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PROJECT PERFORMANCE ASSESSMENT REPORT

TRINIDAD AND TOBAGO

**ENVIRONMENTAL MANAGEMENT PROJECT
(Loan 3863)**

January 31, 2003

*Sector and Thematic Evaluation Group
Operations Evaluation Department*

Currency Equivalents (annual averages)
Currency Unit = Trinidad and Tobago Dollar (TT\$)

1995	US\$1.00	TT\$5.90
1996	US\$1.00	TT\$5.95
1997	US\$1.00	TT\$6.25
1998	US\$1.00	TT\$6.25
1999	US\$1.00	TT\$6.20
2000	US\$1.00	TT\$6.20

Fiscal Year Government: October 1 – September 30

Abbreviations and Acronyms

CAS	Country Assistance Strategy
CBD	Convention on Biodiversity
CEC	Certificate of Environmental Clearance
CPACCC	Caribbean Planning for Adoption to Climate Change
EIA	Environmental Impact Assessment
EM	Environmental management (the function and process)
EM Act	Environmental Management Act 1995
EMA	Environmental Management Authority
ICR	Implementation Completion Report (of the World Bank)
MBI	Market-based Instrument (providing incentives for sound EM practices)
MoPaD	Ministry of Planning and Development
MOU	Memorandum of Understanding
MOP	Memorandum of the President
NBSAP	National Biodiversity Strategy and Action Plan
NEAP	National Environmental Action Plan
NEIS	National Environmental Information System
NEP	National Environmental Policy
NGO	Non-Governmental Organization
OED	Operations Evaluation Department (of the World Bank)
PPAR	Project Performance Assessment Report (of the World Bank)
RAMSAR	The Convention on Wetlands (Ramsar, Iran, 1971)
THA	Tobago House of Assembly
UNDP	United Nations Development Program
UNFCCC	UN Framework Convention on Climate Change

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January 31, 2003

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

**SUBJECT: Performance Assessment Report on Trinidad and Tobago
Environmental Management Project (Loan 3863-TR)**

The loan of US\$6.25 million for the Trinidad and Tobago Environmental Management Project (Loan 3863-TR) was approved in 1995. It closed in December 2000 after a one-year extension and an undisbursed balance of US\$0.78 million was cancelled. The overall objective was to build effective institutional capacity to plan and implement sound environmental management. Sub-objectives were to bring the Environmental Management Authority (EMA) to full operational capacity, complete a National Environmental Action Plan (NEAP) and implement its findings, strengthen the legal framework for environmental management, rationalize and strengthen the environmental management activities of government agencies (the Participating Agencies – PAs) in an information network coordinated by EMA, introduce a public awareness program, train EMA and PA staff, and carry out planning studies on environmental issues. An earlier Bank technical assistance loan and UNDP grants had contributed to the establishment of EMA in 1995.

While the project objectives were highly relevant, the outcome of the project was moderately unsatisfactory. This reflects an over-ambitious set of activities, undue expectations on implementation capacity and the rate of change, the lack of specific environmental objectives and wavering government commitment during a period of financial stringency and political uncertainty. Generating support for environmental management would have been easier if the project design had focused less on process and tackled some of the most serious and obvious environmental problems. Effective public sector capacity for environmental management was not established as intended, since the numerous government agencies having environmental impact were not organized into the intended coordinated system. Training and studies to build EMA's capacity were inadequate while budget and personnel shortages prevented the rationalization and strengthening of the PAs. An effective information network coordinated by EMA was not developed. The National Environmental Action Plan was delayed and did not lead to priority setting although the separate National Environmental Policy has substituted. On the positive side, while work on the legal and regulatory framework for environmental management lagged under the project it has since picked up, and a public awareness program was undertaken and is continuing.

Institutional development impact is rated as modest. Implementation and expenditures focused mostly on EMA, and the intended broad-based system linking other national stakeholders was not established. Only part of the legislation is in place. There remains a lack of environmental indicators and monitoring to inform government and promote public awareness. Despite government declarations (e.g., in the National Environmental Policy) and project intentions, there is weak enforcement of planning and conservation policies and legislation to require restoration of damaged sites is missing.

Sustainability of the reduced benefits of the partly formed environmental management system is rated likely on balance, although capacity is weak in the PAs, where the bulk of EM occurs, and EMA is not autonomous.

Bank performance is rated satisfactory, albeit after a weak start. The project appears to have been a standard design insufficiently tuned to country realities, and hence quality at entry was poor. Institutional objectives were both over-ambitious and open-ended, which weakened accountability, and lack of environmental improvement goals reduced incentives for substantial institutional improvements. The Bank backed away from environmental substance and early on adopted a complaisant view of weak implementation. The failure to follow-up with a related Bank-supported operation, for whatever reasons, has weakened the value and impact of the Bank's role in the initial institution-building phase, which was only the starting point of a long process.

