Use of Consultants*. International consulting firms supported by national consultants (through national consulting firms in some cases) were recruited to implement the TA. Table 2 provides a summary of the consulting inputs and deviations from the planned allocations, if any. All the projects saw minor adjustments in inputs that were accommodated within the original TA budget allocations.

Table 2: Consulting Services

TA	Planned Consultant (person-months)			Actual Consultant (person-months)		
	International	Domestic	Total	International	Domestic	Total
TA 3252-INO	8.0	20.0	28.0	8.2	27.3	35.5
TA 3837-INO	9.0	16.0	25.0	10.0	20.0	30.0
TA 3469-PHI	24.0	56.0	80.0	23.5	53.0	76.5
TA 2623-PHI	9.0	15.0	24.0	10.2	16.0	26.2

INO = Indonesia, PHI = Philippines, TA = technical assistance.

Source: Asian Development Bank database.

26. In summary:

- (i) Overall, ADB and executing agencies seemed generally satisfied with international and national consultant inputs. The quality of international consultants and cooperation with their national team colleagues differed between the two Indonesia TA projects. During the SME cleaner production TA, the national institutional and training specialists resigned during TA implementation due to differences with the international TA team over the approach to be taken and perceived imbalance of efforts. Minor adjustments had to be made to the consulting inputs of the EIA capacity-building TA to accommodate one team change.
- (ii) Both TA projects in the Philippines saw minor team changes to accommodate slight needs and design variations. In the Pasig environment management TA, a legal/privatization specialist was replaced by a community awareness specialist to help develop public information and advocacy approaches and address the social dimension of resettlement. In the environmental standards TA, one consultant position (technology transfer) was removed to free consulting resources for addressing additional tasks placed on the consultant team, i.e., to facilitate processing of the high-priority Metro Manila Air Quality Improvement Project (MMAQIP).

27. Delays in TA completion were in most cases beyond the control of the projects. The Pasig environment management TA in the Philippines and the EIA capacity-building TA in

Indonesia experienced more start-up delays than the other two. The former was affected by a lack of readiness on the part of the newly formed PRRC. The latter suffered from administrative delays resulting from ongoing decentralization sweeping through BAPEDALDA and BANGDA. All the delays were accommodated within the TA projects' original budgets. Table 3 outlines the delays and their effects.

Table 3: Implementation Delays

Technical Assistance	Delay (months)	Main Reason for Delay	Effect of Delays
3252-INO	6	Institutional changes in the Government of Indonesia resulting from passage of decentralization statutes and change of key personnel at executing agencies	<ul style="list-style-type: none"> ▪ Changes in counterpart staff team due to reassignment, affecting continuity of training outcomes
3837-INO	24	Travel restrictions post 9/11 and 2002 Bali bombing resulting in delays to consultant inputs and rescheduling of the fourth Asia-Pacific Roundtable on Cleaner Production (APRCP).	<ul style="list-style-type: none"> ▪ Inception workshop rescheduled from October 2002 to January 2003 due to Bali bombing ▪ International consultant inputs affected due to travel restrictions into Indonesia post-Bali bombing ▪ The fourth APRCP conference held in Chiang Mai instead of Bali as originally planned
3469-PHI	16	Delays in receipt of comments from EMB-DENR on technical working papers and recommendations related to environmental compliance essential to meet SDP's environmental policy agenda; national elections May 2001	<ul style="list-style-type: none"> ▪ Delays to finalization of technical working papers ▪ Limited opportunity for effective engagement from LGU officials almost exclusively focused on the election campaign ▪ Staff recruitment freeze in February 2001, resulted in fewer counterpart staff allocation affecting training outcomes
2623-PHI	8	Disruptions due to national elections in May 1998 and frequent management changes at EMB lead to completion being delayed.	<ul style="list-style-type: none"> ▪ Draft final report tripartite meeting delayed by 5 months due to the national elections in May 1998 ▪ Public information component delayed pending approvals from ADB's external relations department

DENR = Department of Environment and Natural Resources, EMB = Environmental Management Bureau, INO = Indonesia, PHI = Philippines, SDP = Sector Development Program.

Source: Asian Development Bank.

E. Design Changes

28. There were no major changes to the original TA designs. At the DENR's request, the originally planned national industrial permitting database was scaled down in the environmental standards TA because it did not fit the core function of the Environmental Quality Division within the EMB. The project's scope was enlarged to address processing of the high-priority MMAQIP. The expansion dealt specifically with outsourcing of stack measurement and monitoring of air emissions in the Metro Manila airshed and institutional strengthening and capacity building for air quality management in the megapolis.

F. Outputs

29. The four selected TA projects were approved in 1996–2002 and the TA framework used by ADB at that time did not clearly outline TA impacts and outcomes. A summary of the outputs produced during TA implementation is provided below, beginning with the projects in Indonesia.

30. The intended outcome of both Indonesia TA projects was to build institutional capacity in target organizations—the KLH, in the case of the EIA capacity-building TA; and SMEs, in the case of the SME cleaner production TA. Administration of EIA in a decentralized government setup dominated in the former case, and cleaner production know-how transfer in the latter. The TAs delivered the following outputs.

31. **Institutional review and recommendations.** The EIA capacity-building TA reviewed the EIA system at the national, provincial, and district levels, including the standard operating procedures under the environmental monitoring assessment and the environmental management assessment. Specific guidelines were prepared on evaluation of EIA reports, monitoring of impacts and mitigation, and development of environmental monitoring plans and environmental management plans, addressing key implementation aspects of EIA reform in a decentralized development environment (Appendix 3, Table A3.1). Guidelines were developed in consultations with stakeholders in BANGDA, BAPEDAL and the provincial environment offices of West Java and West Kalimantan; discussions held at these meetings and workshops helped advise the TA team of the prevailing inadequacies in the EIA system. Institutional and staffing arrangements to implement EIA in a decentralized government setup were designed, including the terms of references for the EIA commissions mandated with reviewing the EIA. The outputs intended to create an enabling framework for newer processes to take root and to arm the practitioners with appropriate tools to operate in the new environment. The TA outputs seemed sufficient at the time, when measured against what was feasible in a very dynamic administrative environment in Indonesia. Other development partners also worked with the KLH and the BAPEDALDA offices in developing products to strengthen the EIA system. They included Danish International Development Assistance (Environment Support Program Phase 1, 2005–2007) and World Bank (AMDAL Reform and Decentralization Project, 2006). While the outputs and donor TA efforts were essential to establish a firm foundation for EIA under the new regional autonomy law framework, their efficacy was affected to some degree by the competing pressure from the onslaught of decentralization on the time and resources of the government.

32. **Operation manuals and performance monitoring.** The skill sets of the target beneficiaries were strengthened by the development of manuals. The SME cleaner production TA developed operation manuals in English and Bahasa Indonesia based on models for implementing cleaner production practices in all three targeted SME sectors—electroplating, silver, and iron casting. The guidelines were to provide a step-by-step guide to SME owners on cleaner production techniques. A performance-based monitoring system was also developed for SMEs to measure their environmental performance. The IEM found no evidence that the guidelines were actually in use in the SME sector.

33. **Public participation.** While both Indonesia projects encouraged stakeholder participation in the development of their product, the EIA capacity-building TA had a subcomponent specifically dedicated to analysis of present practices and recommending ways of incorporating social considerations into project design and implementation. For that purpose, it developed the Guidelines for Implementing Public Participation in the AMDAL Process with Input to Community Development Planning in Environmental Management Plan.

34. **Training.** The Indonesian TA provided training to stakeholders through inception and other milestone workshops. Under the EIA capacity-building TA, a large number of participants were trained in the role of permits in the EIA process, the EIA review process, strategic environmental assessment (SEA), public participation in EIA process, and review of environmental management and monitoring. The SME cleaner production TA conducted training for SMEs and relevant private and public sector agencies on how to integrate cleaner production concepts into their programs. It also trained SME managers in each of the three industrial sectors on introducing the principles and practices of cleaner production and on the training of trainers in cleaner production assessment methodology and performance measurement.

35. In the Philippines, the Pasig environment management project was an associated TA, intended to build the project planning and management capabilities of the PRRC, the MMDA, and Pasig River LGUs. Hence, its outputs were specific to the SDP project loan. Since the performance of the SDP itself is yet to be formally assessed, the summary below is limited to TA outputs alone.

36. **Project and contract management and monitoring.** These outputs were aimed at building the long-term project management capability of executing agency staff. This covered procedures for contract tendering, bid evaluation, and contract award. Outputs were (i) Standard Operating Procedure/PRRC Guidelines for Government Procurement of Infrastructure Construction Contractors; (ii) PRRC Guidelines for the Prequalification of Civil Works Contractors; (iii) PRRC Sample Bid Documents for Civil Works; (iv) Simplified Disbursement Procedure Manual; and (v) PRRC Financial Management System. They continue to be used by PRRC staff. The TA helped the PRRC develop and put into use a project performance monitoring system that it continues to use.

37. **Urban land use and environment improvement planning.** With a focus on the MMDA, these outputs included development of a riverbank development plan and an action plan for the development and improvement of environmental preservation areas. The LGUs benefited from development of comprehensive land use plans, zoning ordinances, and urban renewal area (URA) plans for the most densely populated cities along the Pasig River—Makati, Manila, Mandaluyong, and Pasig.

38. **Training.** Training was based on the needs assessment undertaken in the inception phase and covered community consultation, database development and management, and project coordination and monitoring. Training was also provided on review of contract documents based on ADB guidelines, project evaluation and appraisal, project coordination and monitoring, urban renewal planning, and updating environmental regulations and standards. Over 600 participants participated in training events, which were usually 1- or 2-day seminars. The training materials were good and the events were considered useful by participants. Feedback to the IEM was positive on their impact on staff skills development.

39. The quality of outputs was good in this TA project and the executing agencies were generally well satisfied. More importantly, the process adopted in producing them, with consultants working closely with PRRC staff, help build substantial capacity in the PRRC. The same, however, cannot be said for the MMDA and the LGUs, whose staffs had relatively limited opportunity to interact with the TA team.

40. The outputs of the environmental standards TA summarized below were targeted at developing environmental standards for selected industry subsectors in a consultative and collaborative manner meant to foster buy-in from respective industry stakeholders.

41. **Environmental standards and environment-friendly technologies.** Through a performance review of the selected power, cement, and sugar industry subsectors; consultation with the industry; and affordability analysis, the TA developed methodological guidelines for the revision of existing air and water quality standards. The TA also compared Philippines and WHO, USEPA emission factors; Philippines and Australian Effluent Factors and the Philippines and Australian Entrainment Levels in drawing up its methodology. It also recommended new regulatory standards for the three subsectors, with emission and effluent goals for pollution control covering total suspended particulate, sulfur dioxide, nitrogen dioxide, and biological oxygen demand. The project also developed a framework for evaluating the impact of environmental standards on industrial development. This paved the way for collaboration between the government and industry stakeholders such as the Pollution Control Association of the Philippines toward development of practical and enforceable standards that would not be perceived as anti-development. To encourage participation by industry in the adoption of environment-friendly technologies, the TA developed an incentive program for specific industries to phase out energy-inefficient and polluting technology.

42. **Management information system.** Database development under the TA aimed to reduce industrial permit processing time on environmental issues. It developed the computerized permit administration system (CPAS), a database meant to improve environmental standards and industrial permitting and trained EMB and DENR personnel in its use. The system continues to be used extensively in the DENR and its regional offices.

43. **Metro Manila Air Quality Improvement Program.** The TA developed outputs that helped in the processing of the MMAQIP, in particular, institutional strengthening and capacity building for air quality management in the Metro Manila airshed. It made proposals for implementation under the MMAQIP. These included privatization of the monitoring air quality program, greater NGO and private sector participation in enforcement of environmental regulations, streamlining of database management and documentation of permits and licenses, and use of market-based instruments in enforcement of environmental regulations.

G. Policy Framework

44. No changes were made to macroeconomic and other policies during TA implementation that would have directly affected the projects' success in a significant way but new policy directions adopted by the governments of Indonesia and the Philippines during that time had an indirect influence on the outcomes. The big bang of radical decentralization in Indonesia captured most of the attention of government functionaries. As a result, some TA activities were overwhelmed by the larger reform agenda and may have unavoidably lost steam. In early 2000, urban environment management in the Philippines gained renewed impetus under the then administration. The SDP provided a buttress for the government's larger PRDP. By virtue of its initial placement as part of president's office, the Pasig environment management TA and the PRRC benefited from that support and buy-in from other partner government agencies. This was critical to the success of the novel initiative that the Pasig River environment project was at that time.

III. PERFORMANCE ASSESSMENT

A. Overall Assessment

45. Each of the four TA project was independently rated *partly successful*. They were rated *successful* in their respective completion reports.

46. In Indonesia, the EIA capacity-building TA is rated *partly successful*, against *successful* in the TCR. Having developed the tools and processes for decentralization of environmental management, the TA implementation was affected by the larger changes in government as a result of decentralization and to this day, staff at the district and municipality offices of environment struggle to meet the full requirements of EIA implementation.

47. The rating of the SME cleaner production TA is *partly successful*, compared with *successful* in the TCR. Cleaner production in SMEs has not made the progress it deserves, due in large measure to the absence of an enabling policy and the regulatory environment. The efforts of development partners and donors do not seem to be coordinated, resulting in a disjointed approach whose shortcomings are magnified by a lack of attention and priority from the government. Failure to adopt any of the follow-up actions recommended by the TA seems to suggest poor government ownership. The TA failed to address the question of sustainable financing support for adoption of cleaner production by SMEs.

48. In the Philippines, the Pasig environment management TA is rated *partly successful*, against *successful* in the TCR. The TA project energized key agencies, introduced and consolidated essential project management skills, and introduced a number of good management practices. In developing approaches to the rehabilitation of congested urban areas and involuntary resettlement, it touched on some of the most pressing and politically sensitive issues of rapidly urbanizing Asia. ADB was overly optimistic in initially envisaging a 1-year TA implementation period. This seems to have been driven more by concerns about timely fulfillment of conditions for the release of program loan tranches than anything else. The design of the Pasig environment management TA could not escape the institutional complexity of the SDP. It had to make a judgment about the roles of the PRRC, the MMDA, and the LGUs in the TA before actual experience was available from implementation of the SDP. This experience has now shown a loss of momentum on the part of some of the local agencies in pursuing the original goal of protecting the ecological and socioeconomic functions of the Pasig River.

49. The environmental standards TA is rated *partly successful*, compared with *successful* in the TCR. This TA may have tried to achieve too much but it seized on the right theme—improving environmental compliance through better standard-setting and novel approaches—and it did it at the right time. TA implementation was characterized by pragmatism based on relevant regional and global experience. The main and lasting contribution of the TA may have been less its specific outputs and more the approach that the TA promoted. The logic behind setting environmental standards is now better appreciated in the EMB and by the regulated community. The evolution of the regulatory framework is now more consultative and analytical, although use of environment standards to develop environmentally sound technologies and phasing out of highly polluting industries remains a challenge. There are still no industry specific standards in the Philippines. Standards for sugar mills under the Clean Water Act were prepared by EMB but are still in the draft form. New effluent standards were drafted as of 2007, but apparently have not been approved for enforcement yet.

50. The individual TA ratings are given in Table 4.

Table 4: Summary Performance Assessment

Technical Assistance	Relevance (20%)	Effectiveness (30%)	Efficiency (30%)	Sustainability (20%)	Total Rating (R)^a	
1. 3252-INO	2	1	1	2	1.4	PS
2. 3837-INO	1	1	1	1	1.0	PS
3. 3469-PHI	1	1	1	1	1.0	PS
4. 2623-PHI	2	1	1	2	1.4	PS

INO = Indonesia, PHI = Philippines, PS = partly successful.

^a Highly successful if $R > 2.7$; successful if $1.6 \leq R \leq 2.7$; partly successful if $0.8 \leq R \leq 1.6$; unsuccessful if $R < 0.8$.

Source: Independent evaluation mission.

B. Relevance

51. The principal factors considered in determining relevance were consistency with ADB objectives and individual government priorities and strategy; and appropriateness of design scope and time frame.

52. In Indonesia, the need to mainstream EIA planning, implementation, and monitoring activities at provincial and district level was clear and consistent with both government and ADB development priorities. Similarly, adoption of cleaner production technology was considered opportune and appropriate for the needs of the SME sector and aligned with ADB's SME initiative.

53. The design of the EIA capacity-building TA is as relevant today as it was at the time of its implementation. The 1997–1999 Indonesia country assistance plan identified capacity building for environmental management at the national, regional, and district levels as a focus of ADB's operational programs. Strengthening decentralization in various organs of the administration has remained a core government reform priority (Box 2). ADB has undertaken several loans and TA projects to support this process (Appendix 3, para. 30). Environment management in a decentralized government set-up was recognized as a continued priority by ADB's country environment analysis of 2005 as well as by other development partners, including World Bank.²¹ The TA is considered *relevant*.

Box 2: Recent Government of Indonesia Legislative Measures to Strengthen Decentralization

In 2007, the government set out a policy on delegation of authority to both provincial and municipal governments for the purpose of environmental development implementation through Law 38 regarding the distribution of government affairs and Law 41 regarding regional apparatus organizations.

Recent Environmental Protection and Management Act 32 of 2009 requires all levels of the government to conduct strategic environmental assessment for preparation and evaluation of spatial plans, development plans, policies, plans, and/or programs with potential environmental impacts of risks.

Source: Asian Development Bank. 2010. Indonesia Country Environment Note. Manila. Draft.

54. The SME cleaner production TA was requested by the Government of Indonesia. The TA was to support the government in hosting the fourth APRCP to be held in Yogyakarta in October 2002. The TA accompanied another capacity-building TA for strengthening business development services (BDS) for SMEs and supported the government's efforts to kick-start the SME sector in the aftermath of the 1997 Asian financial crisis. However, the IEM's discussion with the stakeholders in Jakarta suggests that the TA design

²¹ World Bank. 2009. Investing in a More Sustainable Indonesia. *Country Environment Analysis*. Jakarta.

- (i) did not adequately assess the financial capacity of SMEs left reeling by the 1997 crisis and, consequently, their willingness, passion, and ability to embrace cleaner production at a time when mere survival was at stake;
- (ii) did not take into account the impact of the 2002 Bali bombing, which led to a drop in tourism and nervousness on part of investors, which affected the SMEs' immediate economic prospects;
- (iii) did not build any activity to develop a program of financial support such as credit lines or temporary subsidies that would facilitate investment by SMEs in improved production processes and cleaner production technologies;
- (iv) did not consider adjusting the TA scope despite the request of the executing agencies at the TA kick-off meeting to adopt different sectors because the selected sectors were operating under difficult circumstances due to unforeseen events, including the effects of the 2002 bombing on the silver plating industry based in Bali and difficulties facing iron casting because Indonesia's rail organization was not buying due to financial constraints;²² and
- (v) did not consider the institutional, regulatory, and policy framework that was necessary to enable long-term government investments in SME cleaner production support, which resulted in a fragmented SME sector with decisions taken by a multiplicity of authorities.

55. Due to these design deficiencies, the TA is rated *partly relevant*.

56. In the Philippines, the Pasig environment management TA was a well-timed initiative under the broader ADB SDP loan program to the government, which was itself an important step by the government and ADB at a time of privatization of water supply and wastewater management in Metro Manila. The government was committed to improving the health of the Pasig River system and of those whose livelihoods depended upon it. Subsequent ADB country partnership strategy (CPS) documents, as well as a country environment analysis in 2008, emphasized the importance of preserving the ecological integrity of the river system. However, the TA is rated *partly relevant* because of the following factors:

- (i) The TA design failed to recognize the need to develop financial mechanisms that would sustain urban renewal initiatives essential to maintain the Pasig River's long-term ecological and urban environment functions. Financing was made available through the Pasig loan project for developing the environmental preservation areas (EPAs). The loan money went to LGUs to establish EPAs, having relocated squatters. However, the TA did not develop financial instruments to support urban renewal areas (URAs) under the program. Only initial catalytic activities were performed and this was not enough.
- (ii) The TA project's capacity-development efforts did not have a uniform impact on the participating institutions. While the PRRC as a new agency benefited substantially and continues to use the project planning and management products developed, the MMDA's participation was effective largely during training workshops only. The LGUs on the front line of SDP implementation could have benefited more if the TA had created counterpart offices at the LGUs to work with the PRRC on the Pasig program. Such offices would have provided continuity of designated staff involvement in the program after the TA completion.

²² The MIT is understood to have requested food processing, which it believed needed more support than the subsectors identified in the TA design, as one of the project subsectors.

57. The environmental standards TA was a long overdue initiative to rationalize environmental standards. A power crisis in 1990s in the Philippines and the need to reconcile economic development with environmental protection necessitated a review of environmental standards for key energy-intensive sectors like power and cement and agro-based sectors like sugar. The review had to take into account economic imperatives, cost-benefit relationships, and available technology options to facilitate industrial development while safeguarding the environment. The TA design was appropriate and envisaged an inclusive and consultative process between the DENR and the industry stakeholders in setting standards. This was achieved. The priority given to improved environmental management had a solid basis in the country's 1993–1998 Medium-Term Philippine Development Plan and was mentioned in ADB's country assistance plan of 1997–1999. The TA scope was expanded to support the MMAQIP and in part contributed to the development of the Clean Air Act 1999. Ownership from the EMB and the DENR was appropriate, albeit slow in the beginning, and collaboration between the executing agency and ADB was effective. The TA is rated *relevant*.

58. The design of all the TA projects benefited from the broader macroeconomic and development planning environment at the time and, to that extent, was pertinent to short- to medium-term government reform goals.

C. Effectiveness

59. The ADB TA framework in use at the TA design stage had unclear definitions of impact and outcome. The IEM drew the desired outcomes from the TA papers and assessed the degree to which they were achieved. The IEM found they varied across the different TA projects. None of the projects could be termed *highly effective* because none was able to achieve complete impact, attribution considered. Among the key factors reviewed in determining effectiveness were effectiveness of TA management and the appropriateness and achievement of TA outcomes.

60. A strong focus on improving the investment climate after the economic crisis years of the late 1990s had put increasing pressure on the KLH to streamline EIA procedures and stabilize the environmental compliance cost. The TA contributed to this streamlining by integrating environmental approval into the investment permit process, which had a positive effect on the investment environment. The TA can also take some credit for introducing SEA into formal government policy. Article 15 of Environmental Protection and Management Law 32 of 2009, the new overarching environment legislative instrument, makes SEA a compulsory screening tool for assessing the capacity of local environments to accommodate new development activities, taking into account the principles of spatial planning. The TA project's legacy is also noticeable in public participation, which is now a mandated element of the project development cycle. In spite of this, the EIA process in Indonesia needs further improvement although admittedly one TA alone cannot remedy that. Noteworthy weaknesses are the inadequate skills of staff meant to administer the EIA process in district and municipal environment offices and the composition of EIA commissions, including qualification of members reviewing the EIA. On balance the EIA capacity-building TA in Indonesia is rated *less effective*.

61. The SME cleaner production TA is rated *less effective*. Twenty-three government organizations in Indonesia mention SMEs in their operations but, while SMEs get considerable verbal support both from government and NGOs, the sector lacks an enabling environment and suffers as a result. There is multiplicity of authorities, poor coordination, no clear policy, and little supportive action. An umbrella policy is needed on the development of the sector and on controlling SME pollution. The TA outputs also seem to have fallen short in building a robust performance monitoring system. Evidence shows little progress has been achieved on adoption

of ISO 14001, which was stipulated in the TA paper. Little success was achieved in this respect, particularly because institutional policy and mechanisms for these certifications were not established at the national level and support to private sector in training and certification programs was not extended. The IEM found no evidence of actual use by the SME sector of the guidelines developed by the TA.

62. As a result of the Pasig Environment Management TA in the Philippines, the PRRC has become stronger over the years and works closely with the Pasig River LGUs on projects affecting their jurisdiction. The TA provided PRRC staff with skills in project planning and management, which has improved coordination with LGUs in delivering past and current projects aimed at improved urban land use planning, wastewater treatment, urban renewal, and environment preservation. The TA also produced implementing rules and regulations for multilateral development projects for use by the PRRC. These skills were critical in undertaking the Pasig River project loan that ensued, including the financial management skills that allowed PRRC staff to prepare, negotiate, and undertake other internationally donor-funded projects, including the ongoing Belgian government-funded P1.1 billion Pasig River Dredging Project. On another front, seven barangays (districts) participated in the development of environmental protection areas, along and about 2 kilometers of the river banks in Mandaluyong. The National Housing Authority collaborated with the Mandaluyong LGU in the relocation of informal settlers to allow for this development. However, the TA project's institutional development mandate was not evenly effective across the PRRC, the MMDA, and the LGUs. The MMDA did not benefit much from the TA and was not set up structurally to benefit from the project outputs. It was expected to coordinate the functioning of the LGUs in the 10-meter easements in the Pasig River area but had little control over LGU planning. The water discharge permit system developed under the TA was overtaken by the passage of the Philippine Clean Water Act, or Republic Act 9275, on 22 March 2004. The DENR is not in a position to retain the wastewater discharge fees, which are remitted to the national treasury. On balance, the TA is rated *less effective*.

63. The environmental standards TA was instrumental in developing effluent and emission standards that laid the foundation for the Clean Air Act 1999 and Clean Water Act 2004. For the first time, industry, the private sector, and the DENR collaborated in an effort to develop standards. Through Department Administrative Order (DAO) 14 of 2003, the DENR launched the Philippine Environment Partnership Program to facilitate cooperation between environmental regulators and industry in formulating a stepwise approach to pre-agreed environmental standards. Industry associations such as the Philippine Sugar Millers Association, the Philippine Cement Manufacturers, and associations representing pulp and paper, food processing, and alcohol distilling industries developed environment management plans, which established performance benchmarks. These linked industrial production processes to environment performance and on to environment standards application, thus replacing uniform application of environmental standards and a prescriptive approach to environmental compliance. While the TA should be praised for achieving several of the intended outcomes, use of environment standards to encourage growth of environmentally sound technologies and eventual phasing out of highly polluting industries remains incomplete. There are still no industry specific standards in the Philippines. Standards for sugar mills under the Clean Water Act were prepared by EMB but are still in the draft form. New effluent standards were drafted as of 2007 but apparently have not been approved for enforcement yet. On balance, the TA is rated *less effective*.

D. Efficiency

64. Efficiency of the TA projects was rated on how well the TA project resources were used in achieving the outcomes. Elements of evaluation included on-time and on-budget performance,

ADB supervision, and counterpart arrangements and funding. The TA projects were completed with the funds made available but all were delayed, in some cases by up to 24 months.

65. The EIA capacity-building TA in Indonesia is rated *less efficient*. The key factor that influenced the efficiency of the TA was frequent changes to the executing agency team due to changes in the cabinet and key officials of the executing and co-executing agencies (BAPEDAL and BANGDA) and reorganization of BAPEDAL and BANGDA. Toward the final stages in early 2002, BAPEDAL was integrated into the restructured Ministry of Environment. Some adjustments and replacements were done in the consultant team because the international team leader was unable to stay during the extended period of the TA, and one senior domestic consultant was appointed as assistant minister in the Ministry of Environment. Hence, not only was the TA being undertaken in a very dynamic administrative environment, but also devolution of powers and autonomy to district and municipal level resulted in the staff struggling to cope with increased workload, affecting the TA project's efficiency.

66. Implementation of SME cleaner production TA was affected by unforeseen events beyond its control. Ownership by the SMEs was hard to obtain. They were struggling to survive financially in the aftermath of the 1997 crisis, although this could have been factored into the TA implementation. The initial sell stage of TA implementation was reported to be very difficult and was also affected by the resignation of some national institutional development team members over differences with the international TA team on the approach and work program. At the ADB end, TA management changed hands due to reorganization in 2002. Only one TA review mission was fielded which in hindsight may have been inadequate for effective consulting team management in particular; and the Bali bombing of 2002 changed the scheduling and location of the fourth APRCP, held eventually in Chiang Mai. The TA was completed almost 2 years late. On the positive side, a final nationwide workshop disseminating the results of the TA in Yogyakarta on 17 December 2003 had an unexpectedly positive reception. The project started to hit its stride just as it was winding up. On balance, the TA is rated *less efficient*.

67. In Philippines, the Pasig Environment Management TA benefited from a high level of executing agency and government ownership and the attention of other international development partners to the issue of urban environment improvement in the Pasig River system. Whether through the location of the consultants' offices in the PRRC or the position the PRRC occupied in the government institutional hierarchy, however, the PRRC benefited more from TA outputs than either the MMDA or the LGUs. Some outputs were produced on time—amendment of municipal zoning plans and development of procedures on enforcement of easements, for example—but success on others, notably further development of URAs, was not achieved. Counterpart resources were mostly available from the PRRC but the continuity and level of counterpart input from the MMDA and the LGUs were difficult to sustain. The TA suffered postponements due to delays in establishing the PRRC, which was unable to initially guide and contribute to the TA. The government's Administrative Order 5 (February 2001), which put restrictions on government expenditure and hiring of additional staff, had a profound impact on the ability of the PRRC and other agencies to provide adequate experienced counterpart staff to meet training and capacity-building demands. National and local elections in May 2001 distracted senior LGU executives and technical staff and diverted their interest and involvement from SDP matters. On balance, the TA is rated *less efficient*.

68. Implementation of the environmental standards TA was frequently interrupted by staff turnover at the EMB and the DENR. The EMB director changed five times and the undersecretary of environment and research twice. TA efficiency suffered as consultants spent considerable time going over old ground again with each newcomer. The public information

component was delayed because clearance from ADB's Department of External Relations took longer than expected. The tripartite meeting to review the final draft was moved after its submission in April 1998 to August 1998 due to national elections in May 1998. Otherwise, considering the TA project's modest scale, its outputs were achieved at a relatively low cost. The TA is rated *less efficient*.

69. To a remarkable extent, the efficient delivery of all the TA projects was affected by events not under their control or anticipated at the time of their formulation. Whether it was the Bali bombing in Indonesia or national elections in the Philippines all had an impact on the TA resources.

E. Sustainability

70. Sustainability is frequently affected for better or worse by external factors that may be beyond the TA project's influence. The allocation of human, institutional, and financial resources for sustenance of a TA outcome is the purview of the government agency that received assistance. ADB's ability to continue influencing and engaging that agency's interest in TA goals and objectives is limited.

71. The EIA capacity-building TA in Indonesia is rated *likely* to be sustainable as government, supported by national and internationally-funded initiatives, will continue to sponsor activities that further strengthen decentralization efforts on EIA. The IEM undertaken 8 years after TA completion was pleased to note that some TA outcomes are assuming a life of their own and receiving legislative recognition in the EIA process—namely, public participation and SEA.²³

72. The SME cleaner production TA is *less likely* to be sustainable. The overall TA intent to improve the environmental performance of SMEs continues to resonate and the United Nations Industrial Development Organization, the Japan International Cooperation Agency, and GTZ have contributed to the development of cleaner production in the SME sector in Indonesia. However, in the absence of an appropriate regulatory framework and financial incentives, it is apparent that the momentum of donor assistance has dropped and progress has been limited. One of the weaknesses of this TA was that it did not focus support for institutionalization of clean technology mechanisms within Ministry of Environment as well as support for Clean Technology Centers, both of which could help to sustain continuing technical assistance in these approaches. Government budget need to be secured in support of these institutional mechanisms. Efforts to improve SME's environmental performance will continue but will likely remain fragmented and not sustainable.

73. The early gains achieved through the Pasig environment management TA in the Philippines—institutional collaboration and cohesion in the approach to environmental management of the Pasig river system, along with associated social and urban improvements—seem to have faded. This could partly be due to the SDP policy objectives' linkage to investments and their relation to the capacity-building TA being less obvious to other partnering institutions, namely, the MMDA, the LGUs, and the DENR; institutions which were more critical to sustenance of PRDP investments. The relocation of informal settlers is a continuing challenge and affects the effort to establish URAs, which is also limited by the absence of the financing instruments that the TA failed to propose. The PRRC continues to face problems in retaining skilled human resources and securing budgets. The TA is rated *less likely* to be sustainable.

²³ Strategic Environmental Study, Article 15; and Public Participation, Article 70; Law Number 32, 2009, Environmental Protection and Management Act.

74. The environmental standards TA is rated *likely* sustainable. The work on environmental standards continues to get support from other development partners and government agencies. Consultation between the DENR and industry on the use of environment standards and monitoring of environment performance has become routine. While there is a long way to go before more widespread adoption of cleaner and environment-friendly technologies and a major reduction of industrial pollution are achieved, the use of environment standards as a benchmark in the industrial development decision-making process has clearly been established.

75. The sustainability of TA outcomes was affected more by the strength of the government policies that underpinned these TA projects than the institutions, processes or products they created. This reinforces the notion that a TA has a better chance to succeed if anchored in an ongoing or planned government policy initiative.

IV. OTHER ASSESSMENTS

A. Impact

76. Because none of the TA projects had an impact statement in its TA framework, evaluation of impact is done against the sectoral goals of the TA stipulated in the TA framework (or in the SDP program framework for the Pasig environment management TA).

77. In Indonesia, the impact of the EIA capacity-building TA can be rated *moderate*. The TA can rightfully claim to have laid the foundation for an enabling legislative and institutional framework for decentralization in environment management and EIA in particular. The momentum generated by the TA was sustained, albeit largely due to government's regional autonomy law, which compelled all government agencies to devise decentralization implementing rules. Law 38 regarding the distribution of government affairs and Law 41 on regional apparatus organizations has contributed further to that endeavor. The recent Environmental Protection and Management Act 32 of 2009 recognizes the importance of SEA in spatial development planning, something the TA had proposed in 2001–2002.

78. The impact of the SMEs cleaner production TA is *negligible*. While cleaner production models, manuals, guidelines, and training were developed in the selected industrial sectors, the impact appears to have stopped there. Cleaner production initiatives both by the government and international donors, though laudable, have remained sporadic and disjointed. No comprehensive policy and institutional framework that the government can forcefully push and mainstream has emerged. No data exists on environmental performance of the SMEs, so it is hard to assess the progress made, despite the TA project's attempt to develop an integrated measurement system to record environmental performance. Support in development of clean technology policies at national level with incentive mechanisms, followed by coordinated policy changes in industry promotion and regulation, was lacking in this TA and need to be explored in future. Coordination between relevant Government agencies is key to success as promotion and regulation need to go hand in hand. Most advances in adoption of cleaner production technologies and related quality systems such as ISO 14001 have focused on larger industries. Information on SMEs is fragmented, with no centralized database of any merit available on their types, scale, and locations.

79. In the Philippines, the impact of the Pasig environment management TA should be assessed together with the overall impact of the SDP. For the purposes of this exercise, the TA impact is rated *moderate*. While the PRRC's project management capability has certainly been

improved by the TA, its ability to successfully influence the land use and urban environment planning functions under the purview of the Pasig River LGUs is less certain. The policy agenda of the SDP was ambitious, given the resources and time frame envisaged. Policy change requires skills, effective institutional incentives, and culture change. The latter two factors require capacity development support for a period much longer than the 1 year from the creation of the organization that the TA envisaged. Incentives for change within the SDP itself were not sufficiently clear for key stakeholders such as the MMDA, the DENR, and the concerned LGUs. This affected the commitment of these agencies to the TA.

80. The impact of the environmental standards TA is also rated *moderate*. The TA led the Philippines' first effort ever to develop practical and enforceable environmental standards in a way that joined industry and the regulatory community in the decision process. While the TA outputs find use to this day in the DENR and in industry, this wider application of environmental standards has not moved the economy toward environmentally sound technologies that could replace inefficient and polluting industries.

B. ADB Performance

81. ADB's performance was *satisfactory* on the EIA capacity-building TA. It was responsive to the needs of the government in implementing the TA. As decentralization in Indonesia acquired speed, ADB effectively introduced the TA to complement its ongoing assistance program for BAPEDALDA strengthening at the provincial level to remain relevant to the KLH. However, ADB's performance was *less satisfactory* on the SME cleaner production TA. ADB's efforts remained focused on a small group of SMEs and no capacity-building attention was given to the staff in the MIT or other relevant national and regional organizations. The strategic and policy element for development of cleaner production was ineffective and not understood. The efficacy of conducting only one review mission during the 1-year TA was questionable. So was the assignment of such a short duration for a project aimed at introducing and delivering a concept as complex as cleaner production. The TA was also affected by resignations due to differences between national and international TA teams, which did not reflect well on ADB's management of TA consultants.

82. Overall ADB's performance is rated *satisfactory* for both Philippine TA projects, which benefited from proximity to ADB headquarters. This allowed ADB staff to attend several steering committee meetings and maintain direct personal or telephone contacts with the TA team and executing agency officials. ADB also demonstrated flexibility in these TA projects, allowing for scope variations. This allowed processing of the MMAQIP under one and adjusting consultant inputs to include greater emphasis on public participation in another. During the IEM, the executing agency officials praised the performance of ADB and cooperation from ADB project officers.

C. Executing Agency Performance

83. Overall, the performance of the executing agencies across the four TA projects is rated *satisfactory*, though some did not do as well as others. In Indonesia, BAPEDALDA and BANGDA supported the EIA capacity-building TA well despite their increased workload under decentralization. The MIT was also supportive of the TA activities on cleaner production although it was probably disappointed by the rejection of its request that the industry sectors covered by the project be changed (para. 54). In the Philippines, once established and fully functional, the PRRC provided several new enthusiastic staff willing to learn and take on responsibility. ADB and the consultant team fully reciprocated, although a government-imposed staff recruitment freeze in 2001 resulted in some cutbacks on new counterpart staff allocated to the TA. While senior executive echelons of the EMB and DENR were supportive of the environmental standards TA, it

took some time for operational and technical level staff to understand TA objectives and methodology; hence, their participation was not very effective.

84. While most executing agencies appreciated the benefits from the TA projects and accepted their recommendations, they made hardly any effort to pursue these recommendations once the projects were completed and the international consultants had left.

V. KEY FINDINGS

85. This section highlights some common and differentiating features observed in the four case study TA projects during evaluation. All raise valuable issues and provide lessons for the succeeding section of the report.

86. **Development context.** The evaluation highlights the importance of placing greater emphasis on underlying institutional and macroeconomic issues; and the sociopolitical context in TA design. The development context existing when the SME cleaner production TA was being formulated should have been taken more into account. The region had just been through the 1997 Asian financial crisis and it had made a stronger impact on target beneficiaries than planning allowed for. The financial capacity of governments and the private sector alike had been severely depleted, affecting their ability in the short to medium term to attain and then sustain the development outcomes. None of the TA projects paid sufficient attention to the development of financial mechanisms to enable the executing agencies to fund the longer term goals of the TA. A minor exception was the Pasig environment management TA, which developed a wastewater discharge permit system. Even this may not be sufficient, however, because appropriation of any wastewater revenue by the environmental regulator may not always be the correct solution to underfunding of environment-related capacity-development activities.

87. **Policy framework.** Three of the TA projects evaluated benefited from a supporting policy reform program under way at the same time. The notable exception was the SME cleaner production TA. Indonesia's decentralization program and call for wider reforms underpinned the delivery ethos of the EIA capacity-building TA and other similarly well-timed donor efforts. In the Philippines, the government's PRDP (1999–2014) and the integrated environmental improvement program,²⁴ which combined the short and long term management programs for solid waste, wastewater, flooding, and industrial emissions in the national capital region, rode the wave of strong government support for these activities. They were linked to other far-reaching reforms such as privatization of water and wastewater treatment in Metro Manila. The same was true of better justified and enforceable environmental standards TA. Where this policy catalyst was not strong—i.e., in the SME cleaner production TA—the TA outcomes have lost momentum and progress has been less impressive.

88. **Ownership from beneficiaries.** The projects experienced varying degrees of local stakeholder ownership. Decentralization in Indonesia for the EIA capacity-building TA and changed electoral fortunes in Philippines for the environmental standards TA lead to numerous counterpart staffing changes. The progress of TA, which, unlike loans, is a knowledge product and not revenue-bearing, is particularly sensitive to changes in the staff and management of executing and partner agencies in DMCs or, for that matter, within ADB. The road to developing stronger and enduring institutions whose fortunes do not rely excessively upon a small number of individuals is long and tortuous and may require a fundamental change in the approach to

²⁴ ADB. 1988. *Technical Assistance to the Republic of the Philippines for the Manila Metropolitan Region Environmental Improvement Study*. Manila (TA 1057-PHI, for \$551,000, approved on 8 November).

capacity development. Such a change would include but not be limited to improving remuneration structures and career paths for civil servants, at the behest of the DMC government, providing TA that develops an expanded cadre of environmental science and planning professionals, and introducing leadership and people development training for senior managers.

89. **Country safeguards system.** The EIA capacity-building TA in Indonesia and the environmental standards TA in the Philippines made relevant contributions to enhancing the maturity of the CSS on environment, a subject that has assumed greater significance over time. While challenges still remain and much work is still required to bring the safeguard systems in both countries fully in line with international good practice, these two projects represent an early generation of TA that has introduced relevant EIA tools and techniques into national environment management systems. Environment and Safeguards Division of the Regional and Sustainable Development Department of ADB is undertaking a regional technical assistance (RETA) on strengthening CSS for the Philippines.²⁵ The contribution of the two CSS TA projects can be summarized as follows:²⁶

- (i) **EIA capacity-building project in Indonesia.** The contribution of this TA to CSS was significant. It took the lead in introducing the concept of SEA, which is now mandated under the Environmental Protection and Management Act 32 of 2009, something the TA had proposed in 2001–2002. It also introduced public participation in the EIA system. SEA as a planning tool used in conjunction with spatial planning allows for more informed decisions regarding spatial distribution of investments considered under an overarching framework of environment, social, technical, and economic impact, and mitigation planning across a region and/or sector. The TA was instrumental in developing guidelines for undertaking public participation in EIA and community development planning in the environmental management plan and introducing social considerations in project design and implementation. The TA also prepared a series of papers that compared the ADB EIA guidelines with the AMDAL guidelines that existed at that time.
- (ii) **Environmental standards project in the Philippines.** This TA contributed on multiple fronts to the development of the building blocks of the national environment management system. From developing a set of practical environment quality standards to a process of accreditation of institutions that could carry out third-party monitoring, the TA played a part in strengthening the hands of the EMB in developing systemic EIA processes. For example, the use of CPAS developed under the TA has assisted the EMB at the DENR in developing a database of projects and activities that require environmental monitoring assistance.

VI. ISSUES, LESSONS, AND FOLLOW-UP ACTIONS

A. Lessons for Environment Capacity-Development Technical Assistance

90. **Environmental reform is vulnerable to broader administrative reform.** Capacity development for environmental management is inherently difficult due to its cross-sectoral nature. Success depends greatly on the buy-in from the sector it aims to influence. When capacity development is introduced alongside a broader administrative reform program, such as political decentralization, environmental TA is likely to be closely tied to progress in the wider effort. Indonesia's EIA capacity-building TA, in particular, suffered because the functions of local

²⁵ ADB. 2005. *Technical Assistance for Strengthening Country Safeguard Systems*. Manila (TA 6285-REG, for \$800,000, approved on 12 December).

²⁶ The SME cleaner production TA in Indonesia and the Pasig environmental management TA did not address CSS but broader environmental management issues.

government remained unclear during reforms and bureaucratic capacity and efficiency, local technical capacity and transparency, and accountability were insufficient, as was support for learning and innovation. The TA tried to make up for these deficiencies but could not bridge the capacity gap. Hastily executed decentralization, such as the transfer of functions to local levels without clear assignment of roles and the prior capacity development needed, can dilute environment protection efforts.

91. Sustained funding and policy support are needed for environmental capacity development. Environment management initiatives are typically underfunded due to their externality nature, often considered an unintended consequence of a development activity; making sustainability a crucial factor. Sustainability of TA outcomes which rely on external funding rather than domestically generated resources and policy support will be short-lived. The SME cleaner production TA in Indonesia is an example. A lack of suitable government policies and institutional mechanisms to ensure continued financial and technical support has hampered mainstreaming of cleaner production in the sector. When formulated, the TA did not fully address the question of how to sustain the activities that the project championed. Environmental capacity development generally attracts less sustained funding than capacity development in sectors such as transport and energy, with their potential to generate revenue, for example, through road tolls and the sale of power. Particular attention in environmental capacity development must, therefore, be given to the sustainability of financial support. Successful examples of securing resources for environmental purposes must be drawn upon. These include the use of market-based instruments, environment user fees as pollution charges, and payments for ecosystem services.

92. Technical assistance sequencing is critical for new environmental concepts. Environmental capacity is still not established in many DMCs, so TA sequencing is critical, especially when introducing relatively new environmental and technological concepts (e.g. cleaner production at the time). The example provided by the SME cleaner production TA is typical. It was approved in 2002 only 2 months after another TA on strengthening BDS for SMEs. The BDS TA was to support implementation of key recommendations of a medium-term action plan and, in particular, to promote SME BDS, simplify regulations, and ease SME access to credit—an ambitious scope of work in itself. Implementing these two TA projects in parallel with two executing agencies had little justification. By itself, overlapping is rarely synonymous with synergy. This TPER supports the findings of the 2006 special evaluation study on TA performance that recommended that CPS “should include a clear strategy and program for TA with a long-term framework and measurable indicators of expected outcomes.” The TPER does acknowledge that ADB has made progress recently in this regard by using sector assessment strategies and road maps alongside CPS formulation so that TA projects can be more firmly anchored in a DMC’s national development planning agenda and long-term sustainability can be made more likely.

93. Strong provincial capacity is required for efficient country safeguard system. This evaluation has underscored the need to continue developing the capacity of provincial environmental offices in Indonesia and of the Department of Environment and Natural Resources in the Philippines for more efficiency in administering the EIA process, environmental mitigation planning, and implementation. Any further capacity-development work in Indonesia should ensure that the provinces adapt the national safeguard systems to local conditions without diluting the intent of the safeguards. Possible areas of intervention include (i) streamlining the functioning and institutional mandate of provincial BAPEDAL or regional centers of KLH (Pusreg), (ii) improved inter-government (national and district) and Inter-Ministerial coordination in resolving regulatory and institutional gaps, (iii) greater political and institutional support for Industrial Performance Rating Program (PROPER) allowing for public disclosure and accountability, transparency in operations, and community participation

empowering local communities to achieve effective and sustained pollution control practices, and (iv) developing a master plan for national capacity building for environment management with donor coordination.²⁷ Although environment safeguard procedures and practices in the Philippines are nearly equivalent to ADB's, improvement can be made in simplifying the EIA process, more efficient project categorization, alternative analysis, and public disclosure. Both countries can benefit from further strengthening of the technical skills of implementing institutions, especially at provincial and regional offices. They also need to improve their use of strategic environment assessment as a tool in regional development planning and enforce post-construction environmental monitoring more strictly. The recommendation for continued support for building provincial and local capacity in environment and other areas of governance was also made in the country assistance program evaluations of Indonesia and the Philippines.²⁸

B. Lessons for General Capacity-Development Technical Assistance

94. **Anticipate change.** Anticipating institutional and other changes during a TA project's lifetime should be an inherent goal of TA formulation. Waning interest in TA objectives by an executing or partner agency is not uncommon, as the Metropolitan Manila Development Authority demonstrated to some extent in the Pasig environmental management project. Continuous support of individuals and institutions cannot be taken for granted. Building solid relationships with the executing or implementing agency to shield the TA from the effects of personnel changes should be considered as important as the delivery of the project's technical content. TA team leaders must be more than technicians. They must be able to engage the entire hosting organization. A TA with resiliency built-in will ultimately benefit the client organization itself by also making it less dependent on individuals. Adequate consideration of the dynamics of underlying conditions must remain an essential part of TA design. The Pasig environmental management TA was to help the PRRC rehabilitate the Pasig River to a semi-pristine condition conducive to transport, recreation, and tourism. Since the TA was formulated, the population in the Pasig area has grown, altering the socioeconomic and ecological parameters, and upsetting some of the project's assumptions. The Laguna Lake, Manila Bay, and the Pasig River are an increasingly integrated ecosystem, which may require a management and capacity-development approach different from that the TA adopted. The speed of administrative and physical developments has outpaced the TA design.

95. **A narrow focus is often best for projects and clients.** Too many activities tend to weaken TA focus. TA projects usually have a shorter implementation duration than loan projects and need to avoid too wide a scope. Both the EIA capacity-building TA in Indonesia and the Pasig environmental management TA in the Philippines produced more outputs that the target audiences were able to fully use. These projects, like some other TA, also involved more than one executing agency. Reducing the number of participating organizations can often improve focus and lead to better targeting of TA capacity-development resources.

96. **Duration needs to suit the current context.** A TA project's duration can have an impact on its performance, especially when it comes to introducing new technologies and

²⁷ Regional centers of KLH *Pusreg* (earlier BAPEDALDA) should act as the "lead agent" for environment approvals on large and complex projects (e.g., oil and gas exploitation, pulp and paper, hazardous waste, mining) or projects that cross administrative boundaries or transboundary issues requiring interregional cooperation adopting an ecosystem approach. PROPER can potentially include a system of rewarding positive environmental performance (e.g. subsidies for pollution control equipment) whilst penalizing poor environmental performance (e.g. increasing tax levies on industries not meeting standards).