Borrower performance is rated unsatisfactory. Although government funding eventually greatly exceeded plans, there was weak follow-through with essential legislation and neglect of many key stakeholders. The absence of "headline" environmental programs to begin to tackle egregious environmental issues is conspicuous seven years after the original Environmental Management Act of 1995 and the formation of EMA. A number of continuing environmental anachronisms (for example leaded gasoline, reef walking, beach pollution, inadequate waste disposal and threats to unique environmental resources) reflect an ambiguous environmental record compared with announced policies and public expectations. Borrower environmental management performance has still some way to go to meet the expectations agreed at appraisal.

The main lessons are:

- Specific and monitorable development objectives are a strong incentive to effective project implementation, especially when institutional changes are substantial parts of the implementation schedule.
- Justification for Bank involvement in the institutional groundwork of such a long-term process as environmental management should be built on a clear understanding between the parties and a commitment by the Bank as to continued assistance.
- EMA should be located in a neutral part of the government structure, or even outside it, where there is no possibility of a real or perceived conflict of interest arising in its environmental activities – its decisions should be based on technical and economic considerations.

Attachment

OED Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the OED Rating System

The time-tested evaluation methods used by OED are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. OED evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (more information is available on the OED website: <http://worldbank.org/oed/eta-mainpage.html>).

Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

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This report was prepared by Julian Blackwood (consultant), who assessed the project in April, 2002, and peer reviewed by Keith Pitman (Task Manager) The report was edited by William Hurlbut, and Soon-Won Pak provided administrative support.

Principal Ratings

	<i>ICR*</i>	<i>ES*</i>	<i>PPAR</i>
Outcome	Satisfactory	Satisfactory	Moderately Unsatisfactory
Sustainability	Highly Likely	Highly Likely	Likely
Institutional Development Impact	Substantial	Substantial	Modest
Bank Performance	Satisfactory	Satisfactory	Satisfactory
Borrower Performance	Satisfactory	Satisfactory	Unsatisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The Evaluation Summary (ES) is an intermediate OED product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

<i>Project</i>	<i>Task Manager/Leader</i>	<i>Division Chief/ Sector Director</i>	<i>Country Director</i>
Appraisal	Douglas Wholey	Nicholas J. Krafft	Yoshiaki Abe
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Preface

This is a Performance Assessment Report (PAR) on the Trinidad and Tobago Environmental Management Project for which the World Bank approved a loan (3863-TD) for US\$6.25 million, on March 30, 1995. The original closing date of December 31, 1999, was extended until December 31, 2000. An undisbursed balance of US\$0.78 million was canceled.

This report is based on the Implementation Completion Report (ICR, Report No. 22393) prepared by the Latin America and the Caribbean Region, issued on June 20, 2001, the Memorandum and Recommendation of the President, loan documents, project files, and discussions with Bank staff. An Operations Evaluation Department (OED) mission visited Trinidad and Tobago in April 2002 to discuss the effectiveness of the Bank's assistance with the government, project implementing agencies, private sector agencies, and other stakeholders. The cooperation and assistance of government officials, management and staff of EMA, UWI, civil society agencies, and other interested parties are gratefully acknowledged.

This PAR assesses the outcome of one of the early attempts by the Bank to provide assistance for environmental management in a small island developing economy, which, because of its unusually large petro-chemical industrial base and relatively high income, has both severe environmental problems and the opportunity to ameliorate them. The assessment took place some seven years after the loan was approved by which time results of the initiative should be evident.

Following standard OED procedures, a draft of this PAR was sent to the borrower for comments but none were received.

1. Background

Country and Sector

1.1 Trinidad and Tobago consists of the largest island in the southern Caribbean, Trinidad, plus Tobago to its northeast. The population of 1.3 million is concentrated in the northeast of Trinidad in the capital, Port of Spain, and two conurbation corridors eastwards and southwards from the capital to the towns of Arima and San Fernando respectively.¹ The economy is based on petrochemicals exploited since 1908 and is the most industrialized in the Caribbean. Because Trinidad is small and separated from the mainland by only seven miles of ocean, with a wide range of habitats, there is a relatively dense, varied and profuse biodiversity, and occasional new species come across the Gulf of Paria from Venezuela. Habitats span high rainfall tropical rain forests in two hill ranges to notable areas of semi-arid savanna, swamps, mangrove, and picturesque bays and long beaches around the coastline.