²⁸ ADB. 2005. *Country Assistance Program Evaluation for Indonesia*. Manila; ADB. 2008. *Country Assistance Program Evaluation for Philippines*. Manila.

addressing capacity issues in a dynamic institutional landscape. The TA projects in Indonesia were both implemented at a time when institutions were assuming new mandates and struggling to address new roles. Decentralization was moving rapidly and taking little account of weak implementation capacity in district and municipal environmental offices. The 1997 Asian financial crisis, moreover, had depleted the financial capacity and workforce of the SME sector, which made its ability to ramp up and engage with the SME cleaner production TA questionable. In both cases, longer duration would have improved TA impact and the sustainability of the outcomes.

C. Recommendations

97. The following recommendations on TA formulation are provided for consideration by ADB Management during CPS formulation in Indonesia and the Philippines.

98. **Develop a TA strategy for environment capacity development that considers the context, funding needs, focus, timing, and capacity, as environmental management is difficult due to its crosscutting nature and is typically underfunded.** ADB's CPSs and operations business plans should consider developing TA strategies that allow enough time and proper sequencing between environment capacity development interventions in the same sector to maximize the benefits of each intervention. A critical assessment should be carried out during the needs assessment stage of the target institution's absorptive capacity for shouldering the TA especially for new environment technology concepts (e.g., cleaner production at the time). Project DMFs should include well defined and more realistic impact and outcome statements. The scope, duration, and implementing arrangements should be designed accordingly. Capacity development requires long, continuous support so an appropriately sequenced series of TA projects should be considered. Each individual TA project within the group should be clearly focused, geared toward developing the capacity of the executing agency, and yet still be part of a flexible overall institutional strengthening strategy.

99. **Draw on ADB resident missions during design and implementation due to the need for strong provincial capacity development including country safeguard systems.** More use of ADB resident mission staff should be considered at both the TA design and implementation stages. Resident mission staff can be ADB's front line, building strong relationships with executing agencies and other local stakeholders including provincial government agencies in ensuring DMC buy-in and continuity of positive environment management outcomes adapted to local conditions. They are also better placed than headquarters staff to provide close and continued supervision of TA projects whose implementation becomes vulnerable during periods of wide government policy reform, such as the decentralization process in Indonesia. To the extent possible, the role of ADB headquarters in TA should be one of technical oversight and quality control.

100. **Follow up and build on past progress achieved on environmental management, e.g., developing provincial capacity for country safeguard systems and fee-based approaches for adoption of cleaner production technologies.** Building on previous initiatives when formulating new TA projects and collaborating with other development partners creates a solid foundation for TA sustainability. The EIA capacity-building TA helped establish a base from which to launch Indonesia's CSS work. The Environment and Safeguards Division of the Regional and Sustainable Development Department can build on the insights the evaluation provided on recent developments on EIA and ongoing legislative and regulatory reform in this area. ADB should cooperate closely with the World Bank, which has already undertaken a study on EIA reforms in the context of decentralization, as well as with the Danish International Development Assistance,

which is conducting work in environmental management and clean energy. Evaluation of the environmental standards TA in the Philippines and Indonesia's SME cleaner production TA suggest that an opportunity exists to develop a private sector-friendly, fee-based approach to environment-related technical support, especially in the use of cleaner production techniques and International Organization for Standardization and other similar certification systems. EMS concept is very powerful tool to guide institutional change in support of environmental and natural resource conservation while increasing private sector profits. Strong institutional support (both Government and nongovernment levels) for institutionalization of certification and training systems with broad-based training and education is essential for the success of these certification systems and need to be further explored in the future.

**ENVIRONMENT TECHNICAL ASSISTANCE PROJECTS CONSIDERED—
INDONESIA AND THE PHILIPPINES**

Table A1.1: ADTA Projects in Environmental Capacity Development in Indonesia

TA Number and Title	Amount (\$)	Date Approved	Completed
A. Agriculture and Natural Resources			
1. 1281 Strengthening the Capability for Environmental Impact Assessment in the Ministry of Agriculture and Ministry of Forestry	600,000	23-Mar-90	yes
2. 3252 Capacity Building for Decentralization of the Environment Impact Assessment Process	420,000	3-Sep-99	yes
B. Energy			
1. 1739 Environmental Planning and Management of Coal-Fired Power Plants	200,000	4-Aug-92	yes
2. 2171 Environment and Energy Efficiency	416,000	27-Sep-94	yes
C. Industry and Trade			
1. 1451 Strengthening the Capability for Environmental Impact Assessment in the Ministry of Mines and Energy	340,000	26-Dec-90	yes
2. 1452 Strengthening the Capability for Environmental Impact Assessment in the Ministry of Industry	340,000	26-Dec-90	yes
3. 3837 Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production	500,000	1-Mar-02	yes
D. Public Sector Management			
1. 1013 Strengthening the Capability for Environmental Impact Assessment in the Ministry of Public Works	475,000	19-Jul-88	yes
E. Transport and ICT			
1. 1194 Environmental Management of Road Projects	220,000	10-Aug-89	yes
F. Water and Other Municipal Infrastructure and Services			
1. 1473 Environmental Management of Urban Development Projects	500,000	31-Jan-91	yes
Total	4,011,000		

ADTA = advisory technical assistance; ICT = information, communications, and technology; TA = technical assistance.

Source: Asian Development Bank database.

Table A1.2: ADTA Projects in Environmental Capacity Development in the Philippines

TA Number and Title		Amount (\$)	Date Approved	Completed
A. Agriculture and Natural Resources				
1.	1632 Improving the Implementation of Environmental Impact Assessment	300,000	27-Dec-91	yes
2.	2623 Evaluation of Environmental Standards for Selected Industry Subsectors	400,000	30-Jul-96	yes
3.	1057 Manila Metropolitan Region Environmental Improvement Study	551,000	8-Nov-88	yes
4.	3469 Capacity Building Support for Pasig River Environmental Management and Rehabilitation	1,000,000	20-Jul-00	yes
B. Energy				
1.	1405 Environmental Management of Coal-Based Power Generation	636,000	30-Oct-90	yes
Total		2,887,000		

ADTA = advisory technical assistance, TA = technical assistance.

Source: Asian Development Bank database.

Table A1.3: ADTA Projects Selected for Case Study in Indonesia and the Philippines

Country	TA No.	TA Name	Amount (\$)	Date Approved	TCR/Rating
Indonesia	3837	Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production	500,000	1-Mar-02	Yes (March 2006), successful
Indonesia	3252	Capacity Building for Decentralization of the Environment Impact Assessment Process	420,000	3-Sep-99	Yes (September 2002), successful
Philippines	3469	Capacity Building Support for Pasig River Environmental Management and Rehabilitation	1,000,000	20-Jul-00	Yes (July 2003), successful
Philippines	2623	Evaluation of Environmental Standards for Selected Industry Subsectors	400,000	30-Jul-96	Yes (December 1998), generally successful

ADTA = advisory technical assistance, TA = technical assistance, TCR = technical assistance completion report.

Source: Asian Development Bank database.

EVALUATION DESIGN MATRIX

Subject	Evaluation Question	Research Question	Method
A. ADB Headquarters Processes			
1. ADB department/division priorities	Did ADB's system of allocating TA funding reflect corporate and department priorities and did it contribute to effective use of TA?	<ul style="list-style-type: none"> - What was the basis for TA allocation in ADB department/division and how did this influence the performance of the TA? - What was the basis of the country allocation for TA requests and did this reflect strategic use of TA at country level? 	<ul style="list-style-type: none"> - Review of TA allocation systems in ADB - Senior staff interviews in RSDD, SARD, SERD, resident missions
2. Staffing and other resources for formulating and supervision of TA projects	Were ADB staff and resources the right fit for TA implementation?	<ul style="list-style-type: none"> - Did the budgeting system provide a reliable basis for assigning the right resources for TA? - Did actual staff inputs for TA formulation and supervision conform with budgeted levels? - Was the experience and skills mix appropriate for TA implementation? - Were there effective incentives and recognition for staff working on the TA? How did their career progress? - Was there continuity of staff involvement in TA formulation and supervision? 	<ul style="list-style-type: none"> - Analysis of TA records - Questionnaire - Senior staff interviews
3. Quality control systems	Did ADB/department quality assurance systems provide an effective method of ensuring the quality of TA formulation?	<ul style="list-style-type: none"> - Did peer review and interdepartmental circulation ensure quality assurance? - Did clustering of TA approvals in quality assurance affect TA formulation? - Did quality control differ between standalone TA and associated TA? 	<ul style="list-style-type: none"> - Analysis of TA records - Questionnaire
4. Evaluation feedback, information systems	Did existing feedback loops provide a reliable basis for oversight and management of the TA?	<ul style="list-style-type: none"> - Did the TCRs /TPERs provide valuable feedback on the performance of the TA and was it made use of? - How effective were ADB's knowledge management systems in disseminating lessons learned and were those lessons built into future TA projects? 	<ul style="list-style-type: none"> - Analysis of TA records, TCRs - Questionnaire - Senior staff interviews
B. Country-Level Processes			
1. Strategic direction	Was TA programmed and planned as an integral part of ADB's country strategy, and did this provide sound strategic direction for the TA?	<ul style="list-style-type: none"> - Was TA aligned with ADB CPS or CAP or COBP? - Was TA aligned with country priority and programs? - Did TA focus bring out its comparative advantage? - Was there continuity of TA support over an extended period? - Were there built-in synergies to scale up impacts? - Did TA planning take into account support from other donors? 	<ul style="list-style-type: none"> - Review of relevant CPSs, CEAs.

Subject	Evaluation Question	Research Question	Method
2. Prioritization and selection	Was the choice of individual TA projects consistent with ADB's CPS and/or CEA?	<ul style="list-style-type: none"> - Was TA support concentrated in priority areas identified in the CEA? - Were the TA topics chosen in consultation with government agencies with a capacity to identify strategic and long-term issues? 	As above
3. TA formulation	What was the quality of TA design?	<ul style="list-style-type: none"> - Was design based on existing knowledge and thorough diagnostic analysis? - Were the views of principal stakeholders reflected? - Was an appropriate TA model adopted? - Was level of funding adequate? - Did TA design provide the most suitable mix of international and local consultants? - What was the quality of the TOR? - Was the design complementary to support from other donors? - What was the quality of TA DMF? - Was the dissemination of the findings effectively provided for? 	<ul style="list-style-type: none"> - Sector overviews - Analysis of completed TA projects - Good practice case studies
4. Implementation	Was TA implemented as designed, which factors affected implementation performance, and how were they addressed?	<ul style="list-style-type: none"> - How closely was the TA design followed and what changes were made? - Did the implementation arrangements work well? - Did ADB consultant recruitment processes lead to timely recruitment of good quality consultants? - How did the TA consultants perform? - Were there feedback loops to ensure early reporting? - Was ADB supervision sufficient to support TA implementation? 	<ul style="list-style-type: none"> - Sector overviews - Analysis of completed TA projects - Good practice case studies
5. Outcomes	How effectively, efficiently, and sustainably did the TA achieve intended outcomes and what was the value added?	<ul style="list-style-type: none"> - What was the contribution of ADTA to improving resource utilization and capacity building? - Did ADTA have a wider positive influence beyond the immediate area covered during TA implementation? - Is the contribution of the TA likely to be sustained? 	<ul style="list-style-type: none"> - Sector overviews - Analysis of completed TA projects - Good practice case studies
6. Lessons	What lessons can be derived?		As deduced from the analysis above

ADB = Asian Development Bank, ADTA = advisory technical assistance, CEA = country environment analysis, COBP = country operations business plan, CSP = country strategy and program, CPS = country partnership strategy, DMF = design and monitoring framework, RSDD = Regional and Sustainable Development Department, SARD = South Asia Department, SERD = Southeast Asia Department, TA = technical assistance, TCR = technical assistance completion report, TOR = terms of reference, TPER = technical assistance performance evaluation report.
Source: TPER evaluation.

CAPACITY BUILDING FOR DECENTRALIZATION OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS—INDONESIA

A. Summary

1. The technical assistance (TA) on Capacity Building for Decentralization of the Environmental Impact Assessment (EIA) Process was one of several Asian Development Bank (ADB) projects directed at improved environmental management in Indonesia.¹ ADB's environment-related assistance to Indonesia began under the still highly centralized conditions of the late 1980s but by the mid-1990s already involved support for regionalization of the Environmental Impact Management Agency (BAPEDAL). By the end of 2010, the fundamental shift toward decentralization in Indonesia touched most of the country's economic and governance activities, including environmental management. The TA, with its objective of assisting decentralization of EIA process, was timed very well.

2. Indonesia's very large overall decentralization agenda is formidable. Decentralization of environmental safeguards such as EIA is almost as challenging, and not only because it is linked to natural resource management (NRM). It would be unreasonable, therefore, to expect a single TA project or even several TA projects to complete the decentralization program, whatever their technical focus. Predictably, this TA fell short of accomplishing EIA decentralization in its entirety but it made a solid contribution to a process that continues to this day. There can be little doubt about the TA project's relevance.

3. The TA made a number of recommendations for improving the EIA process and developing corresponding guidelines. Some of these are being overtaken by newer outputs and initiatives in the fast-changing institutional conditions of Indonesia. Nonetheless, the project can reasonably claim a decisive contribution to making strategic environmental assessment (SEA) part of the environmental safeguard mechanisms now in place. Even if indirectly and only in part, the material and ideas developed by the TA made their way into government implementing regulations (e.g., Government Regulation 14 of 2007) and even into the new Environmental Protection and Management Act (Law 32 of 2009). The TA developed approaches toward strengthening public participation in the EIA process. And, in keeping with the overall objective, the TA helped establish EIA procedures at a local level and piloted the approach in two provinces (West Java and West Kalimantan).

4. The effectiveness of the TA was adversely impacted by the complexity of the decentralization agenda and absence of implementing regulations and clarity concerning the functions and powers of local governments in environmental matters. The outputs of the TA may not be used today in their original form but their imprint is found in several policies and measures taken since the TA completion. The process of translating more complete (but still imperfect) regulations suitable for decentralized management into effective action still has a long way to go. The TA project's pilot efforts in West Java and West Kalimantan were only partly effective, with the demands of the decentralization process possibly underestimated by the TA originators. Overall, the TA is considered *less effective*.

5. The consultant team performed competently in difficult institutional circumstances where both the Directorate General of Regional Development of the Ministry of Home Affairs (BANGDA) and BAPEDAL, the TA project's co-executing agencies, were caught in internal reorganization directly linked to decentralization. In part because of that, the TA was completed

¹ Asian Development Bank (ADB). 1999. *Technical Assistance to the Republic of Indonesia for the Capacity Building for Decentralization of the Environmental Impact Assessment Process*. Manila (TA 3252-INO, for \$420,000, approved on 3 September).

6 months later than expected, with financial closing 15 months delayed. The TA was *less efficient* but then, the same could be said about the entire decentralization process.

6. The direction of the TA has lost none of its topicality in Indonesia and continued support to the decentralization of environmental safeguards has been provided by the government and its development partners. ADB's own actions in Indonesia since TA completion indicate that the subject has not been shelved. They include support to fiscal decentralization, decentralized NRM, participation in the Decentralization Support Facility, and recommendations of the country environment analysis (CEA). So does the busy donor-supported environmental decentralization agenda. The sustainability of the TA direction is rated *likely*.

7. Overall, the TA is rated *partly successful*.

8. ADB would do well to use the experience of the TA project's implementation and subsequent developments as a reminder of the unfinished state of the decentralization process, the still weak capacity of many local governments to carry out decentralized environmental safeguard functions, and the threats to environmental sustainability should the important detailed mechanisms of decentralized management continue to lag behind the broad directions of the policy. ADB staff need to keep themselves informed about the latest direction of the EIA reform, supported by World Bank and the Danish International Development Assistance (Danida).

B. Introduction

9. **Evaluation purpose and process.** A passage of time is needed to find out whether TA activities achieve the outcomes and impacts specified at formulation. This examination comes approximately 8 years after the TA project's completion.

10. The evaluation was fielded 24–28 May 2010, preceded by detailed desk review of relevant documentation. The evaluation team interviewed the current staff of the TA executing agencies (environment office, a successor to BAPEDAL, and BANGDA);² communicated with the staff of West Java provincial or regional environment board; interviewed ADB staff involved in the formulation and supervision of the TA and the TA consultants; and sought additional clarifications from the Indonesia Resident Mission staff. The evaluation team had access to all TA-related documents, including the completion report that rated the TA *successful*.

11. **Technical assistance objectives.** The overall objective of the TA was to support the government in the reform of the EIA process through the implementation of the then new Environmental Management Act (Law 23 of 1999) and revised EIA regulations and to facilitate decentralization of environmental management.³ The TA was to prepare new EIA implementation guidelines and strengthen EIA implementation at all administrative levels, i.e., national, provincial, and district and/or municipal levels.

12. The TA scope was described as institutional analysis of environmental management, incorporation of EIA clearance into the permit system, improvement of the EIA review process, assessment of potential use of SEA, strengthening of public participation in the EIA process, and institutional arrangements for EIA implementation in line with the Regional Autonomy Law.

² Until 2002, BAPEDAL, created in 1990, was a semi-autonomous body reporting to the then Ministry of Population and Environment. Following the 2002 government reorganization, BAPEDAL functions were absorbed into the ministry. The latter's status increased and it was renamed the Ministry of Environment (MOE). The absorption of BAPEDAL was almost immediately accompanied by decentralization of BAPEDAL functions to local governments. A deputy minister in the MOE, nonetheless, remains responsible for monitoring environmental management in the regions.

³ Law 23 of 1999 was subsequently replaced by Law 32 of 2009.

13. The TA was to assess regional BAPEDAL offices (BAPEDALDAs) in one province and district in Java and one province and district outside Java, and to formulate for these BAPEDALDAs institutional and staffing requirements that would facilitate the establishment and streamlining of the EIA process, permit system, monitoring mechanisms, and environmental law enforcement at local levels.⁴

C. Design and Implementation

14. **Rationale.** After 30 years at the helm of Indonesia, Suharto stepped down in 1998 and Indonesia experienced a dramatic push toward democracy.⁵ Characterized by nationwide calls for reforms, this democratization process has also given rise to regional demands for the central government to decentralize its authorities and functions. Environmental management could not remain unaffected by these developments.

15. Law 22/1999 on Regional Governance and Law 25/1999 on Fiscal Balance between the Central Government and the Regions mark the official start of Indonesia's decentralization reform. For the first time, local governments were given significant decision-making authority and jurisdiction over their local governance processes and, to a significant extent, local natural resources. While decentralization had broad support, observers noted that the absence of a detailed plan for the transition process and the lack of supporting regulations to clarify the procedures that needed to be undertaken hampered the effectiveness of this sweeping devolution of powers.

16. The TA was a tool of environmental safeguard decentralization, supplying some of the missing pieces of this transition in the EIA process as part of decentralization. The TA implementation was also marked by the difficulties of the decentralization process. To put the TA in a historical perspective, it was not until 2004, almost 2 years after TA completion, that revisions were made to the 1999 laws to correct some of their initial weaknesses. Even with these revisions, local environmental management remained fragile and additional regulations were adopted in 2007. These specifically targeted strengthening local environmental management institutions and were augmented by other policies that provided financial incentives to local government to more closely follow central government policies. The process of improving decentralized decision making and enforcement of existing regulations continues to this day and by all accounts is likely to continue for years to come.

17. **Formulation.** The TA was formulated against the background of ADB's significant involvement in Indonesia environmental management. It ran concurrently with ADB's BAPEDAL Regional Network Project,⁶ closed in 2004,⁷ and associated advisory TA. The TA was built closely on these initiatives. The objectives of the BAPEDAL regional project were to (i) establish institutional capacity at the regional level (four BAPEDAL offices were to be established), set environmental standards, improve environmental awareness, and provide environmental management and support services; and (ii) strengthen BAPEDAL's staff skills. These were similar to those of the EIA capacity-building TA (para. 12). Indeed, creation of a local (provincial and district) BAPEDAL network, i.e., decentralizing BAPEDAL functions to lower administrative

⁴ The establishment of BAPEDALDAs predates the formal start of decentralization in Indonesia (para. 14). Since then, some of the original BAPEDALDAs have changed their designation to provincial environment boards, while some others have retained the old designation.

⁵ It is worth recalling that Indonesia's decentralization came soon after the onset of the 1997 Asian financial crisis, which hit the country hard.

⁶ ADB. 1996. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Republic of Indonesia for the BAPEDAL Regional Network Project*. Manila (Loan 1449-INO, for \$45 million, approved on 27 June).

⁷ Based on ADB. 1992. *Technical Assistance to the Republic of Indonesia for a BAPEDAL Regional Network*. Manila (TA 1697-INO, for \$600,000, approved on 29 April).

levels, was among the government objectives ahead of the formal passage of the decentralization legislation.⁸

18. The TA Master Plan for Establishing BAPEDALDA,⁹ associated to the BAPEDAL regional project (footnote 6), is equally relevant to understanding the origins of the EIA capacity-building TA. The main objective of the BAPEDALDA TA was to help the government prepare a master plan for establishing local environmental institutions, examine ways to ensure the financial sustainability of the new institutions, and prepare an outline for a possible externally funded investment project. This is how the 2005 project completion report of the BAPEDAL regional project assessed the BAPEDALDA TA:¹⁰

During Phase I, nine working papers were prepared on the establishment of BAPEDALDA. These papers were instrumental in the preparation of the Phase I Master Plan Report, which was finalized in September 1997. Phase II was devoted to preparation of an investment project using a sector loan approach based on the analysis of six pilot subprojects..... The TA was carried out when the country was undergoing significant changes in the sociopolitical arena. New regional autonomy laws, calling for devolution of fiscal responsibilities to local governments, were introduced soon after its completion. These changes disrupted the establishment of BAPEDALDA and resulted in inadequately trained staff and under-funded local government institutions. Nevertheless, the outputs of the TA are still valid and the recommendations of the Master Plan should be implemented. The TA was considered highly relevant at the time of appraisal and is still relevant today. Although its sustainability and institutional development impacts are uncertain—mainly due to the regional autonomy policy—the TA recommended a sound approach for developing local environmental institutions. Based on its outputs and outcomes, the TA is rated partly successful.

19. It was in part the experience of the BAPEDAL regional project and the BAPEDALDA TA, coupled with the official promulgation of the decentralizing legislation, that lead BAPEDAL to propose, and ADB to accept, the EIA capacity-building TA largely in the form that was ultimately agreed. The TA was duly included in the 1999 country assistance program pipeline for Indonesia.¹¹

20. **Cost, financing, and executing arrangements.** The cost of the TA was estimated at the equivalent of \$525,000 equivalent, comprising \$227,000 in foreign exchange and \$298,000 in local currency. The TA was financed by the Government of Japan's Asian Currency Crisis Support Facility for \$420,000 and in kind by the Government of Indonesia, amounting to the equivalent of \$105,000.

21. The executing agencies were BAPEDAL for policy formulation and coordination and BANGDA. A steering committee chaired by the National Planning and Development Agency (BAPPENAS) and comprising sectoral ministries, technical experts, and representatives of nongovernment organizations and community-based organizations was established to guide the TA implementation.

22. **Consultants and scheduling.** The TA provided for 8 person-months of international and 20 person-months of domestic consulting services, the former in the fields of environmental

⁸ While BAPEDAL may have been ahead in anticipating the need for decentralization, it was soon overwhelmed by its depth, which quickly reached districts and municipalities, partly by-passing regions (with their BAPEDALDAs) and even provinces.

⁹ ADB. 1996. *Technical Assistance to the Republic of Indonesia for the Master Plan for Establishing BAPEDALDA*. Manila (TA 2598-INO, for \$180,000, approved on 14 November).

¹⁰ ADB. 2005. *Completion Report: BAPEDAL Regional Network Project in Indonesia*. Manila.

¹¹ ADB. *Country Assistance Plan, Indonesia 1999–2001*. Manila.

management with a focus on EIA guidelines and SEA economics (6 person-months) and social development with a focus on public participation (2 person-months). The latter were provided in the fields of environmental management (6 person-months), social development (3 person-months), environmental legislation (6 person-months), and institutional development (5 person-months).

23. At TA completion, 8.2 person-months of international and 27.3 person-months of domestic consulting services had been delivered. One replacement had to be made in the domestic consultant team after the local environmental specialist was appointed assistant minister of the Ministry of Environment (MOE). Only minor adjustments were made in the duration of the international consulting inputs.

24. The consultants produced all contracted reports. Delays in implementation were largely caused by institutional volatility in the immediate aftermath of the passage of decentralization statutes. This included changes in key personnel of BAPEDAL and BANGDA, as well as in staff responsible for TA implementation at both central and regional levels and internal reorganization of these agencies (culminating in the absorption of BAPEDAL into the KLH in 2002).

25. **Design evolution and changes.** The design directed the TA consultants to undertake several activities: (i) institutional analysis of environmental management; (ii) proposal of a way to make EIA clearance an integral part of investment permitting; (iii) critical review of the EIA process with suggestions for its improvement; (iv) assessment of the case for using SEA at policy, planning, and program levels; (v) proposal of ways to strengthen public participation mechanisms in EIA process; (vi) help in shaping decentralization mechanisms in environmental management, particularly an institutional arrangement for EIA implementation at provincial and district levels; and (vii) recommendation of ways to simplify legislation related to environmental protection.

26. The TA design was based largely on BAPEDAL's expression of existing needs. The SEA component was proposed by ADB relatively late in TA formulation but was accepted by the AMDAL directorate. A component on an accreditation system for EIA training institutions, originally favored by ADB, was dropped from the TA scope in the expectation that it would be financed under the BAPEDAL regional project, which did not happen.

27. **Outputs.** The planned outputs and their delivery were as follows:

- (i) **Guidelines to streamline investment permit system incorporating EIA clearance.** The consultant team developed a series of draft guidelines in close coordination with the executing agencies. IEM's understanding is that Government is utilizing information produced in these guidelines particularly Guidelines Concerning Working Procedures and Evaluation Process of TOR; Environmental Impact Statement; Environmental Management Plan; and Environmental Monitoring Plan of the Evaluating Commission of Central, Provincial, and District/Municipal Government; Guidelines for the Scientific and Technical Requirements for Assessing TOR, Environmental Impact Statement, Environmental Management Plan, and Environmental Monitoring Plan and Guidelines for Implementing Public Participation in the EIA Process with Input to a Community Development Plan in the environmental management plan.
- (ii) **EIA review process.** The three documents developed were (a) guidelines for monitoring mechanisms and law enforcement for EIA implementation; (b) guidelines on the process and procedure of evaluation of environmental impact statements, environmental management plan, and environmental monitoring plan; and (c) guidelines to improve the effectiveness and efficiency of environmental management plan and environmental monitoring plan. Recommendations were also formulated regarding the improvement of the EIA process.

- (iii) **SEA techniques at policy, planning, and program levels.** A workshop on SEA was organized in Jakarta in November 2000 that confirmed the need for SEA in Indonesia, underlined the importance of introducing SEA to decentralized levels of government, concluded that environmental study centers had a role to play in such dissemination efforts, and agreed that methodology for SEA appropriate for Indonesia should be developed. Subsequently, the TA team formulated an approach to introducing SEA. This (a) identified how SEA fitted in with existing policy development and planning process and how it could be used as an input to sector projects and programs, and (b) clarified SEA's relation to project-level EIA. SEA was presented as both a policy and planning tool, and as a tool of spatial planning. The TA identified parameters to be used in delineating the boundaries of a regional project, plan, or program requiring SEA, and developing screening procedure and scoping process. The legal bases for the application of SEA in Indonesia were identified, as were challenges to its adoption in Indonesia. These were described as insufficient coordination among relevant departments and agencies, lack of suitable application guidelines, and absence of a comprehensive SEA methodology. A methodological approach to adoption of SEA in Indonesia was then developed that included a sequence of (a) statement of development objectives and their parameters; (b) determining the carrying capacity of receiving environment and their parameters; (c) introducing SEA at the appropriate strategic level (policy, plan, or program); (d) describing alternatives; (e) applying EIA to individual projects; and (f) developing and implementing monitoring programs.
- (iv) **Public participation mechanisms.** The TA provided detailed analysis of present public participation practices and recommended ways of incorporating social considerations into project design and implementation. The consultants developed guidelines for implementing public participation in the EIA process to support the preparation of community development sections of an environmental management plan. The team also developed (a) a procedure for announcing and documenting comments, suggestions, and responses of a concerned community; and (b) guidelines on the distribution, publication, and documentation in support of Decree 8 of 2000 of the chairman of BAPEDAL concerning the participation of the public and the availability of information in the EIA process.
- (v) **Institutional analysis of EIA implementation at national, provincial, and district levels.** The TA team reviewed the evolution of environmental management in Indonesia (particularly EIA implementation, including the standard operating procedures under the environmental management assessment and monitoring assessment)¹² and, based on this review, provided recommendations on institutional and staffing arrangements and environmental monitoring under the decentralized system and formulated the interagency and interregional coordination mechanisms. The team then formulated guidelines on the preparation of the terms of the reference of EIA commissions and their technical teams and secretariats, as well as guidelines for the oversight of delegated EIA.
- (vi) **Workshops on public participation.** A 2-day workshop on public participation and access to information in the EIA process was conducted 2–3 May 2000.
- (vii) **Capacity development in two case provinces.** Three provinces proposed by the government (East Kalimantan, East Java, and West Java) were visited and two (West Java and West Kalimantan) were selected as pilot areas for capacity development. The workshops conducted were on the role of permits in the EIA process (80 participants), the EIA review process (40 participants), SEA (80 participants), public participation in the EIA process (70 participants), review

¹² Broadly, this correspond to ADB's initial environmental examination.

of the environmental management assessment and monitoring assessment (180 participants), and policies for the environmental management assessment and monitoring assessment (40 participants).

- (viii) **TA reports.** Agreed TA reports were submitted with some gaps now apparent in monthly progress reports and small delays in the submission of other contractual reports. The inception report was submitted in May 2000, the interim report in August 2000, and the final report in January 2002. Key outputs were printed in Bahasa Indonesia as well for distribution to the central, provincial, district, and municipal governments and other stakeholders.

28. **Policy framework.** The Indonesian Parliament passed Law 32 of 2009 on Environmental Protection and Management, which replaces Law 23 of 1999 on Environmental Management. Implementing regulations are to be issued in October 2010 (i.e., 1 year after the passage of the law). Some of these regulations have already been issued, while others are to follow. The emphasis has been shifting from further legislation to implementation and to streamlining and harmonizing implementation procedures.

D. Performance Assessment

29. **Overall assessment.** Given its timing in the immediate aftermath of the passage of path-breaking decentralization legislation, the TA was *relevant*. It remains so today, as the mechanisms of decentralized decision making (including decentralized environmental safeguards) are still being expanded and improved. It was *less effective*, as evidenced by the still prevailing capacity weaknesses in the local environment offices to address EIA issues. On the positive side, the SEA provisions of Law 32 of 2009 are clear instances of achievement. It was *less efficient*, mainly due to frequent changes inside counterpart executing agencies resulting from reorganization of BANGDA and BAPEDAL. Sustainability of TA outcome is *likely*, given the extent of the unfinished decentralization agenda and the government's continued commitment to dealing with essential implementation details. Overall, the TA was rated *partly successful*.

30. **Relevance.** The TA needs to be seen in the broader decentralization and broader environmental management contexts. It remains *relevant* to both. Decentralization remains a major government priority. The government has developed a medium-term, sector-wide approach for managing decentralization reforms and is leading the multi-donor Decentralization Support Facility, a trust fund facility supporting the Government of Indonesia's decentralization efforts. Several ADB loans have been approved since 2005 to support decentralization, accompanied by TA projects.¹³ In the environmental management context, decentralized environmental

¹³ ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant to the Republic of Indonesia for the Local Government Finance and Governance Reform Sector Development Program*. Manila (Loans 2192-INO and 2193-INO[SF], for \$330 and \$30 million, respectively, approved on 3 November); ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Program Cluster and Loan for Subprogram I Republic of Indonesia: Second Local Government Finance and Governance Reform Program*. Manila (Loan 2478-INO, for \$350 million, approved on 4 December); ADB. 2004. *Technical Assistance to the Republic of Indonesia for Sustaining Decentralization and Local Governance Reforms*. Manila (TA 4543-INO, for \$900,000, approved on 23 December); ADB. 2005. *Technical Assistance to the Republic of Indonesia for Supporting an Effective Institutional Framework for Fiscal Decentralization*. Manila (TA 4682-INO, for \$500,000, approved on 3 November); ADB. 2007. *Technical Assistance to the Republic of Indonesia for Preparing the Second Local Government Finance and Governance Reform Program*. Manila (TA 7010-INO, for \$700,000, approved on 3 December); ADB. 2008. *Technical Assistance to the Republic of Indonesia for the Local Government Finance and Governance Reform*. Manila (TA 7184-INO, for \$1.5 million, approved on 4 December); ADB. 2009. *Technical Assistance to the Republic of Indonesia for the Support for Local Government Finance and Governance Reform 2*. Manila (TA 7452-INO, for \$1 million, approved on 10 December). The Ministry of Home Affairs, the ministry co-executing TA for Decentralization of EIA Process (with BAPEDAL), is invariably co-executing these other ADB TA projects.

management is recognized as a continued priority in ADB's Indonesia 2005 CEA¹⁴ (and in the 2009 CEA of World Bank).¹⁵ ADB assistance started with the BAPEDAL regional project (para. 18), this EIA Capacity Building TA, and a related TA on Capacity Building for Decentralized Natural Resources Management.¹⁶

31. **Effectiveness.** Although the details can be debated, the TA undoubtedly strengthened the environmental safeguards dimensions of the post-decentralization law regulations by formulating actionable guidelines and recommendations. BAPEDAL (and, after 2002, the KLH) acknowledged that the TA had been instrumental in enhancing the institutional capacity of the central and local environmental agencies. In the two provinces where case studies were undertaken, the TA helped set up an institutional framework (organizational structure, human resources plan, and operational requirements) responding to new decentralized responsibilities of the organizations concerned. Many of these developments have been overtaken by more recent events but staff of the organizations concerned retains positive impressions of the TA activities.

32. The training programs conducted at the central level and in two provinces reached a large number of personnel and the written output of the TA was widely and appropriately distributed. The TA can take a fair share of credit for introducing SEA into formal government policy. Article 15 of the Environmental Protection and Management Law 32 of 2009, the new overarching environment legislative instrument, makes SEA a compulsory screening tool for assessing the capacity of local environments to accommodate new development activities, taking into account spatial planning considerations. The TA project's legacy is also noticeable in public participation, which is now a mandated element of the project development cycle. Not all TA outputs have had the same degree of usefulness but, in the fast-changing circumstances of decentralizing Indonesia, this is not altogether surprising.

33. The TA addressed the issue of comparability of ADB and country environmental safeguards through the analysis of ADB EIA guidelines and Indonesian guidelines at that time and a discussion paper on issues in EIA guidelines of ADB, which are not yet fully addressed in the EIA documents.

34. The TA project's design and monitoring framework envisaged post-evaluation reviews. Apart from the current evaluation, no such post-evaluation that would establish direct and specific contribution of the TA to the strengthening in the Indonesia's EIA process has been undertaken. On balance, the TA was *less effective*.

35. **Efficiency.** The efficiency of the TA was adversely impacted by the complexity of the decentralization task and institutional meanderings in the immediate aftermath of the passage of decentralization statutes. This included personnel changes in BAPEDAL and BANGDA and these agencies' internal reorganization. These problems were felt with equal force at the local level and this could not be without consequences for TA progress in the two pilot provinces. TA completion was delayed by 6 months and can be assessed as *less efficient*.

36. **Sustainability.** The EIA capacity-building TA is best seen as a bold initial input into a decade-long (and unfinished) process of crafting mechanisms for decentralized application of environmental safeguards. Indonesia could and did build on respectable achievements of the pre-decentralization era in this domain. The decentralization has posed not only the question of how to adapt existing environmental safeguards to decentralized circumstances but also of how to

¹⁴ ADB. 2005. *Indonesia: Country Environment Analysis*. Manila.

¹⁵ World Bank. 2009. Investing in a More Sustainable Indonesia. *Country Environment Analysis*.

¹⁶ ADB. 2000. *Technical Assistance to the Republic of Indonesia for the Capacity Building for Decentralized Natural Resources Management*. Manila (TA 3523-INO, for \$775,000, approved on 26 October).

create the technical and management capacity in the newly empowered local entities. Under both windows, much remains to be done. This is well recognized by the government and its development partners and a number of programs are being implemented or planned.¹⁷ This bodes well for the sustainability of the TA project's efforts and lends itself to a *likely* sustainable scenario.

E. Other Assessments

37. **Impact.** The TA project's impact is rated *moderate*. It is not easy to separate the impact of the EIA capacity-building TA from that of other ADB and other donor-supported initiatives. What is possible to say is that the TA was the first donor-assisted project that targeted decentralization of EIA process, rather than decentralization more generally, or decentralization of broader environmental responsibilities, as was the case under BAPEDAL regionalization. Other projects and initiatives followed and by now the impact is inevitably a mixed one. The difficulty of attribution should not be mistaken for lack of impact.

38. **ADB performance.** ADB's performance is rated *satisfactory*. ADB was caught somewhat by surprise by the fury of Indonesian decentralization, which risked making its recent environment-related projects (especially the BAPEDAL Regional Project) dated. However, ADB regained its footing and responded (through the EIA capacity-building TA) to the emerging decentralization priority quickly and appropriately. It maintained sufficient contacts with BAPPENAS, BAPEDAL, and BANGDA throughout TA implementation to keep up the momentum of implementation even at times when personnel changes in the TA executing agencies created difficulties. The resident mission was supportive and displayed initiative when this was required.

39. **Executing agency performance.** The executing agency performance is rated *satisfactory*. The executing agencies provided the necessary facilities. The project steering committee played a meaningful role. The degree of support of both executing agencies was, nevertheless, affected negatively by the day-to-day demands of the decentralization process resulting in frequent changes of personnel in BAPEDAL and BANGDA, including those with direct contact with the TA consultants.

F. Issues, Lessons, and Follow-Up Actions

40. **Issues.** Decentralization of environmental safeguards cannot be divorced from decentralization of NRM. Since 1999, local governments have acquired greater say over the way they manage the resources of their administrative areas. While sustaining support to decentralized environmental assessment and permitting—following the TA footsteps—simultaneous attention is needed to develop protocols that streamline the responsibilities of various government agencies involved in allocation, revenue sharing, monitoring, and enforcement related to the use, protection, and management of local forest, coastal resources, and land and water resources.¹⁸ ADB CEA 2005 (footnote 14) identifies the proliferation of national, provincial, and district-level organizations and lack of cross-sectoral coordination in NRM as a serious issue that could undo the gains obtained through improved decentralized EIA

¹⁷ See www.dsfindonesia.org for an overview.

¹⁸ Currently, ADB (OGC) has a RETA program for judicial training and certification program for judges (green benches), which includes Indonesia and this program can be further expanded to develop a broad-based environmental education and awareness program (e.g., for media, NGOs, civic groups, police, navy, army, etc.) in support of improving enforcement procedures in addition to supporting regulatory instruments and capacity (ADB. 2009. Strengthening of Judicial Capacity to Adjudicate Upon Environmental Laws and Regulations. Manila [TA 7474-REG, for \$225,000, approved on 17 December]).

processes. Through its recent loans for fiscal decentralization in Indonesia, ADB has touched on an important dimension of this challenge. That attention needs to be sustained.

41. **Lessons and recommendations.** The EIA capacity-building TA provided a powerful demonstration of the complexity of administrative decentralization and the demands it places on the stakeholders. While the capacity at regional and provincial levels in Indonesia may have been sufficient in part because of earlier capacity-strengthening support directed at BAPEDALDAs, that capacity was usually minimal at the district and municipal levels. The decentralization rapidly moved past regions and provinces and exposed the weaknesses at district and municipal levels. In view of that, the effective duration of the TA (significantly shorter than the overall TA implementation period) was insufficient and the target of pilot activities (provinces) possibly less than fully appropriate.

42. It is important for the staff of the Regional and Sustainable Development Department and the resident mission to keep abreast of recent thinking on the likely future direction of EIA practices and their regionalization undertaken under 2006 AMDAL Reform Program of World Bank and Danida.¹⁹ Among other things, the AMDAL Reform Program considered the most appropriate successor to the Government Regulation 27 of 1999 that, to this day, largely governs EIA practice. The choice appears to be between fundamental revisions of EIA or only its refinements compatible with decentralized applications. Law 32 of 2009 does not provide sufficient clarity on the issue.

Table A3.1: Guidelines and Draft Legislative Documents Developed under the Capacity Building for Decentralization of the Environmental Impact Assessment Process (TA 3252-INO)

Guideline Titles	
1.	Guidelines to Facilitate Establishment and Streamlining Investment Permit Systems: <ul style="list-style-type: none"> (i) Decree of the minister of home affairs, Guidelines for One-Stop Service in Investment Procedure; (ii) Regional Regulation on the Establishment of One-Stop Service for a City/District; (iii) Decree on the Establishment, Organization, and Work Mechanism of Office of One-Stop Service in a City/District; (iv) Decree on the Enactment of Kinds of Services at One Stop Service (UPSA) in a City/District; (v) Decree on the Management Guideline for UPSA in the City/District; and (vi) Decree concerning the Management Guideline for Integrated Investment Procedure in City/District.
2.	Guidelines Concerning Working Procedures and Evaluation Process of TOR; Environmental Impact Statement; Environmental Management Plan; and Environmental Monitoring Plan of the Evaluating Commission of Central, Provincial, and District/Municipal Government: <ul style="list-style-type: none"> (i) Guidelines on the TOR of the EIA Commission, Technical Team, and Secretariat of EIA Commission; (ii) Guidelines on the Procedure for Announcing and Documenting Comments, Suggestion, and Response of Concerned Community; (iii) Guidelines on the Process and Procedure of Evaluation of Environmental Impact Statements, Environmental Management Plan, and Environmental Monitoring Plan; and (iv) Guidelines on the Distribution, Publication, and Documentation.
3.	Guidelines for the Scientific and Technical Requirements for Assessing TOR, Environmental Impact Statement, Environmental Management Plan, and Environmental Monitoring Plan
4.	Guidelines for Monitoring Mechanisms and Law Enforcement for EIA Implementation

¹⁹ Qipra. 2006. *Regional Pilot Project: Final Report*. AMDAL Reform Program (Phase 2): Linking Poverty, Environment and Decentralization. Consultant report for World Bank. Jakarta. For information about Danida-supported work on the EIA process and decentralization, see www.esp2indonesia.org

Guideline Titles	
5.	Guidelines for Integrating EIA Process into Project Cycle
6.	Guidelines to Improve the Effectiveness and Efficiency of Environmental Management Plan and Environmental Monitoring Plan
7.	Guidelines for Oversight of Delegated EIA Process
8.	Guidelines for Implementing Public Participation in the EIA Process with Input to a Community Development Plan in the environmental management plan: <ol style="list-style-type: none"> (i) Guidelines for Planning and Development in the Region (Pedoman Penyusunan Perencanaan dan Pembangunan di Daerah/P5D); (ii) Directive of the MOE 2 of 2000 regarding the Guidelines for the Evaluation of the EIA Documents; and (iii) Decree of the Chairman of BAPEDAL 8 of 2000 concerning the Participation of the Public and the Availability of Information in the EIA Process.
9.	Guidelines Concerning the Role of Sectors to Strengthen Technical Capability of Provincial and District/Municipal EIA Evaluating Commission.

BAPEDAL = Environmental Impact Management Agency, EIA = environmental impact assessment, MOE = Ministry of Environment, TA = technical assistance, TOR = terms of reference, UPSA = one-stop service.

Source: TA performance evaluation report evaluation.

Table A3.2: Summary of Recommendations on the EIA Process Developed under the Capacity Building for Decentralization of the Environmental Impact Assessment Process (TA 3252-INO)

A. Environmental Management Institutions	
1.	With the implementation of regional autonomy and the shift of authority for supervision and monitoring to the district and city BAPEDALs due to the legislation and autonomy, these BAPEDALs may not have the manpower, finances, and experience to fulfill these tasks. The new MOE should have an oversight authority to review the actions of these regional BAPEDALs and the regional EIA commissions to ensure that they are functioning properly in environmental management.
2.	To ensure that the quality of the EIA, environmental management plan, and environmental monitoring plan is maintained at a national standard, the new MOE should have the authority to review these studies and have the power to cancel those that are substandard.
3.	The relationships between the new MOE (or the KLH), regional environmental offices, the provincial BAPEDALDAs, and the district BAPEDALDAs must be clearly defined in legislation.
B. Permit System	
The TA project's analysis of Indonesia's environmental permitting system shows that three alternatives can be proposed:	
1.	Status quo. The current system continues operating.
2.	Two-step process. Establish a process to integrate the location permit with the approved spatial plan and environmental feasibility, followed by a sectoral business permit.
3.	One-stop service. The investment permit is processed and issued in one integrated office that represents authorities from all relevant government agencies.
C. Regulations on Impact Analysis	
1.	The MOE should provide more information on the laws, government regulations, and decrees that are issued each year at the central government level. Stakeholders and the general public need an up-to-date, regularly maintained website that can provide the necessary information and documents. They should indicate which regulations are in force and which have been cancelled.
2.	The MOE should maintain a register of all provincial and district/city regulations and decrees related to the environment.
3.	The MOE should have all of the approved EIAs, environmental management assessments, and environmental monitoring assessments in the library. These approved EIAs should be listed on the website and be available to the public.
4.	To provide an information service on policies and environmental regulations that is more extensive, data and information available on the web of the MOE should be issued each quarter in national and local newspapers.

<p>D. Length of Time Required for the Preparation and Approval of EIA Documents</p>
<ol style="list-style-type: none"> 1. A more efficient process needs to be developed for the submission of the EIA TOR. Many of the specific questions arising in the commission review of the TOR can only be answered in the final stages of the study. 2. The guidelines for the social and economic studies in the EIA should be reviewed and revised to allow more focused studies. 3. The guidelines for the impact determination need to be reviewed and revised to allow for a more rapid assessment. 4. One approach to accelerating the EIA processes would be the strategic environmental assessment of areas that are expected to have many new industries. These assessments could be carried out by university experts and used by each proponent of a project to accelerate the determination of the impacts and the descriptions of the existing environment. 5. The review process of the ANDAL,^a environmental management plan, and environmental monitoring plan by the technical team takes long time. 6. The evaluation commission could be more focused on the significant negative impacts of the environmental management plan and environmental monitoring plan. 7. The proponent should be allowed only a specific amount of time between the approval of the TOR and the submission of the EIA, environmental management plan, and environmental monitoring plan. It should not be more than 160 working days.
<p>E. Quality of the EIA Documents (and Preparers' Qualifications)</p>
<ol style="list-style-type: none"> 1. The EIA courses are important for educating researchers and consulting firms on the procedures for carrying out the EIA. Yet this certification should not be used to determine who is on the research team. The scientific qualifications of the study team should be given more priority: a person with a PhD in a scientific field and many years of research experience should be considered more qualified to be the team leader than a person with a basic degree and the EIA B certification but without technical competence in a relevant field. 2. These certification courses at the universities have become an industry. The initial purpose was to train qualified professionals how to carry out EIA studies, rather than to train a large number of consultants with minimal understanding of scientific analysis. 3. The proponents must realize that EIA is of major importance in the approval of their proposed projects and will be the document used to monitor their project for many years. Therefore, it should be treated as an essential document that requires funding, attention by the proponent's leaders, and implementation of the results. 4. The MOE should set up a quality assurance and quality control team to review the EIAs prepared, submitted, and approved by the EIA evaluation commission. With the emergence of a large number of district and city EIA commissions throughout the country, the maintenance of quality standards will be an important problem in the future.
<p>F. EIA Documents being incorporated into Construction Contracts and Operations Manuals</p>
<ol style="list-style-type: none"> 1. The guidelines for the environmental management plan should have an explicit statement that the construction contractors will be liable for damages if they do not follow the results of the plan. 2. A mandatory environmental management training program should be initiated for the managers of construction companies. If these managers do not have this training, they should not be allowed to bid on construction projects. 3. Indonesian NGOs should be trained in project management so that they can monitor the implementation of the environmental management plan and environmental monitoring plan. 4. The proponent must ensure that the environmental management plan and environmental monitoring plan are included in the manuals for operating the project or activity and that their staff is fully cognizant of the requirements of the plans. For example, after an environmental audit, a very large mining firm was found to comply reasonably well with the environmental management plan but had almost no compliance with the environmental monitoring plan. 5. BAPEDALDA inspectors at the district and city level must be trained and given incentives to be active in monitoring the environmental performance for projects requiring environmental management, environmental management assessment, and environmental monitoring assessment. 6. Recent government regulations make it possible for the inspectors to carry out effective monitoring programs. Steps should be taken to ensure that the inspections are carried out routinely and periodically.