1.2 Major labor-intensive plantation crops (especially sugar and cocoa) were important before the oil and petrochemical industries took over in the twentieth century, and the Afro-Indian population reflects labor imported during the early Spanish and then British colonial eras (which ended in 1962). The economy experienced boom years while oil prices were high during the 1970s, but too little of the boom had lasting impact, and opportunities were missed while resources were plentiful to correct some longstanding environmental problems. With the recent discovery of vast additional offshore oil and gas reserves, Trinidad and Tobago is poised for another economic boom which may provide a renewed opportunity to correct environmental problems.

1.3 The plantation and petrochemical industries, combined with dense population in the northeast lowlands, have resulted in great pressure on the environment with both localized and dispersed pollution (of soil, air, fresh water, and beach and ocean resources), loss and damage to natural resources and threats to biodiversity. Main problems are polluted waterways and shorelines (from a combination of industrial effluent, untreated sewage, and frequent oil spills), sites contaminated by oil spills and industrial waste, poorly sited and managed dump sites and improper dumping of hazardous solid wastes, deforestation (especially in the Northern Range), and growing air and noise pollution. Noise pollution, in the Caribbean home of the steel drum carnival band, is a public issue that politicians have addressed recently. Car ownership has recently grown rapidly to become the highest per capita in Central America and the Caribbean (in Tobago it has more than doubled in three years), giving rise to increased congestion and air pollution.² On the positive side, most of the oil and gas extraction and petrochemical industries are distant from the major population centers and the prevailing winds from the east blow air pollution over the Gulf of Paria away from the major centers in western Trinidad.

1.4 Mangrove removal and swamp reclamation for rice cultivation are topical issues in conservation. Unlike most of the smaller Caribbean islands, beach-based international tourism is not significant (except in southern Tobago) although international cruise ships call at Port of Spain. Tobago is especially concerned about beach and ocean pollution from untreated sewage and seepage from waste dumps, beach encroachment, and the adverse impacts of recent large-

1. Like most islands in the Caribbean the capital and main port is located on the calmer west side where early sailing ships found safe anchorages out of the prevailing Northeast Trade Winds.

2. Bulk importation of inexpensive used cars has made them affordable to many more families.

scale tourist developments. Rapid expansion of pleasure boat and international yachting businesses in and around Chaguaramas (west of the capital) is giving rise to pollution problems.³

1.5 An active and vocal lobby follows environmental issues and presses for changes based on a variety of perspectives: business interests that see commerce benefiting, preservationists concerned about biodiversity and losing natural treasures, NGOs with specific mandates, and the University of the West Indies which is active in monitoring and documenting environmental issues and which offers related courses.⁴ The environmental situation at project design is summarized in Annex B, Table 1.

Project Genesis

1.6 Environmental problems have long been recognized in the country, but at the Rio Earth Summit in 1992 the country's National Report on its environmental status was muted:

“At the national level, environmental issues pertain to land use, pollution, solid waste management, and environmental standards. Regional issues relate mostly to the Caribbean Sea and include trans-boundary transport of hazardous chemicals and wastes, pollution (including oil pollution), and the management of trans-boundary fish stocks. And at the global level, the major issues include climate change and sea level rise.” (World Resources Institute web site, April 2002).

1.7 The Business Expansion and Industrial Restructuring Project (Loan 3432), known as BEIRL, became effective in March 1993 and contained some environmental management measures to avoid adverse impacts from further industrial expansion. In proposing BEIRL the Bank's President reported to the Board that the government “recognizes that environmental degradation must be halted and reversed before economic development, human health, and the biosphere become further affected, and appreciates the need to put in place the necessary legal, regulatory and institutional framework.”⁵ But it was clear to the government and the Bank that a more fundamental approach to environmental management was needed, both to establish capability and to rationalize the existing confusion of environmental legislation and environmental responsibilities of numerous government agencies. Other driving forces for strengthened environmental management were a strong environmental movement that was making itself heard and a government study that suggested that eco-tourism had good potential.⁶

1.8 Government took swift action. In 1992 it used funds from a Bank Technical Assistance Loan to hire a consultant to coordinate establishment of a specialized agency for environmental management. The government then prepared a Policy Brief (1993)⁷ and a draft Environment

3. Environmentalists note that part of the attraction of Chaguaramas for foreign boat owners is that overhauls are not constrained from using materials banned elsewhere (such as lead-based anti-fouling) and that the usual regulations for waste disposal are not in place.

4. Tobago notes proudly that it has the oldest declared forest reserve in the Western Hemisphere – Main Ridge Reserve which dates from 1765, “for the protection of the rains.”

5. *Memorandum and Recommendation of the President*, March 6, 1995, World Bank. Later the project under assessment was described as building on the start made under BEIRL.