<p>G. Public Consultation and Availability of Information</p> <ol style="list-style-type: none"> 1. The guidelines for public consultations should be reviewed to provide more information on how extensive these consultations should be. 2. The guidelines should be clear regarding the responsibilities of the proponent, government officials, and the MOE but should not state how to fund and support these responsibilities. They should include a statement that the proponent should fund all of the activities related to the public consultations. 3. The participation of the local people's representative and the public in evaluating the TOR and the EIA, the environmental management plan, and the environmental monitoring plan can require financing, especially in an isolated area. The guidelines should clearly state that the proponent must be responsible for funding their participation, although the selection of the representative must be carried out proportionally. 4. The guidelines should specify how the approved EIA, environmental management plan, and environmental monitoring plan should be made available to the public as easily, cheaply, and quickly as possible.
<p>H. Decentralization of the Environmental Management Institutions</p> <ol style="list-style-type: none"> 1. The relationships and roles of the various levels of environmental agencies need to be defined by regulation. These agencies are the MOE, the three offices of the assistant deputies for the regions, the provincial BAPEDALDA, the district/city BAPEDALDA, and the other environment offices at the district level. 2. As of 7 January 2002, BAPEDAL was dissolved and the duties, tasks, and authority were transferred to the MOE. With this change, more emphasis should be placed on developing the environmental networks throughout the country. 3. Although the national regulations and decrees have stated that the authority for the actual management of the environment shall be at the district and city levels of government, the implementing regulations at the provincial level and the district and city levels have not been formulated or approved or issued in some of these regions. 4. This rapid devolution of authority over environmental management to the district and city levels of government comes at a time when these governments do not have the trained staff or sufficient funds to carry out these responsibilities. With the establishment of EIA commissions at the district and city levels of government, the procedures for approval of the EIA documents may end up having many forms. 5. With the closure of the sectoral EIA commissions at the national level and the devolution of authority, the commissions at the provincial, district, and city levels may not have the expertise to thoroughly evaluate the more technologically sophisticated planned enterprises. 6. With the financial crisis that has affected Indonesia for the last 4 or 5 years and the decentralization of finances, the province, district, and city governments are supposed to fund the activities of these BAPEDALDAs, yet they do not have the necessary resources. In this situation, these local governments will be tempted to overexploit their natural resources. If this occurs, the role of BAPEDALDA and the commissions will become even more important in managing and monitoring the environment. These agencies need more support and assistance from the national government and multilateral institutions. 7. With the devolution of authority over the environment to district and city governments, the staff of local agencies must be trained to a much higher level of environmental awareness. The national government and multilateral institutions must establish and carry out the necessary training program.
<p>I. Development of Laws and Regulations for the EIA Implementation at the Local Level</p> <ol style="list-style-type: none"> 1. Forums such as workshops should be quickly held throughout the country with local government officials, local NGOs, members of the regional legislatures, and the public to explain what regulations have been issued at the national level and what types of environmental regulations will be important for these regions to manage and monitor the environment. 2. The MOE should be trying to influence the rise of environmental agencies at the district and city levels, as well as the establishment of EIA evaluation commissions. With at least 244 district and city governments and the number expanding with the creation of more of these governments, the MOE has a huge job in keeping track of what is occurring and even larger task of trying to influence what is happening. The ministry may not have the resources for this task and may only be able to work with the provinces in the expectation that the provinces will then work with the district and city governments.

J. Strategic Environmental Assessment

1. There is a need to socialize SEA to regional governments.
2. More information needs to be distributed and promoted by environmental study centers all over Indonesia.
3. Development of appropriate methodology for SEA should be applied to Indonesia.
4. A set of procedural steps for the application of SEA was presented for adoption.

BAPEDAL = Environmental Impact Management Agency, BAPEDALDA = regional office of BAPEDAL, EIA = environmental impact assessment, MOE = Ministry of Environment, NGO = nongovernment organization, SEA = strategic environmental assessment, TA = technical assistance, TOR = terms of reference.

^a AMDAL refers to the environmental assessment process, while ANDAL refers to the EIA document.

Source: TA performance evaluation report evaluation.

Table A3.3: Procedural Steps for Strategic Environmental Assessment

Strategic Decision-Making Steps	Main Points that SEA Should Address
Step 1: Setting the context for PPP making and SEA	<ul style="list-style-type: none"> • Decision about whether the PPP needs SEA (screening) • Reasons for carrying out the SEA and commitment to changing the PPP where appropriate • Understanding constraints that might affect the PPP process and SEA process • Collection of background information
Step 2: Determining objectives	<ul style="list-style-type: none"> • Description of the PPP: geographical area, location, sector, time period covered by SEA • PPP objective(s) • SEA topics, targets, and indicators that can be used to monitor the achievement of these targets
Step 3: Baseline description	<ul style="list-style-type: none"> • Description of the baseline environment • Description of relevant environmental regulations and standards • Description of current environmental management practices • Environmental sustainability constraints and concerns
Step 4: Identifying and describing alternative means by which the PPP objectives can be achieved; evaluate and compare alternatives	<ul style="list-style-type: none"> • Description of alternative PPPs, including the best-for environment alternative • Test of alternative PPPs for compatibility with other PPPs and for internal consistency • Using indicators to describe and explain the possible impact of PPPs • Description of how the PPP has been changed
Step 5: Implement PPP and monitor results	<ul style="list-style-type: none"> • Monitoring of environmental sustainability impacts

PPP = policy, plan, and program; SEA = strategic environmental assessment.

Source: Therivel and Brown. 1999. p. 446; Therivel and Partidario. 1996. Chapter 3; and Sadler and Verheem. 1996. Chapter 6. Quoted in RTI International. 2002. *TA 3252-INO: Capacity Building for Decentralization of the EIA Process Final Report*. Jakarta, V-11.

IMPROVING THE ENVIRONMENTAL PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES BY PROMOTING CLEANER PRODUCTION—INDONESIA

A. Summary

1. The technical assistance (TA) on Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production was a well-justified initiative of the Asian Development Bank (ADB) and the Government of Indonesia directed at one of the thorniest environmental problems the country faces—how to improve the environmental performance of small and medium-sized enterprises (SMEs) without saddling them with an unnecessarily high environmental compliance cost.¹ Introduction of the principles and practices of cleaner production was the approach adopted. Despite respectable achievements in pollution control among large industrial establishments, the country had lacked experience with cleaner production, especially its adoption by SMEs. The TA offered to add value.

2. The project targeted three among the heavily polluting subsectors in the SME industry segment, i.e., iron casting, electroplating, and silver plating, and selected to work with 12 enterprises in three clusters of these SMEs. The TA performed an audit of the SMEs, developed the cleaner production models considered most suitable for the targeted sectors, developed operations manuals, conducted training for the SME personnel and local government staff, developed performance monitoring systems, drafted a cleaner production implementation strategy for the then Ministry of Industry and Trade (MIT), the TA project's executing agency, and contributed to the holding of the fourth Asia–Pacific Roundtable on Clean Production (APRCP).

3. The TA produced most of the anticipated output but depth varied. Some shortfalls resulted from an implementation period that was not long enough. After a difficult and slow start, the project gained speed and attracted strong interest but by that time it was already closing. The momentum was insufficient to sustain the original activities after the project closed and the project's short duration in relation to the magnitude of the task made it impossible to fully develop some of the most relevant of the planned outputs, such as those related to the International Organization for Standardization (ISO) 14001 and ISO 14021 certification of SMEs.

4. The project faced implementation difficulties related to security concerns in the wake of the Bali bombings of 2002, experienced discord within the consulting team, and was confronted with low capacity in most institutions at the local level at an early stage of Indonesian decentralization. Most activities were delayed as a result. All of this had some impact on the TA project's efficiency.

5. After initial doubts about the TA direction—doubts that reflected economic difficulties of the time—the MIT provided solid support to the TA, which was appreciated by ADB headquarters. (The TA was administered by ADB headquarters rather than by the Indonesia Resident Mission during ADB reorganization of 2002). In formulating the TA, ADB reliably diagnosed the underlying problems but formulated relatively weak terms of reference for the TA consultants. Some doubts remain about the choice of targeted SME subsectors.

6. The TA is rated *partly relevant*, having stopped short of addressing a supporting policy framework for cleaner production. It was *less effective* because it did not reach all of its targets or reached some of them only somewhat superficially. In part because of disruptions of TA work

¹ Asian Development Bank (ADB). 2002. *Technical Assistance to the Republic of Indonesia for Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production*. Manila (TA 3837-INO, for \$500,000, approved on 1 March).

and delays in several activities that were caused by external factors, but also because of internal dissent within the TA consultant team, the TA was *less efficient*. Clean production continues to be important in Indonesia but continued absence of enabling conditions makes the TA direction *less likely* to be sustainable. Overall, the TA is rated *partly successful*.

7. The TA reinforces the oft-repeated lesson of insufficient staying power being the enemy of more telling achievements. The TA needs to pay sufficient attention to the balance of targets (between doers and facilitators) in structuring capacity-development components. ADB should keep abreast of international developments in the area of environmental compliance by SMEs and of developments in Indonesia, such as the activities of the Indonesia Clean Production Center (ICPC).

B. Introduction

8. **Evaluation purpose and process.** Time is needed to evaluate the outcomes and impacts of an ADB project. The TA in this report is being revisited more than 5 years after the project's completion.

9. The evaluation in the field took place 24–28 May 2010, preceded by detailed desk review of relevant documentation. The evaluation team held discussions with the Directorate of Small and Medium Industry in the MIT (successor to the original executing agency), staff of the Ministry of Cooperatives and SMEs, the Indonesian Chamber of Commerce, the SME section of the Ministry of Environment, and one of the original local TA consultants. The evaluation team received written answers to a questionnaire from the TA international consultant and talked to the ADB staff responsible for TA supervision following ADB's reorganization in 2002. The evaluation team had access to all TA-related documents, including the TA completion report that rated the TA *successful*.

10. **Technical assistance objectives.** The overall objective of the TA was to improve environmental quality in Indonesia by introducing the principles and practices of cleaner production in selected SME sectors, in particular iron casting and electroplating.

11. The project scope included developing models for adopting cleaner production practices in SMEs; formulating performance-based monitoring systems that would lead SMEs to meeting ISO 14001 requirements; institutionalizing cleaner production implementation in SME activities; and sponsoring, in collaboration with other external funding agencies, the fourth APRCP conference planned for October 2002.²

C. Design and Implementation

12. **Rationale.** By an official count, there were 3.5 million nonagricultural SMEs in Indonesia employing about 7 million people at the beginning of the decade.³ A significant percentage of them are located in Java, including several, such as electroplating, silver plating, iron casting,

² ISO 14001 sets out requirements for an environmental management system (EMS), which can be employed by an organization to measure and document its environmental impact. EMSs that meet the ISO 14001 requirements can be externally audited and certified by an accredited certification body.

³ The exact numbers of nonagricultural SMEs are open to debate. Despite their classification as SMEs, many of them would more closely fit the label of informal. The classification of enterprises as small and medium, micro, informal, etc. is a subject of some complexity but of significant practical relevance. See A.G. Brata. 2005. Spatial Dynamic of Small and Medium Enterprises in Indonesia. *ASEAN Economic Bulletin*. 23 (1). pp. 11–30.

and food processing concerns that are involved in polluting activities.⁴ These SMEs are vital to individual and family livelihoods but deadly for collective welfare due mainly to their discharges into the country's surface and groundwater.

13. The government's concerns about the environmental and health repercussions of SME activities overlapped with its apprehension about a threat posed to the SME sector's encouraging export performance by growing insistence in importing countries that exporters respect environmental norms and ISO 14001 compliance.

14. The TA recognized the serious limitations of "end-of-pipe" approaches to pollution control in the SME segment of industry and easily identified cleaner production as holding a far better promise⁵. The TA would encourage the adoption of cleaner production approaches and practices by selected groups of SMEs through cleaner production demonstration models and training and gradually spread cleaner production methods into a wider SME community. The TA was to complement other ADB support to SME development in Indonesia (para. 15) and ADB's substantial support to the promotion of clean industry in developing member countries.⁶

15. **Formulation.** The SME cleaner production TA had close links with a much bigger (\$1.5 million) TA on strengthening business development services (BDS) for SMEs, approved only 2 months earlier.⁷ The BDS TA followed ADB's Industrial Competitiveness and SME Development Program, under which the Government of Indonesia prepared a medium-term action plan for SMEs.⁸ The BDS TA was designed to support implementation of the key recommendations of a medium-term action plan and, in particular, promote SMEs' BDS, simplify regulations, and ease SMEs' access to credit. The SME cleaner production TA was to complement the Industrial Competitiveness Program and BDS TA by addressing the environmental side of SME operations.

16. There were signs of a hurry in securing TA approval to ensure that the project could give support to the fourth APRCP. Ironically, the roundtable had to be cancelled on security grounds. Justice was served, forcing ADB and the MIT to concentrate on TA substance.

17. **Cost, financing, and executing arrangements.** The TA cost was estimated at the equivalent of \$650,000, comprising \$285,000 in foreign exchange and \$365,000 in local currency. The TA was financed by the Government of Japan's Asian Currency Crisis Support Facility for \$500,000 and in kind by the Government of Indonesia in an amount equivalent to \$150,000.

⁴ Much has changed in this branch since the time of TA formulation. Imports from the People's Republic of China have surged and railways (one of the traditional markets for SME cast iron articles) have become less important.

⁵ The traditional means of combating pollution has been by means of end-of-pipe systems, i.e., treatment of wastes and polluting streams. This end-of-pipe approach, while still essential for many industries and for many technologies, should only be used as a last resort, and cleaner production opportunities should be investigated first. (United Nations Environment Programme, 1998).

⁶ Conveniently summarized in J.E. Evans and W.B. Hamner. 2003. Cleaner Production at the Asian Development Bank. *Journal of Cleaner Production*. 11 (5). pp. 639–649; ADB. 1999. *Technical Assistance for the Promotion of Cleaner Production Policies and Practices in Selected Developing Member Countries*. Manila [TA 5840-REG, for \$600,000, approved on 20 April]. The experience was fresh in ADB staff minds.

⁷ ADB. 2002. *Proposed Technical Assistance to the Republic of Indonesia for Strengthening Business Development Services for Small and Medium Enterprises*. Manila (TA 3829-INO, for \$1.5 million, approved on 9 January).

⁸ ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grants to the Republic of Indonesia for the Industrial Competitiveness and Small and Medium Enterprise Development Program*. Manila (Loan 1738-INO, for \$200 million, approved on 16 March).

18. The TA project's executing agency was the MIT.⁹ The ministry's director general of small and medium industry and trade chaired a steering committee that included representatives of the National Development Planning Agency (BAPPENAS) and the Ministry of Cooperatives and SMEs.

19. **Consultants and scheduling.** The TA was to provide 9 person-months of international and 16 person-months of domestic consulting services, the former in the fields of cleaner production/business development of SMEs (3.75 person-months), cleaner production (2 person-months), and performance evaluation (2.75 person-months). The latter were to be provided in the fields of cleaner production, with a focus on silver-electroplating and casting industries (6 person-months); institutional development and training (5 person-months); and institutional development (4 person-months).

20. At TA completion, 10.0 person-months of international and 20.0 person-months of local consulting services had been provided. The international performance evaluation consultant was replaced by a cleaner production and institutional development specialist once the scope of TA became clearer. Another 1.75 months of home-based services of international consultants were agreed to by ADB to compensate for delayed start of the project (para. 21) and provide more time to produce operating manuals. Local consulting services were increased by a total of 4 person-months, consisting of 1.5 additional person-months to introduce cleaner production options to pilot firms, and 2.5 person-months of services of a local person knowledgeable in iron casting (rather than electroplating), which was presenting unanticipated technical challenges.

21. Serious delays were experienced at all stages of TA implementation due to travel restrictions in Indonesia following the 9/11 attacks in the United States and further logistical difficulties in the wake of the Bali bombings of 12 October 2002. These events made it impossible to hold the fourth APRCP as planned in October 2002. The event had to be postponed and was eventually held in Chiang Mai, Thailand in January 2003.

22. The local institutional and training consultants resigned half way through TA implementation over dissatisfaction with the international team management approach and a perceived imbalance of efforts. ADB, not distinguishing between foreign and domestic consultants, nonetheless found the TA consultants' performance "very good with a very experienced and dedicated team leader."

23. **Design changes.** There were no changes of design (and therein possibly lay one of the problems, as explained in para. 27).

24. **Outputs.** The planned outputs and their delivery were as follows:

- (i) **Cleaner production pilot models in casting and electroplating industries.** The original idea was to target 16 SMEs representative of the priority activities. Selection criteria were developed for inclusion of SMEs in the study and, in the end, three pilot groups with a total of 12 SMEs were selected in three industry sectors and in three locations, i.e., silver plating in Yogyakarta (Special Territory of Yogyakarta), iron casting in Klaten (Central Java), and electroplating in

⁹ The ministry was reorganized in 2005 when the industry and trade portfolios were separated. Each ministry now has its own unit responsible for SMEs. The Directorate of Small and Medium Industry in the Ministry of Trade is the direct successor to the MIT. In addition to the MIT and Ministry of Trade, the Ministry of Cooperatives and SMEs has a potentially important role to play in SME support.

Sidoarjo (East Java). A cleaner production assessment protocol was developed and used to gather information about these SMEs' efficiency, cost structure, and environmental performance. An assessment report, a type of cleaner production audit, was then prepared for each of the 12 SMEs.

- (ii) **Operations manual for implementing cleaner production in cast iron and electroplating SMEs.** Operations manuals were developed in English and Bahasa, based on cleaner production models for implementing cleaner production practices in all three targeted sectors. Cleaner production operating guidelines for electroplating and iron casting were then drafted (and are available in Bahasa).
- (iii) **Performance-based monitoring systems for SMEs.** Despite the non-fielding of performance evaluation specialist (para. 20), an integrated performance measurement system (performance measurement worksheets) incorporating choice of standards, methods of data collection, self-assessment, and cleaner production verification aimed at measuring production and environmental performance was developed for the target SMEs.
- (iv) **Policy for implementing cleaner production in SMEs.** A policy paper on cleaner production implementation strategy for SMEs was drafted after discussions with small groups in three different locations.
- (v) **Training of SME personnel and relevant private and public sector agencies.** A series of training workshops on SME environmental performance were held from December 2002 to June 2003 for (a) local government units and private and public-sector BDS to integrate concepts of cleaner production into their SME support programs (local governments and BDS took part in 9 of the total of 12 training programs delivered by the project), (b) managers of a wide range of SMEs in each of the three industrial sectors to introduce principles and practices of cleaner production, and (c) potential trainers in cleaner production assessment methodology and performance measurement. Specific training on (a) adoption of ISO 14001 standards by SMEs, and (b) self-declaration of compliance under ISO 14001, ISO 14031, and SA 8000 was also delivered.
- (vi) **Support to host fourth APRCP.** The TA allocated \$50,000 to fund travel expenses of participants from 10 developing member countries and the rental of the venue planned for October 2002 in Yogyakarta. The date and venue of the conference were changed due to security concerns in Indonesia. In the end, the roundtable which was held on 19–22 January 2003 in Chiang Mai, Thailand, saw a presentation of 51 technical papers in 14 working and training sessions and was considered successful by participants (details available at www.aprcp.net).¹⁰
- (vii) **TA reports.** The following were submitted: inception report (25 October 2002), interim report (30 June 2003), draft final report (27 January 2004), and final report (25 March 2004). Technical reports submitted included (a) operations manuals for implementing cleaner production in iron-casting and electroplating SMEs; (b) guidelines for the local promotion of cleaner production; and (c) assessment protocols for electroplating and iron casting that describe, among other things, the systems and mechanisms for local government agencies to continue to facilitate SMEs' adoption of cleaner production. Posters were produced for display in selected sectoral SMEs.

¹⁰ The APRCPs' objective is to foster dialogue among industry, government, academia, and nongovernment organizations in the region on pollution problems and solutions via technology exchange, regional events, and training. ADB has been a steady supporter of the APRCP since the organization's establishment in 1997. <http://www.aprcp.net>

25. **Policy framework.** Indonesia's environmental management is relatively complex, combining voluntary compliance with prescriptive management. To make things more difficult, environmental regulation and management are now decentralized, placing new demands on the capacity of local governments and institutions. One of the challenges the SME cleaner production TA faced was the relatively weak capacity of local institutions in the locations where pilot activities were being conducted. At the same time, a good deal of expertise exists at the central level that goes back to the time of the Environmental Impact Management Agency (BAPEDAL) which ushered in environmental activism that continues to this day. There is also familiarity at the center with environmental assessment, originality in identifying practical solutions to thorny problems (evident in such undertakings as the Program for Pollution Control, Evaluation, and Rating [PROPER]), and other pluses. It is reasonable to expect that these will ultimately be brought to bear on the problem of pollution by SMEs.

D. Performance Assessment

26. **Overall assessment.** The massive contribution by SMEs to environmental pollution and the great export and general economic promise of these same enterprises guaranteed the TA project's relevance from the outset. This was not negated by a temporarily poor fit between the subsectors targeted by the project and the hard economic realities in the country, although failure to develop an enabling policy framework renders the TA *partly relevant*. The project lasted far too short a time to be effective and so is rated *less effective*. It did not reach all of its targets or reached some of them only superficially. In part because external factors disrupted TA work and delayed several TA activities but also because of internal dissent within the TA consultant team, the TA was *less efficient*. Cleaner production continues to be important in Indonesia but continued absence of enabling conditions makes the TA direction *less likely* to be sustainable. Overall, the TA is rated *partly successful*.

27. **Relevance.** The TA provides a solid rationale for the overall direction of the project and the choice of SMEs to be targeted: their pollution record (rated among top polluters by BAPEDAL, often with toxic and hazardous discharges); scope for rapid impact of cleaner production interventions likely to invite imitation; and high export potential, with the associated interest in the environmental compliance certification among export-oriented SMEs. This rationale remains intact. However, the TA design did not allow for development of an enabling policy and regulatory environment that could nurture and sustain cleaner production in the SME sector. Although there are other contributing factors, lack of attention to this detail has led to a situation where the effort remains fragmented and on fragile ground. On balance, the project is *partly relevant*.

28. **Effectiveness.** In a halting manner, reflecting in part the disruptions of TA work caused by security concerns that affected movement of TA staff, the project delivered most of the expected outputs. The cleaner production models were developed, initial SME audit performed, operation manuals drafted, training conducted, performance monitoring systems developed, cleaner production implementation strategy for the MIT formulated, and the APRCP ultimately held in an alternative venue.

29. The TA fell short of its original objectives under the ISO 14001 heading and in the depth of some of its outputs. The TA speaks eloquently about ISO 14001 self-declaration procedures for SMEs and the need for an institutional infrastructure (e.g., verifying agency, accredited auditors, performance evaluation process, and indicators) to make this possible. Little has been achieved on this score under the TA (and outside it). Rightly, the TA linked cleaner production

introduction to the activities of BDS being strengthened under the BDS TA (para. 15), seeing a need for BDS to acquire the expertise to assist SMEs in addressing their environmental problems. In spite of some training directed at this component of the project, the outcomes have been modest to date. A performance monitoring system was developed but is not actively used by the enterprises targeted or any other. There is a long way to go to make self-declaration an active tool of ISO certification. The experience of pilot introduction does not provide sufficient information about the potential for complying with self-declaration requirements of environmental management systems.

30. Missing from the final written output are reporting system to monitor SME performance and systems and mechanisms for local government agencies (e.g., BDS) to continue to facilitate SMEs' adoption of cleaner production.

31. The TA training output consisted of 10 training sessions and 2 more specialized training workshops. Some of them targeted local government officials but the majority was directed at the SMEs themselves. Such a balance would be most welcome in circumstances where the capacity of those who create the enabling environment is well entrenched. In Indonesia, the effectiveness of the project suffered because not enough capacity existed at the local levels of the MIT and other agencies. The TA was thus *less effective*.

32. **Efficiency.** The TA is rated *less efficient*. It had to cope with disruptions caused by security-related issues, which delayed the fielding of the consultants. Progress was adversely affected by insufficient receptiveness initially of the target SME audience, which was caught up in the economic difficulties of the time. Identification of participating SMEs was slow. The MIT also took some time to steer the TA effort. The working relations between the international and local consultants deteriorated in the middle of TA implementation and several activities suffered as a result. Also, the limited duration of the TA meant that little feedback was obtained from the TA target audience that could be used to recalibrate the implementation. The TA was *less efficient* as a result of all these factors.

33. **Sustainability.** ADB's 2005 Indonesia country environment analysis (CEA) states that "categorization of industries (by their) pollution intensities, (and) ... assistance to clean production programs and technologies and funding for industrial self-auditing program to improve environmental performance" is to be considered a priority.¹¹ Even more emphatic is the support in the CEA and successive country assistance plans, country strategy and programs, and country partnership strategies for safeguarding the water resources of the densely populated areas of the country where the majority of SMEs are located and where inadequate compliance monitoring and enforcement programs, inadequate outreach programs, and other similar weaknesses are found. There is little doubt that the overall intent of the SME cleaner production TA continues to resonate. In the absence of an enabling policy and legislative framework, however, the sustainability of the effort is questionable. Sustainability is *less likely*.

E. Other Assessments

34. **Impact.** Much has happened in Indonesia in the field of clean technology. The Indonesia Clean Production Center (ICPC) was established in 2004, just as the SME cleaner production TA was drawing to a close. The ICPC is keenly aware of the need to develop novel approaches to dealing with pollution by SMEs. Eco-label schemes have been launched in several categories of products and ISO 14001 and other environmental standards have made more of an inroad

¹¹ ADB. 2005. Indonesia: *Country Environment Analysis*. Manila.

into Indonesian economic life.¹² The year 2010 has been declared the Year of Green Industry in Indonesia. However, most of these improvements affected the operations of larger industries, not the SMEs. The impact of TA is *negligible*.

35. **ADB performance.** The sound justification of the TA was not matched by the terms of reference (TOR). These used the term “pilot models” when they meant pilot applications (of a model), underestimating the magnitude of the expected output. More important, they seriously underestimate the need for capacity development outside the SMEs themselves, crucial to disseminating cleaner production beyond the relatively small number of firms reached by the project. Equally serious was the choice of a short implementation period (1 year) that conflicted starkly with the complexity of the task so well described in the text. The fact that, in the end, the TA took much longer than expected was only in part caused by external events and was due at least as much to the unrealistic brevity of implementation period. If the expectation was that the related BDS TA would make up for some of this limitation, it proved wrong. BDS did not become active promoters of cleaner production in SMEs as was hoped at the outset. Elsewhere, the TOR’s call for implementation of ISO 14041 (life cycle assessment) was excessive given the resources provided for the TA and resulted in predictable lack of achievement. Finally, while the project’s design and monitoring framework quantified certain objectives (e.g., the number of trainees), the quantification was absent in the consultants’ TOR.

36. More difficult to assess is ADB’s relative inflexibility in guiding the TA. Whereas, at TA formulation, ADB paid attention both to overall regional experience and the country specifics, the latter were relegated to a secondary place once implementation got under way. Let us recall those specifics: two of the three industrial segments targeted by the TA (electroplating in general and silver plating) have good export promise but they are also tourism-dependent. The third (iron casting) has certain peculiarities. In 2002, at the beginning of the TA, tourism was still reeling from the 1997 Asian financial crisis and the after-effects of Bali bombings. Metal-plating SMEs were closing down or, if surviving, were not very receptive to initiatives such as cleaner production that might well be profitable in the medium and long run but involved initial investments. Iron casting by Klaten-based SMEs was being starved by the continuing decline of Indonesian railways, its traditional customer, and even more so by the rapidly growing imports of cast iron articles from the People’s Republic of China. Taken together, these factors made the selection of these TA pilot sectors suddenly questionable. The MIT did question the choice, in fact, but ADB remained unswayed by its suggestions for changing the pilot sectors.¹³ This may have been right strategically but was a tactical mistake. It reduced TA effectiveness in the short run, as more effort was required to sell the TA ideas in the sectors selected. And in the long run, not enough legacy was left behind by the TA to build on. Nonetheless, the MIT expressed itself generally satisfied with the results of the TA by the end of the project.

37. ADB minimized the problem of internal dissent among TA consultants and the resignation of the local consultants halfway through TA implementation is hardly mentioned in ADB documentation. The fact that the SME cleaner production TA was administered from ADB headquarters in Manila rather than the resident mission made it more difficult to establish the merits of the case.

¹² It might be useful to recall that Indonesia was one of the great innovators in industrial pollution control in the large enterprise segment through the PROPER/PROKASIH program launched in the early 1990s.

¹³ There would have been examples to draw upon to change focus. The Japan International Cooperation Agency-funded Aqua-Environment Improvement Project for a Model River Basin in the City of Semarang was introducing cleaner production principles among tofu-producing SMEs in Semarang, and the GTZ-managed Indonesian-German Environmental Program (ProLH), which started in 1999, had a major cleaner production component.

38. ADB coped well with the transfer of responsibility for the TA linked to ADB's internal restructuring of 2002. Somebody was always in charge. However, on balance, ADB's performance is rated *less satisfactory*.

39. **Executing agency performance.** The executing agency performance was rated *satisfactory*. The MIT expressed initial doubts about the direction of the TA, based on feedback from its SME constituency. However, the MIT provided the necessary facilities and, after the fielding of TA consultants, its counterparts gave solid support to the TA consultants in collecting necessary data and reports and liaising with SMEs, SME associations, and local government services. The principal executing agency counterpart project manager came in for a lot of praise by ADB staff responsible for TA implementation.

F. Issues, Lessons, and Follow-Up Actions

40. **Issues.** The question of how best to provide services to SMEs—i.e., whether through overt government-provided support or on a fee basis by specialized private sector providers—was raised during TA formulation. Elements of the latter approach, favored by some donors, appear in the TA documentation (when BDS are seen as potential providers of cleaner production expertise to SMEs) but, given the shortage of cleaner production service providers at the time, the TA project's emphasis was squarely on direct government support. The situation is changing in Indonesia, however, and the initial question deserves to be periodically raised inside ADB.

41. As formulated, the TA stood on its merits but was not well linked to policy and regulatory changes that might have made greater advances in the environmental performance of SMEs possible. Some 23 government organizations in Indonesia mention SMEs in their operations and considerable verbal support is directed at SMEs by the government and nongovernment entities but the sector still suffers from a lack of enabling conditions. Information on SMEs (and, even more so, on informal and microenterprises that are off the MIT's radar screen) is fragmented, with no centralized database on SMEs environmental performance. The TA project's attempt to develop an integrated measurement system to record environmental performance was seriously incomplete. Progress continues to be hard to establish with confidence.

42. The effort to upgrade the environmental behavior of Indonesia SMEs is hampered by multiple overlapping authorities and poor coordination. A clear policy statement and supportive actions are clearly missing even if signs of progress are unmistakable—in the activities of the ICPC, for instance.¹⁴ An umbrella policy addressing the development of the SME sector and of the approach to SMEs pollution control is yet to be formulated. Here, too, the cleaner production implementation strategy for SMEs developed by the TA, though considered useful by the MIT, fell well short of ideal. As to environmental policy and regulatory preconditions, the new environmental law (Law 32 of 2009) does not specifically address pollution by SMEs. The Pollution Control Department at the district or municipal office of the environment provides some financial support to SMEs but lacks a systematic approach. In short, much remains to be done.

43. **Lessons.** The implementation period of the TA project was too short and the budget too modest to bring about a widespread change in SME practices. Fundamental changes in SME environmental performance are unlikely to come about through one-time interventions and will require sustained action.

¹⁴ See R. Marshal. 2009. Cleaner Production Strategy in Indonesia. A presentation by the current ICPC Executive Director to the International Conference on Green Industry in Asia. Manila. 9–11 September 2009.

44. The field of environmental compliance by SMEs is a dynamic one. Many new approaches to improving the performance of SMEs and lowering their costs of compliance are being formulated by organizations such as the International Network for Environmental Management and the Asian Productivity Organization. The APRCP, supported by the SME cleaner production TA, is only one of a number of entities that have useful things to say and substantial experience in this area.¹⁵ It is important for ADB to keep abreast of these developments. ADB should also maintain regular contact with the ICPC.

45. Capacity development can mean many things but it usually encompasses the capacity of the ultimate economic actors, or the SMEs in the case of the SME cleaner production TA, and the capacity of those who facilitate or regulate the actions of these actors. This argues for sustained attention to a right balance in capacity-development activities in any ADB TA project. In the case of this TA, that balance may not have been the best.

List of Training Workshops Conducted under the Improving the Environmental Performance of Small and Medium Enterprises by Promoting Cleaner Production (TA 3837-INO)

Training Program	Target Participants
Cleaner production assessment to pilot SME training	SMEs for a particular sector (silver plating, iron casting, electroplating)
Inception workshop	SMEs, national government units and LGUs, BDS, industry associations, and other stakeholders from all three project sites
Policy and strategy seminars	SMEs for a particular sector (silver plating, iron casting, electroplating)
Basic EMS, cleaner production, and PUNDI introduction workshops	SMEs for a particular sector (silver plating, iron casting, electroplating), BDS, LGUs, and industry associations
EMS for pilot SMEs	Representatives from pilot firms, industry associations, or cooperatives
Cleaner production, EMS and assessment, audit, and performance measurement for SME	SMEs, LGUs, BDS, NGOs
Cleaner production, EMS, and self-certification for SMEs (training of trainers)	SME associations, LGUs, BDSs, training associations
EMS/cleaner production self-assessment for SMEs	SME associations, LGUs, BDSs, training associations
Cleaner production/EMS strategy and model in Jakarta	SME associations, LGUs, BDS, training associations
Final Workshop	Wrap-up and lessons learned

BDS = business development service, EMS = environmental management system, LGU = local government unit, NGO = nongovernment organization, SME = small and medium-sized enterprise, TA = technical assistance
Source: TA performance evaluation report evaluation.

¹⁵ For an example see W.H. Engel. 2004. ISO 14001 for Small Businesses (SMEs). A presentation at 13th ISO/TC 207/SC 1 Meeting in Buenos Aires, Argentina; or ISO. 2005. *The Global Use of Environmental Management System by Small and Medium Enterprises*. Executive Report of ISO/TC207/SC1/ Strategic SME Group. Stockholm. www.iso.org/tc207/sc1

CAPACITY BUILDING SUPPORT FOR THE PASIG RIVER ENVIRONMENTAL MANAGEMENT AND REHABILITATION—PHILIPPINES

A. Summary

1. The technical assistance (TA) for Capacity Building Support for the Pasig River Environmental Management and Rehabilitation¹ supported the implementation of the Asian Development Bank's (ADB's) Pasig River Environmental Management and Rehabilitation Sector Development Program (SDP) backed by policy and project loans.² The SDP aimed at implementing the initial slice (2000–2004) of the government's long-term (1999–2014) Pasig River Development Plan (PRDP) designed to improve water quality of the seriously degraded Pasig River and the living conditions along its banks.³ This evaluation considers only the TA project, not the SDP to which the TA was attached. However, due to the close subordination of this TA to the objectives of the SDP, frequent references to the program and the project are necessary.

2. The design and formulation of SDP shaped the TA project. The SDP rightly identified institutional capacity to implement the program to be among key prerequisites of success. The choice of the Pasig River Rehabilitation Commission (PRRC) as the TA executing agency was logical and the involvement of the Metropolitan Manila Development Authority (MMDA) and local government units (LGUs) was appropriate. Consulting services accounted for 85% of the TA project's total estimated cost of \$1.43 million and for 98% of the TA grant of \$1.00 million. In common with the majority of TA projects supporting ADB program loans, specific activities were not developed in detail in the TA documentation and ADB and the PRRC exercised substantial freedom in using available consulting and local staff resources. This, on balance, was a good thing.

3. The TA consultants responded competently and efficiently to their terms of reference, helped by a motivated staff at the PRRC. The consultants' outputs were generally of good quality and their work was appreciated by the executing and collaborating agencies.

4. The relevance of the TA derived largely from its support of the SDP. Without pre-judging the results of SDP completion reporting now under way and its future evaluation, it would be hard to find a Philippine setting that offers development potential better to that of the Pasig River. That relevance has not diminished. The PRDP, of which the SDP and the Pasig environment management TA was a slice, is still being implemented and the TA experience continues to be relevant to other parts of Metro Manila and beyond. The concerns addressed by the TA continue to be given priority by the Government of the Philippines and ADB programs. The design lacked provisions for long-term budgetary support for urban renewal schemes in LGUs. The TA was thus *partly relevant*.

5. The TA delivered the majority of outputs within the broad scope of work described in the TA document and the extra capacity created by the TA lives on in some cases but is partly

¹ Asian Development Bank (ADB). 2000. *Technical Assistance to the Republic of the Philippines for the Capacity Building Support for Pasig River Environmental Management and Rehabilitation*. Manila (TA 3469-PHI, for \$1 million, approved on 20 July).

² ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and a Technical Assistance Grant to the Republic of the Philippines for the Pasig River Environmental Management and Rehabilitation Sector Development Program*. Manila (Loans 1745-PHI and 1746-PHI, for \$175 million, approved on 20 July).

³ This was the successor to the Pasig River Rehabilitation Program (PRRP) launched in 1989 with the Danish International Development Assistance (Danida). Danida played a catalytic role by helping the government, through its Department of Environment and Natural Resources (DENR), to establish the PRRP, which sought to improve the river's health by consolidating all river rehabilitation efforts.

eroded in others. In this sense, the TA was *less effective*. Within the PRRC, the project management and procurement skills acquired during the TA are being used in follow-up Pasig River projects (e.g., the Pasig River dredging project). The TA contributed to the enactment of a new procurement law in 2003 and the Clean Water Act of 2004. Some loss of the TA project's institutional imprint can be observed in the MMDA and the LGUs, both of which have undergone significant internal changes, turnover of staff, or both. In all three institutions targeted, the legacy of the TA comingles with the institutional effects of other projects that these institutions implement along the Pasig River or in the linked ecosystems of Laguna Lake and Manila Bay.

6. Greater continuity and room for learning on the job made the PRRC component of the TA more efficient than activities implemented through the MMDA and LGUs. This, together with the erosion of some of the know-how originally transferred, makes the TA *less efficient* when taken as a whole. There has been a noticeable drop in the amount of attention and resources committed by collaborating agencies to the activities promoted under the TA. Some of it may well indicate success in completing a particular phase of capacity strengthening but the remainder suggests that the activities of the TA are *less likely* to be sustainable.

7. The overall assessment of the TA must remain conditional on the evaluation of the SDP. That SDP is complex and handicapped because it is only a portion of a longer-term program, a fact easily ignored by critics. But enough has been learned for the purposes of this evaluation to suggest that SDP should be considered, as a minimum, partly successful. Such a rating would remove the possibility that the activities of the Pasig environment management TA were the victim of a weak program parent. The TA energized key agencies, introduced and consolidated essential project management skills, and introduced a number of good management practices. In developing approaches to rehabilitation of congested urban areas and involuntary resettlement, it touched on some of the most pressing and politically sensitive issues of the rapidly urbanizing Asia. The SDP's achievements and possibly those of the TA itself may be overshadowed by the highly visible and still unresolved squatting problems in the Pasig watershed, which were evident early on in the SDP but particularly obvious during the 2009 Ketsana and Parma typhoons. Alongside the more conventional but essential activities, the TA helped operationalize local approaches to involuntary resettlement but it is far from certain that those approaches are robust enough to withstand future challenges. Both the SDP and the Pasig Environment Management TA provide a fertile ground for assessing the equivalence of the Philippine and ADB's involuntary resettlement safeguards, considered incomplete here.

8. ADB deserves high marks for embarking on a program that may have built on an intellectual base funded earlier by the Danish International Development Assistance (Danida) but called nonetheless for originality. Some of this rubbed off on the TA, for example, in the formulation of tasks to be performed by TA consultants or the recognition of the institutional interaction of the PRRC, the MMDA, and the LGUs. In dealing with resettlement issues, both the program and the TA broke new ground. ADB's earlier experience with urban resettlement—in the Suzhou Creek project in the People's Republic of China—was largely inapplicable to the Philippines.⁴ It is too early to say whether ADB will be equally original in using the program and TA experience to develop new approaches to urban informal high-density settlements. The view taken here is that it should.

⁴ ADB. 1999. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the People's Republic of China for the Suzhou Creek Rehabilitation Project*. Manila (Loan 1692-PRC, for \$300 million, approved on 29 June).

9. ADB was overly optimistic in initially envisaging a 1-year TA implementation period that seems to have been driven more by concerns about timely fulfillment of conditions for the release of program loan tranches than anything else. TA implementation itself was handled competently, helped by well-performing consultants. ADB did well to ensure substantial involvement of local institutions and experts in dealing with resettlement issues. The PRRC, the TA executing agency, was a young organization at the TA project's outset. By TA completion, it was more professional and it remains so today, despite some loss of trained staff.

10. The design of the Pasig environment management TA could not escape the institutional complexity of the SDP. It had to make a judgment about the roles of the PRRC, the MMDA, and the LGUs in the TA before experience could be gathered from SDP implementation. In retrospect, the TA should have placed greater emphasis on developing the capacity of the LGUs. With that in mind, a measure of flexibility in TA design and implementation that makes it possible to modify the division of activities in multi-institution TA projects such as the Pasig environment management TA remains a sound principle.

11. On balance, the TA is rated *partly successful* overall.

B. Introduction

12. **Evaluation purpose and process.** Outcomes and impacts of TA projects are difficult to identify at the time of these projects' formal closing. A longer time is needed to judge how much of a mark these projects have made. In the case of the Pasig environment management TA, this retrospective assessment comes almost 8 years after the TA project's formal completion (31 October 2002).

13. The evaluation took place 17–19 May 2010 in the field, preceded by detailed desk review of relevant documentation. The evaluation team interviewed the current and former staff of the PRRC, other agencies involved in TA implementation (MMDA), and ADB staff involved in the formulation of the TA. The team benefited from, among other sources, a well-prepared technical assistance completion report (TCR) that rated the TA *successful*.

14. **Technical assistance objectives.** The objective of the Pasig environment management TA, approved concurrently with the ADB-supported SDP, was to build the capacity of the PRRC, the MMDA, and beneficiary LGUs to implement the initial slice (2000–2004) of the government's PRDP.

15. The SDP was an integrated package of policy reforms supported by a \$100 million program loan and a series of specific interventions to improve the water quality of the Pasig River, permanently reduce pollution loading, and promote urban renewal and redevelopment along the riverbanks supported by a \$75 million investment loan (footnote 2).

16. The TA was to help the PRRC, MMDA, and LGUs (i) implement the targets set out in the policy reform action plan; (ii) ensure that PRDP activities were efficiently coordinated, phased, and sequenced and implemented effectively; and (iii) maximize the potential social, environmental, economic, and financial development benefits of the program.

C. Design and Implementation

17. **Rationale.** Winding its way through four municipalities of Metro Manila (Pasig, Mandaluyong, Makati, and Manila), the Pasig River, with its four major and over 40 small

tributaries, had long been a potent reminder of the inability of successive governments to come to grips with the interlinked and growing problems of severe river pollution. These included uncontrolled wastewater and other discharges into the river and its tributaries and exacerbated seasonal flooding caused by the river's reduced drainage capacity. Squatting, overcrowding, and degrading living conditions prevailed along the river banks and a variety of institutional, financial, and other obstacles stood in the way of rehabilitation. This was in stark contrast to the high property, amenity, and environmental value of riverside locations in the world's progressive cities. To their credit, the government of the time and ADB realized the development potential of a rehabilitation project centered on the Pasig. This resulted in the SDP.⁵

18. The program framers were keenly aware that success along the Pasig demanded a combination of physical investments and policy reform. The agreed policy and action framework included (i) approving, adopting, and implementing the first phase of the PRDP from 2000 to 2004; (ii) providing sanitation services in areas not covered by the Metropolitan Manila Waterworks and Sewerage System concession agreements; (iii) establishing a wastewater discharge permit system for Metro Manila with a progressive tariff structure; (iv) improving domestic solid waste management for riverside communities; (v) establishing environmental preservation areas (easements) along the riverbanks and undertaking urban renewal in adjacent areas; (vi) reviewing, strengthening, and unifying the environmental regulations and discharge standards; (vii) strengthening water quality monitoring and enforcement capability and capacity; (viii) enhancing public awareness of environmental issues; and (ix) strengthening the institutional capacity of agencies concerned with SDP implementation and environmental management in the Pasig watershed. The Pasig environment management TA was formulated to address the last-mentioned item of that agenda.

19. **Formulation.** Context was important in SDP and TA design and formulation. On the institutional side, the relative stability of the administration of the time facilitated reform but the country was still recovering from the effects of the 1997 Asian financial crisis. The government had just embarked on a radical program of privatization of water supply and wastewater management but it bypassed informal settlers.⁶ On the physical side, many industries had abandoned Pasig riverbank locations but massive encroachment by squatters and non-squatters continued, with household discharges coming to dominate industrial ones.⁷ Access to the river and access in general was blocked in many locations, making provision of services difficult or impossible. Immediate priorities were to restore access and formulate an approach to reducing discharges into the river and its tributaries. Both required, among others, tackling the complex issue of decongestion and resettling squatters.

20. Building on earlier Danida-supported work (footnote 3), the SDP was formulated (paras. 1 and 14). The program identified key institutions to be involved in the program's implementation, i.e., the PRRC, the MMDA, and the LGUs of affected municipalities. These institutions had all undergone several changes during the preceding period and their capacity to

⁵ It would be wrong to present the SDP as a path-breaking initiative. That role is more accurately attributed to an earlier (1989–1999) Danida-supported PRRP. The major contribution of the SDP was in brokering a consensus on the policy and investment action required at the close of the PRRP and supporting that action financially. For more details on pre-SDP development, see R.T. Cruz. 1997. Case Study III—The Pasig River, the Philippines. In R. Helmer and I. Hespanhol, eds. *Water Pollution Control —A Guide to the Use of Water Quality Management Principles*. London. Weinheim. New York. Tokyo. Melbourne. Madras: E. & F. Spon, on behalf of the United Nations Environment Programme, the Water Supply and Sanitation Collaborative Council, and the World Health Organization.

⁶ Now as Maynilad Water Services and Manila Water Company, concessionaires of the Metropolitan Waterworks and Sewerage System.

⁷ The relative shares of industrial vs. household discharges were often disputed by local pressure groups.

implement a program as ambitious as the SDP was insufficient and had to be strengthened if the program was not to be put at risk. This dictated the design of the TA.

21. Capacity development for the PRRC was to be directed at the project management office and support realization of the policy reform agenda; strengthening the forward planning capabilities of the PRRC; strengthening project evaluation, appraisal, approval, and implementation capabilities; coordination with the financing agencies and national and local entities implementing PRDP; identifying potential funding and cost recovery mechanisms to be used under approved programs and projects; establishing and operationalizing a system for monitoring and reporting on project and program activities; and developing procedures for contract management (tendering, bid evaluation, awards).

22. Capacity development for the MMDA would focus on helping to coordinate the plans and programs of national and local government agencies within the Pasig River basin; developing the systems and staff capabilities to enforce the observance of restored easement and environmental preservation areas (EPAs) in accordance with relevant MMDA ordinances and regulations, strengthen planning and coordination capabilities of MMDA staff; developing a system to consolidate plans and programs prepared by national and local government organizations and the private sector for the Pasig River basin; and establishing a system for monitoring development activities within the Pasig River basin.

23. Capacity development for the LGUs within the Pasig River basin would focus on preparing comprehensive development and zoning plans for the areas adjacent to the river and proposals for urban renewal; demarcating areas likely to be affected by the Pasig River Rehabilitation Program; preparing zoning and development plans for these areas; and helping LGUs identify areas most suitable for urban renewal, either as economic enterprise zones (high-growth commercial or mixed commercial and residential areas) or community revitalization zones (targeting the urban poor).

24. Assistance was also to be provided to “establish mechanisms to motivate the community to become involved with local nongovernment organizations (NGOs) and LGUs in revitalizing these areas economically (such as through encouraging enterprise and poverty reduction measures) and physically (e.g., through environmental upgrading).”⁸

25. As in most cases when TA supports a program loan, the TA was not described in detail in a separate TA document and no separate design and monitoring framework was formulated. Instead, the TA project’s brief summary was one of the appendixes of the relevant report and recommendation of the President (RRP), with an unstated assumption thus made that the RRP supplied the context and even the detail necessary. As a result, significant room—greater than

⁸ Quoted from the description of the TA in SDP RRP, Appendix 15, page 1 (footnote 2). The responsibility for the CBS TA was only part of the PRRC’s executing responsibilities. Under the SDP, the PRRC was responsible for overall program coordination, monitoring, implementation, and capacity building. It established a project management office for this purpose. The PRRC was also responsible for implementing the sanitation component, including the development of the septage treatment facility and the septic tank cleaning service. The Department of Environment and Natural Resources (DENR), in conjunction with the Laguna Lake Development Authority, were responsible for monitoring water quality and enforcing environmental regulations and standards. The Housing and Urban Development Coordinating Council, in collaboration with the National Housing Authority and the LGUs, were responsible for development of squatter relocation sites and relocation of families from EPAs. The MMDA and the LGUs were responsible for implementing urban renewal, including community consultation, preparation activities, and provision of infrastructure and basic municipal services. Thus, all three agencies targeted by the Pasig environment management TA had direct implementation responsibilities under the SDP (“headaches other than implementing the TA”).

usual—was provided in this TA to interpret its activities flexibly. In principle, such flexibility is desirable even if it calls for correspondingly greater supervision efforts by ADB during implementation and greater effort during evaluation.

26. **Cost, financing, and executing arrangements.** The total cost of the TA was estimated at \$1.43 million, including \$695,000 in foreign exchange cost. ADB provided \$1.00 million to finance the entire foreign exchange costs and the equivalent of \$305,000 of the local currency cost on a grant basis from the Asian Currency Crisis Support Facility funded by the Government of Japan. The government was to contribute \$430,000 in local currency cost. Foreign and local consultants accounted for the bulk of projected TA cost while office accommodation, transport, and counterpart cost dominated the estimates of the government TA contribution. By TA closing in July 2003, 99.8% of the TA amount had been disbursed. The actual amount of the government contribution was not monitored but it is likely to have been substantively in line with the original estimates, given the continued availability of planned government-funded inputs.

27. The TA was to be executed by the PRRC, at the time under Department of Budget and Management (DBM), “working in close collaboration with MMDA and the participating LGUs.” Transfer of administrative oversight of the PRRC from the DBM to the Department of Environment and Natural Resources (DENR) in 2006, after the Pasig Environment Management TA completion, was the government’s choice, not necessarily ADB’s, since the DENR was considered better suited to regulatory activities than development. ADB nonetheless raised no objections to the transfer in view of DENR’s other responsibilities under the SDP.

28. The TA budget provided no clues about how TA money was to be divided between the PRRC and the collaborating agencies, a decision that rested with ADB and the PRRC. Despite this, no major interagency disputes arose, with the allocation of TA consultant resources fairly balancing the needs of the executing and collaborating agencies, especially during the period of DBM supervision of the PRRC.

29. The original TA appendix of RRP envisaged a 12-month implementation period. This was changed to a far more realistic 2-year implementation period. It seems that original timeframe was ambitious, considering that several agencies were involved in the implementation. In addition, the PRRC was still a new institution and the fielding of consultants was delayed 6 months.

30. **Consultants and scheduling.** Consulting services were the core of the TA. A total of 24 person-months of international- and 56 person-months of local consulting were envisaged. The international team comprised an urban planner, a municipal engineer, an industrial wastewater engineer, a financial analyst, an urban economist, and a legal/privatization specialist. The domestic consultants were a town planner, a community development specialist, a municipal engineer, an economist, a legal adviser, a training specialist, and a sanitary engineer.

31. Early on in implementation, the legal/privatization specialist was replaced by a community awareness specialist to help develop public information and advocacy approaches to deal with negative publicity that sprung up around the project, as well as to help address the social dimension of resettlement. The total amounts of consulting inputs actually delivered were not significantly different from those originally planned, with only small changes in designations and marginal adjustments in the quantity of inputs: 23.5 person-months of international consulting services and 53 person-months of domestic consulting services.

32. The TA consultants' written outputs comprised an inception report, an interim report, quarterly progress reports, a draft final report, and a final report. They also prepared 14 technical working papers. The final report is comprehensive and well presented. It was submitted after a small delay in September 2002 to incorporate comments from government agencies. In general, to the extent that the required consultant inputs could be located during the evaluation, they appear to have been provided on time. Training materials prepared by the consultants were of good quality and the events considered useful by participants, according to ADB staff. The executing and collaborating agencies were generally satisfied with TA inputs. The TCR commented on enthusiasm and dedication of the PRRC counterpart staff that helped overcome government hiring freeze during the period of TA implementation.

33. Nevertheless, the TA consultants and ADB commented on difficulties arising from belated appointment of project implementation assistance consultants and insufficient cooperation by the DENR's Environmental Management Bureau in providing comments on technical working papers and on recommendations related to environmental compliance essential to meet the SDP's environmental policy agenda. National and local elections in May 2001 diverted senior LGU executives and technical staff to the election campaign at the expense of the SDP and TA concerns.

34. The TA required coordination between the TA consultant team and consultants engaged under related TA supported by other aid agencies, in particular Danida, working with the DENR. There is nothing to suggest that this posed any special difficulty.

35. **Design changes.** Apart from lengthening the period of TA implementation from 12 to 24 months, no changes were made in the design of the TA.

36. **Outputs.** The TA was to facilitate the SDP's policy reform agenda and the delivery of its physical outputs. The performance of the SDP itself is yet to be formally assessed and this report resists the temptation to judge the Pasig environment management TA by the still incomplete picture of SDP achievements. Instead, we limit ourselves to the TA outputs only.

37. In the PRRC, the consultant team developed a proposal for regulatory reform based on a comprehensive review of environmental regulations and discharge standards as they related to the Pasig River. It also prepared an action plan for capacity development for key environmental management agencies—the PRRC itself, the DENR, the Laguna Lake Development Authority (LLDA), the Environmental Management Bureau, and other national capital region agencies. Based on a needs assessment, the consultant team organized 28 workshops during the inception phases, targeting one or more of the key collaborating agencies, covering a broad range of topics, and involving 600 participants. The consultants drafted a wastewater discharge permit system for Metro Manila and developed options for implementing an environmental user fee system similar to that now used by LLDA. These were to be adopted by all 11 LGUs within the Pasig River catchment. The consultants helped the PRRC develop and put into use a project performance monitoring system. The consultant team also developed a set of procedures for contract tendering, bid evaluation, and awards, specifically (i) standard operating procedures and PRRC guidelines for government procurement of infrastructure and construction (December 2001), (ii) PRRC guidelines for the prequalification of civil works contractors (December 2001), (iii) a PRRC sample bid document for civil works documents (December 2001), (iv) a draft simplified disbursement procedures manual (June 2001), and (v) a PRRC financial management system (January 2002).

38. Working with the MMDA, the consultants developed an approach to formulate an urban renewal area (URA) and EPA development strategy, an URA action plan for two pilot areas (Joriz Plaza/Abella in Mandaluyong and Barangay Pineda in Pasig), an action plan for development and improvement of EPAs; and a riverbank development plan that reconciled the plans and programs of national and local government agencies and the private sector within the Pasig River basin.

39. The TA was instrumental in developing interagency coordination. Several outputs in the PRRC and the MMDA contributed to meeting tranche release conditions of the SDP program loan. The efficiency of that mechanism is questionable at the current time, however, as the activities of the PRRC are not fully integrated with activities of the LLDA and of projects in Manila Bay, both of which affect the conditions of the Pasig watershed.

40. Capacity development for the LGUs within the Pasig River basin focused on establishing areas that were to be impacted under the SDP, modifying comprehensive development and zoning plans for these areas, and developing proposals for urban renewal. As a result, three of four LGUs involved (Makati, Pasay, and Manila) incorporated recommendations of the Pasig River Rehabilitation Master Plan into their comprehensive land use plans, zoning ordinances, and URA plans. The TA marked the beginning of a joint commitment by the MMDA and the LGUs to the enforcement of riverbank easements and the defense of EPAs. Training was provided to the MMDA and the LGUs for this purpose. The TA project's objective of helping the LGUs identify areas with a potential for urban renewal, either as economic enterprise zones or as community revitalization zones, was pursued through training events directed at the LGUs and local NGOs.

41. A knowledge, attitude, and practices survey was undertaken among targeted communities by the TA team at the project's outset to encourage responsive design and collaboration of the targeted communities with local governments and NGOs in undertaking revitalization measures. The survey findings were used by the PRRC to develop an environmental awareness manual for wide use and to guide the approach toward local solid waste management initiatives. This was an attempt to institute a participatory planning process along the Pasig River in nine poor urban communities.

42. **Policy framework.** The Pasig Environment Management TA was subordinated to its parent, the SDP, and in that role, it helped support SDP policy reform and investment components. The policy dimension of the SDP included (i) establishing a wastewater discharge permit system with a progressive tariff structure in Metro Manila; (ii) adopting of a new approach to developing riverside communities based on EPAs and URAs; (iii) reviewing, strengthening, and unifying the environmental regulations and discharge standards; (iv) strengthening water quality monitoring and enforcement capability and capacity; (v) enhancing public awareness of environmental issues; and (vi) strengthening the institutional capacity of agencies in charge of environmental management in the Pasig watershed. The way in which the TA addressed these policy objectives is described in (paras. 36-38)

D. Performance Assessment

43. **Overall assessment.** TA such as the Pasig environment management project that explicitly supports a program and project loan and is approved as an integral part of a bigger effort such as the SDP would ideally be evaluated jointly with it. We do not have that luxury here and need to evaluate the TA, physically completed well ahead of the program itself, on its own. We make a working assumption, backed by a limited number of field visits and interviews with stakeholders, that SDP is at least partly successful.

44. The TA itself is considered *partly relevant, less effective, less efficient, and less likely* to be sustainable. Its positive impact was strongest at the PRRC and less lasting at the MMDA and the LGUs. Several of the project's outputs have had a short life and some have been overtaken by events and forgotten. Mainly because of that, the TA is considered only *partly successful*.

45. **Relevance.** The challenges addressed at the time of the TA—urban renewal, linked to pollution control and informal urban settlements—remain as important in the Philippines today as they were when the SDP was launched. So it is only the TA project's failure to address the question of the financial instruments essential to ensure the long-term viability of its urban renewal component that reduces its rating to *partly relevant*. Otherwise, the Midterm Philippine Development Plan 1999–2004 and its successors, as well as ADB's Philippine country assistance plan 2000–2002 and its successor country assistance strategy, country strategy and program, and country partnership strategy, give direct or indirect support to the direction of the TA. In supporting the SDP, the TA addressed the right priorities.

46. The relevance of the TA extends beyond the Philippines, as suggested by the size of ADB's water quality management portfolio and the importance of the topic of involuntary settlement in ADB's assistance to urban sector of its developing member countries.

47. **Effectiveness.** The TA is rated *less effective*. Its impact on strengthening the capacity of the participating institutions has not been uniform and this adversely affected the delivery of some of the SDP's policy reform initiatives.

48. The attribution of this rating is easiest in the case of the PRRC. Here, the TA made a significant contribution to that institution's ability to support both the policy reform and the investment components of the SDP. This was most visible in the commission's project evaluation, appraisal, approval, and implementation capacity, as well as in its contract management ability and coordination with relevant national agencies (the National Economic Development Authority, Department of Finance). That capacity and the documentation produced at the time are being used to this day in spite of some loss of qualified staff that the organization can compensate for through its own efforts. The PRRC was introduced to ADB procurement procedures and ways of harmonizing these with its own. Implementation rules and regulations were developed for all bidding. The skills introduced by the TA are being applied in new activities undertaken by the PRRC such as the Pasig River dredging project. A TA output, the Standard Operating Procedure PRRC Guidelines for Government Procurement of Infrastructure Construction Contractors (December 2001), also contributed to the new Philippine Procurement Law (Republic Act 9814) enacted in 2003. The project performance monitoring system continues to be used today, if not perhaps with the same intensity as it was at the peak of the SDP activities.

49. In several other cases, the TA outputs have had a positive, if somewhat muted, impact. Many of the ideas in the proposal developed under the TA for a wastewater discharge permit and environmental user fee system for Metro Manila have made their way into the Philippine Clean Water Act of 2004 and Department Administrative Order 10 of 2005 (Clean Water Act Implementing Rules and Regulations), although with some loss of specificity in a failure to target Metro Manila and key LGUs and in falling short of the LLDA model.

50. The project performed less well in the cases of the MMDA and the LGUs. The institutional revamp of the MMDA in 2004 resulted in a loss of continuity. The majority of those involved in the TA project are no longer with the organization. While the approach to formulating URAs and EPAs developed under the TA is well embedded in practice, little evidence remains

that the URA action plan is being implemented. In contrast, EPA's riverbank development plan has been used for the development of EPAs of 2 kilometers in length in seven barangays in Mandaluyong. The National Housing Authority collaborated with the LGU in the relocation of informal settlers to allow for this development, assigning land outside the city for most of the resettlement. The creation of Metro Manila Interagency Committee to deal with squatter resettlement has been in part motivated by the experience of the SDP and the Pasig environment management TA. The MMDA's participation was effective until the time when the chair of the PRRC was transferred as part of a government restructuring from the Department of Budget and Management to the DENR, after which involvement declined.

51. The work of the TA is more evident in some LGUs than in others. The differences reflect several factors, including the activism of the local administration of the day and the degree of benefit perceived by the municipality concerned from amending zoning and development plans and identifying areas with good potential for urban renewal. In general, the municipalities were strengthened during the TA implementation, especially by acquiring capacity to develop project proposals on their own instead of relying on the PRRC. Some of this effect is being dissipated, however, through the loss and reassignment of trained staff. The LGUs also reported making effective use of the findings of the TA-designed knowledge, attitudes, and practices survey in receiving community feedback to the project development initiatives. Active participation was also reported from all LGUs in the TA with the preparation of comprehensive land use plans and zoning ordinances that are still in use.

52. In retrospect, the TA ought to have focused more on building the capacity of the LGUs. They are responsible in the long term for the maintenance and upkeep of the Pasig rehabilitation areas. The project should have created counterpart offices at the LGUs to work with the PRRC on the Pasig program. These offices would have provided continuity of designated staff involvement in the PRRC program after TA completion. The MMDA did not benefit much from the TA and was not structurally set up to address the scope of the TA. Although expected to coordinate the functioning of the LGUs in the 10-meter easements along the Pasig River area, the MMDA had little control of the LGU planning process.

53. **Efficiency.** Some perspective is required in assessing efficiency. The cost of the Pasig environment management TA (\$1.43 million) amounts to about 0.8% of the combined value of the program loans (footnote 2). If the SDP achieves its intended results, the TA will have contributed to that success and have done so at a remarkably low cost. The TA was not the only support the SDP has had, however. Simultaneous with the TA, or before or after it, Danida, the United States Agency for International Development (USAID),⁹ NGOs, and voluntary sources¹⁰ have also made contributions. The ADB TA cannot reasonably take credit for all the SDP's potential success.

54. Within the TA project's own boundaries, some components were more efficient than others. Strengthening of the PRRC with its well-defined focus and outputs was achieved on time and within budget. The benefits of that strengthening continue to accrue to the country, making this component money well spent. That assessment is more difficult in the case of the capacity strengthening of the MMDA and the LGUs. On the positive side, some outputs were produced within the original budget and time (e.g., amendment of municipal zoning plans and

⁹ Most notable among these were the USAID Philippine Sanitation Alliance that works with LGUs on water and sanitation issues and USAID-Rotary Pasig River Improvement Project.

¹⁰ These included, for instance, the Piso para sa Pasig program and activities of the ABS-CBN Foundation. For a more comprehensive picture of NGO involvement in Pasig rehabilitation, see I. Baleta. 2009. NGOs' Role in the Pasig River's Rehabilitation Program. A presentation to FORUM—Network for Urban Futures in Southeast Asia, Summer School. Cologne, Germany. 2009. www.forum-urban-futures.net

development of procedures on enforcement of easements). Others such as training events to help LGUs and NGOs identify areas with good urban renewal potential have had mixed results. Proposals have been developed but not acted upon or were of poor quality. The process of squatter relocation and urban renewal under the SDP that the TA helped develop and put into operation was prolonged and only partly successful.¹¹ Judging by this, the component was either *less efficient* in developing an approach to Pasig urban renewal or the true cost of urban renewal was far higher than assumed by the framers of the SDP and the TA did a good job but the task proved far more difficult than expected. Here, we lean toward the latter interpretation without, however, having the confidence to declare the MMDA and LGU components *efficient*.¹²

55. Closer and longer-lasting physical contact of TA consultants with the PRRC encouraged more learning on the job by counterpart staff than was the case at the MMDA and the LGUs where contacts were less frequent and less continuous. This, too, helps explain the greater efficiency of the TA in the PRRC than in the MMDA and the local governments. However, the TA did experience delays in completion and the PRRC was not ready to receive the TA when approved. Taking into account the delays in completion of activities, the TA is rated *less efficient*.

56. **Sustainability.** What is considered here is not the sustainability of a TA project—capacity development can go on forever—but the sustainability of activities that the TA helped strengthen. On balance, the TA is rated *less likely* to be sustainable for reasons cited below.

57. The problems of Pasig River were not new at the time the SDP was formulated. Because of their scale and scope, however, the SDP helped achieve the critical mass needed to alter the public perception of the problems and the TA played a positive role in that process. By raising the program's profile, the TA created some of the preconditions for sustainability.

58. Despite fluctuations in PRRC staff numbers reflecting the commission's changing workload, including the phasing out of the SDP and the start of other projects, the activities of the PRRC bear the imprint of the TA and for now remain very much needed.

59. Mainly through training, the TA has made a positive contribution to the capacity of the LGUs to formulate projects. Even if this capacity is subject to the usual attrition of skills and staff, the LGUs are now somewhat stronger and more active, even if they do not remember the TA in any detail or not at all. The PRDP is not finished and the demand for the LGUs' active participation is likely to grow. The seed planted by the TA, then, is likely to survive, albeit with some ups and downs. At the MMDA, there is little continuity and the TA is now a distant memory. None of the three agencies targeted by the TA found it possible to sustain its support at TA levels once the project ended.

60. The question of how to deal with informal settlements along the Pasig and its tributaries is key to the fate of the SDP. It will also help determine the program's sustainability. Metro Manila's squatter population continues to grow. Partial successes along the Pasig are being offset by setbacks elsewhere. This creates demand for the sort of skills fostered under the Pasig

¹¹ The relocation of the original 10,000 families envisaged at the outset of the SDP is only now being accomplished, with 9,000 families relocated at the time of writing. This may almost match the number of informal settlers relocated from other areas of Metro Manila by the National Housing Authority during the same period, as noted by the MMDA but this, by itself, means little. The marginal value of de-squatting along the Pasig may well be higher than elsewhere in Metro Manila but the number of non-Pasig squatters may be rising rapidly.

¹² The SDP did not have the luxury enjoyed by more authoritarian governments in Asia of dealing with relocation of inhabitants unsentimentally. In purely financial terms, the relocation and creation of alternative livelihoods for the Pasig River squatters has been a slow, inefficient, and probably costly (in per family terms) process.

environment management TA (formulation of urban renewal projects and community participation among them) but this continued demand is a sign of broader policy and societal failures.

E. Other Assessments

61. **Impact.** Judgment of the TA project's ultimate impact is linked inextricably to the judgment still to come on the SDP. For now, it is possible to say that 7 years after the TA project formally ended, the Philippines has an agency in charge of managing new projects along the Pasig River that is more mature than it was originally. The Pasig River municipalities have greater confidence in their own ability to formulate and manage local projects. And across the board, there is greater acceptance of the need to coordinate and communicate across administrative boundaries.

62. Some good habits have been introduced or reinforced in government institutions. These include project performance monitoring in the PRRC, which spills over into its supervising body, the DENR. Nonetheless, the impact rating assesses corroborating sustainability of socioeconomic outcomes and improvements in the urban and ecological values of the Pasig river system. The TA project's impact on that score is *moderate*.

63. **ADB performance.** ADB was imaginative in the design of the SDP and the accompanying TA and tenacious in seeing the formulation through to its completion despite many challenges, including adverse publicity, which it prefers to avoid. In managing the TA, ADB proved ready to work with different stakeholders, such as the Ateneo de Manila with which it collaborated in the development of community discussions. It responded quickly to the need to reinforce the project's community awareness dimension. At the same time, ADB displayed caution. It chose to leave involuntary resettlement, a vital aspect of the Pasig River challenge but also the most controversial, largely outside the scope of the TA. By doing so, it may have avoided potential embarrassment but also missed an opportunity to gain lessons and resettlement experience that could be of exceptional importance to many cities in Asia.¹³

64. ADB was slow in undertaking a program and project completion report and this has placed additional demands on this evaluation. On balance, ADB's performance is rated *satisfactory*.

65. **Executing agency performance.** The change of government in early 2001 altered the composition and membership of the PRRC. The commission's establishment and the time it took to become fully functional affected initial TA mobilization. This, together with the appointment of new secretaries in agencies with strong links with the PRRC, the LGUs, and the MMDA, such as Housing and Urban Development Coordinating Council, required a period of settling in.

66. The administrative order in February 2001 placing restrictions on government expenditure and hiring of additional staff adversely affected the ability of the PRRC-project management office and other agencies involved in the implementation of the Pasig River Rehabilitation Program to provide adequate experienced counterpart staff to meet training and capacity-development demands.

¹³ Here, the IED 2006 study on involuntary resettlement is a valuable reference (ADB. 2006. *Special Evaluation Study: Involuntary Resettlement Safeguards*. Manila).

67. Despite these difficulties, the PRRC staff remained motivated throughout the period of TA implementation and no particular difficulties arose to cause disquiet at ADB or among TA consultants. The executing agency performance is rated *satisfactory*.

F. Issues, Lessons, and Follow-Up Actions

68. **Issues.** Institutional aspects tend to be decisive in formulating and implementing complex programs such as the SDP and the associated TA. Creation of a new body, the PRRC, was a logical next step in a long series of attempts to deal with deteriorating conditions of the Pasig River. Nonetheless, by the end of the TA, the limitations of substantively relying on the PRRC were beginning to emerge and the case was becoming stronger for a unified management of the interconnected ecosystems of Laguna Lake, the Pasig River, and Manila Bay. The TA was formulated well ahead of this emerging realization. It helped strengthen the institutional status quo but that status may well deserve reconsideration.

69. ADB did not finance relocation and land acquisition under the SDP, reacting defensively and in due deference to its safeguard policies.¹⁴ Understandable as this may be, it must still be asked whether the SDP and the Pasig environment management TA should have played a more active role in developing approaches and practices of squatter resettlement, in part to provide a balance for the emphasis given in ADB indigenous resettlement safeguards to roads and stand-alone infrastructure projects rather than high density urban redevelopment programs. The latter are undoubtedly riskier but offer exceptional development opportunities.

70. **Lessons and follow-up actions.** This evaluation shares the view expressed in TCR that “policy change requires skills, effective institutional incentives, and culture change. The latter two areas require capacity-building support for a period much longer than 1 year from organizational establishment as was envisaged by the TA.”

71. The SDP and Pasig environment management TA put emphasis on strengthening government institutions and policies rather than focusing on NGO involvement. The potential role of the NGOs in implementing the SDP was recognized and some of the TA project’s activities (especially those coursed through LGUs) included NGOs as facilitators or trainees. In spite of this, ADB was unprepared for hostility to squatter resettlement and even urban renewal components of the SDP and initially found it difficult to orient itself in an unorganized nongovernment setting in which different local pressure groups overlapped with different kinds of NGOs. The importance of an effective communication strategy and action then emerged and was successfully addressed through TA rebalancing (para. 31). That lesson deserves to be kept in mind. Rather than simply hide behind safeguard policies and avoid difficulties or unpleasantness, ADB needs to learn to act on its technical convictions and to explain them to even a raucous audience.

72. Resettling squatters largely in the same area, a feature of the SDP, appeals to the heart but may not be logical or sound in practice. Alternatives are not easy to formulate, especially when they require creation of welcoming conditions and livelihood opportunities for the resettled population but the bias toward a locational status quo deserves at least to be debated rather than automatically presumed to be the superior option. The TA had relatively little to say about this but was not entirely divorced from it, especially in respect of the MMDA-implemented component. The MMDA’s part of the TA, however, was relatively modest.

¹⁴ It is ironic, therefore, to note that the caution did not spare ADB controversy, with some noisy protestations along ADB Avenue outside ADB’s Manila headquarters at the SDP’s outset.

List of Capacity-Development Activities Conducted under the Capacity Building Support for the Pasig River Environmental Management and Rehabilitation (TA 3469-PHI)

No.	Area of Concern	No.	Activity
1.	Ecological solid waste management	1.	Action planning workshop on ecological solid waste management in riverside communities for the four pilot LGUs
		2.	Workshop on ecological solid waste management action plan
2.	EPAs	3.	First EPA workshop
		4.	Second EPA workshop
3.	Comprehensive land use planning and zoning	5.	Pre-LGU summit consultation meeting
4.	Environmental wastewater management	6.	Consultation workshop on wastewater management (Policy Agenda 3, 6, and 9)
		7.	Consultation workshop meeting (Policy Agenda 3, 6, 7, and 9)
5.	Urban renewal	8.	Manila URAs workshop on action plan preparation
		9.	Seminar workshop on URAs
6.	Project evaluation and appraisal	10.	Seminar on project evaluation and appraisal
7.	Social preparation	11.	Seminar-workshop on social preparation for relocation
8.	Financial planning and management	12.	Seminar-workshop on PRRC financial planning and management
		13.	EUFS system in the Philippines
9.	Relevant environmental topics, issues, and concerns—EFS (joint undertaking with Danida)	14.	Updates on Pasig River water quality monitoring
		15.	Ecological solid waste management in riverside barangays-The Barangay Barangka Itaas Experience
		16.	Updates on the EIA/EIS system in the Philippines
		17.	Overview of GIS and its application to the Pasig River Environmental Management and Rehabilitation Project
		18.	Overview of ERA
		19.	Environmental Awareness for Pasig River LGUs
		20.	Industrial waste exchange in the Philippines
		21.	Overview of environmental management, EMS, and ISO 14001
		22.	EIA
		23.	Integrated water resources management
		24.	Urbanization versus urbanism
		25.	Municipal wastewater management
		10.	Public relations, information, and advocacy (in joint undertaking with Danida's Pasig River Rehabilitation Program and PRRC's Project Implementation Assistance)
11.	Business and technical writing (in joint undertaking with Danida and the ATV speakers network)	27.	Training course on effective business writing
12.	Various SDP and PRRM concerns	28.	Metro Manila Mayors' summit

ATV = Academy for the Technical Sciences, Danida = Danish International Development Assistance Agency, EFS = environmental forum series, EIA = environmental impact assessment, EIS = environmental impact statement, EMS = environmental management system, EPA = environmental preservation area, ERA = environmental risk assessment, EUF = environmental users fee, GIS = geographic information system, ISO = International Organization for Standardization, LGU = local government unit, PRRC = Pasig River Rehabilitation Commission, PRRM = Pasig River Rehabilitation Program, SDP = Sector Development Program, TA = technical assistance, URA = urban renewal area. Source: TA performance evaluation report evaluation.

EVALUATION OF ENVIRONMENTAL STANDARDS FOR SELECTED INDUSTRY SUBSECTORS—PHILIPPINES

A. Summary

1. The technical assistance (TA) on Evaluation of Environmental Standards for Selected Industry Subsectors, implemented by the Environmental Management Bureau (EMB) of the Philippines Department of Environment and Natural Resources (DENR) between 1997 and 1998, was formulated to help the bureau develop environmental standards and regulations for industries aligned with the government's support for sustainable development.¹ The TA was a concerted attempt to replace an ideological approach to environmental standards—i.e., the simple imposition of imported environmental standards across all industries—by one that takes into account local ambient conditions, enforcement capacity, and a variety of economic trade-offs inherent in the process. The TA linked environmental compliance with the introduction of cleaner production into Philippine industries, selecting the power, cement, and sugar sectors for special attention. The project also aimed at improving industrial permitting database and monitoring.

2. The project was a relatively modest initiative within a proliferation of environmental initiatives in the Philippines funded by other aid agencies. In the Asian Development Bank (ADB) itself, the TA was soon eclipsed by two major environment-related policy and investment programs—the Metro Manila Air Quality Improvement Project (MMAQIP) and the Pasig River Environmental Management and Rehabilitation Sector Development Program. Despite the shadows cast by these much larger undertakings and some obscurity due to the passage of time, the TA, completed 12 years ago, achieved a lot.

3. The TA recommended new regulatory standards in the short and long terms for three subsectors, with emission and effluent goals for control pollutants (total suspended particulates, sodium dioxide, nitrogen oxide, biological oxygen demand) in different receiving environments. The standards are now used. The TA introduced a new approach at the EMB to formulating environmental standards that are sensitive to the context, industry-specific, and accompanied by consultations with technical experts and representatives of the regulated community. The Department Administrative Order (DAO) 14 of 2003 promulgating Philippine Environmental Partnership Program, with an incentive-based and step-wise but time-bound approach to achieving environmental compliance, built substantively on the work of the TA.

4. The project's analytical and promotional work in support of cleaner production fell short of the original objectives but many of the measures advocated by the TA found their way into cleaner production initiatives of other government agencies, such as the Department of Trade and Industry (DTI), the Board of Investments, and the Department of Science and Technology (DOST).

5. The TA contributed meaningfully to the passage of the Clean Act of 1999, with far-reaching institutional and practical consequences.

6. The TA, relevant at the time, remains so to this day whether in the context of environmental compliance in the rapidly growing industrial estates or of improved environmental performance through greater energy efficiency and waste minimization. The TA was *partly effective*, largely due to the many changes of senior personnel at the EMB and the DENR during

¹ ADB. 1996. *Technical Assistance to the Republic of the Philippines for Evaluation of Environmental Standards for Selected Industry Subsectors*. Manila (TA 2623-PHI, for \$400,000, approved on 30 July).

the TA project's implementation, even though the EMB gave the project genuine and consistent support.

7. ADB responded to the request for support from the Government of the Philippine imaginatively and competently. Its supervision of the TA was facilitated by the physical closeness to the TA team and the EMB.

8. Despite small setbacks in the introduction of the Computerized Permit Administration System (CPAS) and the institutionalization of clean production, the TA is rated *partly successful* overall.

B. Introduction

9. **Evaluation purpose and process.** A passage of time is needed to judge the outcomes and impacts of ADB TA. In the case of this TA project, the retrospective assessment comes after an unusually long period— almost 12 years since formal TA completion in November 1998.

10. The evaluation took place in the field 17–19 May 2010, preceded by detailed desk review of relevant documentation. The evaluation team interviewed the current staff of the EMB and other government agencies affected by the project, communicated with former ADB staff involved in the formulation and supervision of the TA, consulted ADB staff now involved in Philippine environmental management, and discussed the project with the Pollution Control Association of the Philippines. The evaluation team had access to all TA-related documents, including the technical assistance completion report (TCR) that rated the TA *generally successful*.

11. **Technical assistance objectives.** The TA paper describes the TA objectives as "assisting EMB in the implementation of sound environmental management programs through the development of rational and enforceable environmental standards and regulations for industries in consonance with the government's policies and strategies for sustainable development." Other stated TA objectives were to assist the government in (i) incorporating economic and financial strategies and policies into the environmental management plans and programs of the EMB; and (ii) improving the management of the database and monitoring and enforcement of environmental permits, licenses, and clearances. The EMB was to become the hub for all industrial pollution control databases and positioned to coordinate and use them.

C. Design and Implementation

12. **Rationale.** Notwithstanding pro-environment rhetoric and some isolated achievements, the Philippines entered the 1990s generally unprepared to deal with environmental pollution. The country was squeezed between the urgent need to solve power shortages, among other public utility crises, and its commitment to environmental improvements, which was illustrated best by the creation of the Philippine Council for Sustainable Development, with its Agenda 21. The government was saddled with an antiquated approach to environmental standards, based largely on importation of foreign norms that were well-intentioned but unsuited to Philippine conditions. Rather than protecting development, these standards and the manner of their application hindered it. This was felt particularly by the power sector and energy-intensive industries such as cement but also affected such sectors as agro-processing. Both the principles of standard setting and the process were weak. The former lacked a cost-benefit basis or recognition of ambient factors and sector specificity and the latter was prescriptive with minimal feedback from the regulated community.

13. The emphasis on end-of-the-pipe treatment had long begun been supplemented in the pollution control programs of the advanced economies or replaced by cleaner production approaches. In the Philippines, the win-win potential of this approach still needed to be demonstrated and cleaner production promoted.

14. **Formulation.** The TA was formulated by ADB in response to a growing sense of urgency by the Government of the Philippines to reform the process and practice of environmental standard setting. The formulation coincided with greater interest by the developing member countries and development agencies in promoting waste minimization and principles of cleaner production, which was rightly considered to be a powerful ally of compliance with environmental standards.

15. The TA scope was to (i) review the current rationale and enforcement of existing environmental quality, emission, and effluent standards; (ii) using three major industry subsectors (power, cement, and sugar), determine the appropriateness of the existing environmental standards in terms of enforcement ease and the regulated industries' ability to take corrective action; (iii) examine economic and financial incentives and disincentives to improve compliance with EMB standards; (iv) review state-of-the-art and environmentally sound technologies in the targeted subsectors and compare potential energy utilization efficiencies, and wastage reduction with those actually recorded in the Philippines; (v) develop mechanisms to encourage adoption of improved and environmentally sound technologies and phase out energy-inefficient and high waste-generating technologies; and (vi) develop appropriate effluent and emission standards for the three chosen industry subsectors. The TA was also to examine the existing management of industrial pollution database and the procedures for permits, licensing, and monitoring used by the DENR and the EMB and recommend ways of streamlining and improving them; and evaluate the potential involvement of the private sector and environmental nongovernment organizations (NGOs) in various aspects of environmental management, especially in sampling, laboratory analysis, and monitoring of violators.

16. The formulation saw a narrowing down of an originally broader scope covering emission and/or effluent standards of all major industrial sectors (with those of the National Power Corporation [NPC] given prominence) to emission and effluent quality standards of selected subsectors (power, cement and sugar) only.

17. **Cost, financing, and executing arrangements.** The total TA cost was estimated at the equivalent of \$540,000, comprising \$296,000 in foreign exchange and \$104,000 in local currency. The TA was financed by the Japan Special Fund for \$400,000. The government was to contribute \$140,000 in kind.

18. The EMB of the DENR was designated as executing agency to provide overall guidance and support to TA implementation. The DTI was a collaborating agency tasked with integrating DENR policies into the country's industrial realities.

19. The EMB's counterpart staff included a project manager and 10 technical personnel on air quality and water quality, and representatives from three regional offices. Counterpart steering agencies included the National Economic and Development Authority, the House of Representatives of the Philippine Congress, the Department of Health, the Department of Transportation and Communications, the DTI, the Department of Interior and Local Government, the Department of Energy, the DOST and the NPC. The House of Representatives, the Department of Interior and Local Government, the Department of Transportation and Communications, and the NPC dropped out from steering activities early on in the TA project's life. No particular reason for this change was given.

20. **Consultants and scheduling.** The TA was to provide 9 person-months of international and 15 person-months of domestic consulting services, the former in the fields of environmental economics, environmental science and technology, technology transfer, and information and database management. The latter were provided in the fields of environmental law and litigation, environmental engineering, industrial and energy planning and policy, environmental health, and computer science. Actual inputs were as follows: 10.23 person-months of international and 15.98 person-months of domestic consulting services.
21. Consultants assisted the EMB through review of policies and databases, coordination with key agencies, conduct of studies, facilitation of technical meetings, and consultations.
22. The TA was to be completed by 31 March 1998 but disruptions of the TA work resulting from the national election in May 1998 made it necessary to extend to the closing date of 26 November 1998.
23. Only one change was made in consultant inputs. The services of the technology transfer international consultant were abandoned to provide time to address new tasks placed on the consultant team, i.e., to facilitate processing of the high-priority the MMAQIP and, specifically, to study the implication of the TA on the design of the MMAQIP with particular reference to outsourcing of stack measurement and monitoring of air emissions in Metro Manila airshed and institutional strengthening and capacity building for air quality management in the Metro Manila airshed.
24. The consultants produced all contracted reports, usually with small delays. These included monthly progress reports; inception report (due on 30 April 1997, delivered on 7 May 1997), interim report (31 August 1997/24 October 1997), draft final report (31 January 1998/April 1998), and final report (31 March 1998). In all, 10.23 person-months of domestic and 15.98 person-months of international consulting services were delivered by the end of the project.
25. **Design changes and evolution.** The TA was originally programmed for 1995 but the approval for a corresponding ADB fact-finding mission was delayed due to changes in the National Economic and Development Authority personnel. The original TA was budgeted at \$600,000 but this was reduced to \$400,000 in the resource availability conditions of 1996. The original (1995) TA concept envisaged development of a national industrial permitting database as part of the TA. During the TA inception, this was scaled down somewhat. The narrowing down of the TA scope from all industries to selected subsectors was mentioned earlier (para. 16) as was the change of scope of consulting services (para. 23).
26. **Outputs.** The planned outputs and their delivery were as follows:
- (i) **Enforceable standards for three selected industry subsectors.** The consultant team (a) confirmed the choice of three subsectors (power, cement, and sugar) and collected information relevant to their environmental regulation; (b) reviewed the existing (DAO 14 of 1993) ambient air and water quality standards and the approach to their formulation; (c) reviewed the performance of the selected subsectors against the existing pollution control standards, using EMB records, Pollution Adjudication Board statistics, and formal and informal discussion with plant operators; (d) assessed the levels of emission/effluent standards that could be afforded by industries; (e) calculated the treatment costs to meet regulatory standards; (f) developed methodological guidelines for the revision of standards; and (g) recommended new regulatory standards for the three subsectors with emission and effluent goals for control pollutants (total

- suspended particulates, sodium dioxide, nitrogen oxide, biological oxygen demand) in different receiving environments and in the short and long term.
- (ii) **Environmental management policies and standards compatible with the country's industrial development goals.** The consultant team (a) formulated a framework for evaluating potential impacts of environmental standards on industrial development; (b) reviewed available state-of-the-art and environment-friendly technologies; (c) assessed the technologies and processes used by the three industry subsectors targeted by the TA; (d) drafted a clean technology and environment law; (e) reviewed the DTI industrial development program and incentives and disincentives provided to specific industries to phase out energy-inefficient and polluting industries and introduce environment-friendlier alternatives, and assessed the economic feasibility of incentive programs; (f) recommended economic incentives to encourage environmental compliance and clean production in cement and sugar industries; and (g) developed guidelines and procedures for accreditation of private laboratories and NGOs for third-party compliance monitoring.
 - (iii) **Database and information system to track submission of reports, delivery of permits, renewable notices, and prosecution of violators.** The consultant team (a) reviewed the procedures for enforcement of environmental standards, and issuance of permits and licenses, with specific attention to identifying bottlenecks and resource constraints within the DENR; (b) developed a database and system (CPAS) to improve the implementation of the environmental standards and industrial permitting, and trained EMB and DENR personnel in the use of the system; (c) procured and installed system hardware in the EMB and in EMB Central Luzon, Central Visayas, and Northern Mindanao regional offices; (d) field-tested the standards enforcement and CPAS; and (e) assessed the technical and financial capacity of regulated firms to conform to new EMB procedures.
 - (iv) **Action plan for implementation.** An implementation plan with a broader cleaner production focus was formulated that envisaged two phases. The initial phase was an industry environmental policy, drafted by the consultant, containing sections dealing with implementation of economic instruments, implementation of regulatory instruments, computerization of DENR administrative procedures, accreditation of private laboratories, and participation of NGOs and local government units in monitoring. The consultant recommended that, during its second phase, the policy be legislated, preferably supplemented by pollution discharge targets, cleaner production technology objectives, and economic instruments/incentives.

Additional outputs provided by the consultant team (i.e., its contribution to the MMAQIP) were mentioned earlier (para. 23).

27. **Policy framework.** The TA was formulated after the United Nations Conference on Environment and Development, when ADB had given new priority to the environment, which was to become one of the five ADB strategic development objectives. It was also a time when environment-related initiatives by other development agencies targeting Philippine industries were mushrooming. The inclusion of other agencies with close links with the industry in the TA steering committee was important for that reason. The DENR had just completed the United States Agency for International Development-supported Industrial Environmental Management Project but kindred projects were under implementation or planned. These included the Integrated Program on Clean Technology implemented by the DOST and the Philippine activities of the United States-Association of Southeast Asian Nations (ASEAN) Environmental

Project and Industrial Waste Exchange Program, both conceptually close to the TA project's efforts to promote environmental compliance through the introduction of cleaner technologies and approaches. The DOST's Integrated Program on Clean Technologies in particular complemented and perhaps even duplicated one of the components of the TA.

D. Performance Assessment

28. **Overall assessment.** The TA may have tried to achieve too much but it seized on the right theme—improving environmental compliance through better standard-setting and novel approaches—and did it at the right time. TA implementation was characterized by pragmatism based on relevant regional and global experience. The main and lasting contribution of the TA may have been less its specific outputs and more the approach that the TA promoted. The logic behind setting environmental standards is now better appreciated in the EMB and by the regulated community and further evolution of the regulatory framework is now more consultative and analytical. The potential of cleaner production as an environmental compliance tool no longer needs to be explained to the country's environmental regulator and sector overseeing industries. The TA was and remains relevant.

29. The original TA outputs were produced fast and were of acceptable quality. In its support to the MMAQIP, the TA ended up going beyond its terms of reference. Offsetting the strongly positive change in the EMB culture, for which the TA is responsible in part, several TA outputs proved to be relatively short-lived and limited in their geographical scope, and some of the dynamism that the TA introduced into the EMB has been lost. The sustainability of the TA direction is, therefore, *likely*. The TA is rated *partly successful* overall.

30. **Relevance.** The TA is rated *relevant*. It was implemented in the middle of the environmental reform-minded 1990s. The reform impulse was being driven by unsolved problems in public utility provision and apprehension about the impact of better environmental regulation, which was a stated government priority shared by development partners, on industry competitiveness at a time of rapid expansion of industrial estates and industrial decentralization. The TA fitted into that picture perfectly. The priority given to improved environmental management had a solid basis in the country's 1993–1998 Medium-Term Philippine Development Plan (MTPDP) and soon had visible results in the form of the Clean Air Act 1999 and the Ecological Solid Waste Management Act of 2000. Attention to environmental measures to control air, water, and solid waste pollution continues to be featured in the MTPDP to this day (most recently, in the 2004–2010 MTPDP).

31. **Effectiveness.** No evaluation of the quality of TA outputs was made in the TCR. When this evaluation looked at the TA project's outputs and their legacy during the 12 intervening years, a generally positive picture emerged. New standards formulated by the TA for the three TA subsectors were adopted as part of a more comprehensive DAO 81 of 2000 (the implementing rules and regulations of the Clean Air Act). DAO 10 of 2005 (the implementing rules and regulations of the Clean Water Act) and Administrative Orders 34 and 35 are being used today. By contrast, the proposal to legislate clean technology policy has never progressed beyond draft status. Some of the draft law ideas, however, have found their way into activities of other government agencies. They can be found in the DTI's 1997 Investment Priority Plan, the DOST's Science and Technology Agenda for National Development, the Environmental Management Program on Industry Competitiveness, the activities of the Philippine Business for the Environment (a corporate nonprofit organization), and industrial ecology modules promoted by the Board of Investments.

32. The record is distinctly positive under the introduction of economic incentives to encourage environmental compliance and clean production. After several years of reflection the DENR launched the Philippine Environment Partnership Program via DAO 14 of 2003 to facilitate cooperation between environmental regulators and the industry in formulating a stepwise approach to pre-agreed technical environmental standards. The program is supported financially by the Development Bank of the Philippines (DBP), drawing on the Japan Bank for International Cooperation-funded Environmental Infrastructure Support Credit Program, and is based on environmental management plans prepared by industry associations such as the Philippine Sugar Millers Association (PSMA), Philippine Cement Manufacturers Corp. (PHILCEMCOR), Pulp and Paper (PULPAPEL), Food Processing (PHILFOODEX), and Alcohol Distillers Association. The environmental management plans establish performance benchmarks verified by the DBP. These serve as road maps for continuing improvement in industry performance and are a basis for DBP support and the DBP's compliance monitoring, subject to EMB oversight. This achieved one of the principal expected outcomes of the TA, i.e., institutionalization of industry-specific guidelines that recognize differences in the way various industries conduct their operations to replace uniform application of environmental standards and a prescriptive approach to environmental compliance. It can also be reasonably said that the TA made a meaningful contribution to the very important Clean Air Act of 1999 through additional work performed by the consultant team in support of the MMAQIP. The TA project's contribution to other important pieces of environmental legislation (Ecological Solid Waste Management Act of 2000 and Clean Water Act of 2004) was, if anything, indirect.

33. Despite a substantial delay, the TA project's work on accreditation of third parties for environmental monitoring has been institutionalized through DAO 25 of 2007 (Guidelines for DENR Accreditation of Third Party Source Emission Testing Firms).

34. The impact of the new approach to environment standards, for which the TA is to a significant degree responsible, can be judged, albeit imperfectly, by the record of industry's environmental compliance. This is moderately positive. On balance, the TA is rated *less effective*.

35. **Efficiency.** Considering the TA project's modest scale, its outputs were achieved at a relatively low cost and were delivered largely on time. TA work on cleaner production may duplicated some of the activities of the DTI and the DOST but not to a great extent and served to place the regulator (EMB) on a par with industry ministries. The TA consultants coped well with the change of scope (para. 23) but there was a delay of 8 months in TA completion. Taken together, the TA was *less efficient*.

36. **Sustainability.** The TA established the practice of creating technical committees on standards, which are used ad hoc but effectively to bring together stakeholders, experts, and government staff to consider standard formulation and enforcement. This practice is found useful by the EMB and is appreciated by the regulated community. DAO 14 (para. 38) institutionalizes the new approach.

37. The work on environmental standards continues to get support by other development partners. An example is the Japan International Cooperation Agency's Capacity Development Project on Water Quality Management, Phase 1 (2005–2007) and Phase 2 (2008–2010). Similar support, though not necessarily channeled to the EMB, is noticeable in the area of cleaner production and industrial ecology (para. 32). This additional support, as well as a related regional TA, were among the reasons why a proposed ADB TA on improving industrial efficiency and competitiveness that was included in the 1998–2001 Philippines country assistance program and intended to further develop the directions promoted by the TA was ultimately dropped.

38. CPAS has been adopted in a small number of administrative regions and today it appears to be a relatively passive tool. DAO 17 of 2002 redefining the structure of the EMB in response to the Clean Air Act of 1999 reiterated the EMB's role as an information hub but the formulation was too general to claim that the objective of the TA has been achieved. DAO 14 of 2003 effectively replaces CPAS with the Industrial Environmental Management Geographic Information System (IEM GIS), but the application of IEM GIS appears to be inconsistent for the time being. Overall, the objective of turning the EMB into a hub for all industrial pollution information has been achieved only in part.

39. The direction promoted by the TA is rated, on balance, *likely to be sustainable*.

E. Other Assessments

40. **Impact.** The TA is assessed to have a *moderate* impact. The EMB today still bears its marks and the project's impact to the bureau's working style is undeniable. The Pollution Control Association of the Philippines, representing the regulated community, has good things to say about that evolution. There are signs that the new direction, best encapsulated in DAO 14, indicates a collaborative and consultative relationship between the regulator and the industry. Whether some of the industrial promotion policies in the Philippines have blunt the pro-environment regulatory and incentive measures is a separate question not evaluated here.

41. **ADB performance.** ADB took advantage of its headquarters presence in Manila and, while conducting a single formal mission (fact-finding mission, 14–16 March 1996) during the life of the TA (and leaving meager written record of the project's progress), ADB staff attended several steering committee meetings and maintained direct personal or telephone contact with the TA team and DENR officials. It speaks well of both ADB and the DENR (EMB) and attempts to encourage continuity that the ADB staff member largely responsible for the TA design became director of the EMB upon his retirement from ADB in 2006. ADB performance is rated *satisfactory*.

42. Anything in excess of 10 years is simply too long in the Philippines (and probably anywhere) to jog memories and reestablish contacts with those with intimate knowledge of the TA project. In such circumstances, the evaluation is forced disproportionately to rely on second-hand information.

43. **Executing agency performance.** TA implementation was hampered by frequent changes in the top ranks of the EMB. From TA fact-finding to completion, there were five changes of EMB director and two changes of DENR undersecretary of environment and research. Each time, the consultant had to spend considerable time to brief the new DENR/EMB office holder. That problem apart, EMB was supportive and its performance was *satisfactory*.

44. Continuity is apparent in the EMB's work, e.g., in the Japan International Cooperation Agency-supported the Capacity Development Project on Water Quality Management that introduces the standards-related expertise into regional EMB offices (in support of the Clean Water Act) and in pilot testing development of industry-specific effluent standards that widen the scope of the ADB TA to new sectors such as agro-processing and pulp and paper.

F. Issues, Lessons, and Follow-Up Actions

45. **Issues.** Following the TA, ADB's support to environmental management in the Philippines has been directed to high-profile projects (the MMAQIP and Program, the Pasig River Environmental Management and Rehabilitation Project and Program, and the Energy

Efficiency Project). The environmental standards and regulatory compliance chapter in collaboration between ADB and the Government of the Philippines appears to have been closed. It might be appropriate to revisit it in the near future if only to confirm that the positive trend started under the TA continues.

46. The TCR identified industry protection policies as a major obstacle to faster introduction of cleaner production and greater environmental compliance in the Philippines. This evaluation has not considered how important this problem remains 12 years after the TA project's completion. The topic would deserve to be addressed during policy and programming dialogues between ADB and the Government of the Philippines.

47. **Lessons.** Through its overt as well as indirect support to cleaner production and improved environmental compliance management, the TA has created room for greater lending by ADB's Private Sector Operations Department and greater venture financing of cleaner production. In that sense, the TA is a good example of cross-fertilization between TA directed at the public sector and private sector development activities.

48. Relatively small but well-targeted TA projects such as this one can have a major impact, provided they remain aware during implementation of parallel activities by other government agencies. ADB TA projects are often not the only games in town and building an understanding of the country-wide context into TA implementation through steering groups or similar mechanisms turns potential duplication into a source of synergy.

49. Although sufficient time must elapse before outcome and impacts of ADB projects can be established, that gap is rarely greater than 10 years. The evaluation would have benefited with more recent feedback and results had the gap been somewhat shorter.