6. The Bank's support through the Environmental Management Project started out in the early 1990s as a component of a broader Natural Resources Management Project (NRM), but at government request the EM component was promoted to a full project and the NRM concept apparently lapsed. Two NRM projects (National Parks and Wildlife Authority) survived into the 1999 Country Assistance Strategy as projects proposed for 2001, but that was not to be.

7. Assisted by a consultant engaged with funds from the World Bank Technical Assistance Loan.

Management Bill which, after public comments, became the Environmental Management Act (1995).⁸ This Act provided the institutional framework for environmental management. It established the Environmental Management Authority (EMA) as an autonomous statutory agency (Box 1). An Environmental Trust Fund was to finance EMA's operations (through annual appropriations approved by Parliament and funds from fees, grants, and donations). An Environmental Commission, as a superior court of record, was to hear appeals against EMA actions. The government recognized that creating EMA in 1995 was but one of many measures needed to address pressing environmental issues, including the need to rationalize and coordinate the environmental activities of government agencies and consolidate environmental legislation. At the time, some 25 affected agencies were identified and there were said to be about 40 pieces of legislation containing environmental clauses, but these numbers grew substantially as more work was done.⁹ The task facing EMA in environmental management, especially coordinating environmental work of what became known as the "Participating Agencies," was challenging given the severity, depth, and breadth of environmental problems (Annex B, Box 1).

Box 1. EMA's Responsibilities

To recommend national environmental policies, develop and implement policies and programs for the effective management and use of the environment, coordinate environmental management functions, make recommendations for the rationalization of the environmental management system, promote public awareness, set national environmental standards, monitor compliance and take enforcement action, prevent and control pollution and foster conservation of the environment and establish and coordinate linkages at the local, regional, and international levels. (Based on the *Environmental Management Act, 2000*, Part III)

2. The Project

Project Objectives¹⁰

2.1 The overall objective was **to build effective institutional capacity to plan and implement sound environmental management**. This was to be achieved through eight secondary objectives (the last three of which were listed in the documents as components):

1. bringing EMA to full operational capacity as quickly as possible (its creation was a Condition of Loan Effectiveness);
2. completing a National Environmental Action Plan (NEAP) and implementing measures consistent with NEAP findings;
3. strengthening the legal and regulatory framework for environmental management;
4. strengthening and rationalizing the activities of government agencies involved in environmental management (the Participating Agencies – PAs);
5. linking the PAs into a national environmental information network under the coordination and supervision of the EMA;
6. a public awareness program;

8. UNDP funds were used for technical assistance to draft the act and to assist setting up EMA.

9. EMA's Annual Report for 2000 mentions that over 100 laws touch on environmental issues, while another source advised the OED mission that there were over 140 pieces of legislation with environmental management content requiring rationalization.

10. Statements of objectives often vary between sources in the project documents (see Annex D for details). The secondary objectives adopted here are also components rather than higher level development objectives, but are so used to facilitate the assessment and align somewhat with the ICR's approach.

7. environmental training (for staff of EMA and the PAs and the private sector); and
8. studies on environmental issues.

2.2 The completion of a National Environmental Action Plan (NEAP) was especially important to the project as it included determination of EMA's immediate priorities and future work program without which this new agency could not be brought to full operational capacity (which was a major sub-objective). In the context of later comments, there was a notable dilution of objectives as the project design developed: the original objective statement as late as appraisal was to support a "priority [environmental management] work program", but this later became "implementing measures consistent with NEAP findings." Similarly, the fifth objective's "national environmental information network" linking the PAs and EMA was originally a National Environmental Management Information System.¹¹

2.3 Just before field appraisal a Bank internal document reported that the public's prime environmental concern was over drinking water quality, followed by oil pollution of coastal waters and inadequate treatment of sewage. That document proposed that tackling water quality issues, including coastal waters, should be included in the priority activities of the project. But despite that existing evidence, determining priorities was assumed to need study and no environmental management priorities were included in project objectives. This seriously weakened the project design.

2.4 While there was reportedly wide commitment to the objectives among government, the private sector and nongovernmental organizations (NGOs), and it was recognized that a concerted effort over many years would be necessary to achieve the objectives – possibly implying more than the limited 4½ years of the project. The objectives were ambitious, especially as the NEAP had to be prepared (thereby determining EMA's work program priorities), approved, and lead to measures for improved EM within the relatively short implementation period.¹² Moreover, the project description embraced targets that are neither finite nor time-bound and continue to apply thus making performance assessment difficult.

2.5 These objectives were grounded in a Policy Letter from the government to the Bank in which the government committed itself both to managing the environment better in future and to correcting existing environmental problems which were listed (Annex B, Box B).¹³ However, the Action Plan attached to the Policy Letter was trivial. It covered just the short 16-month start-up period from December 1994 to March 1996, not to the end of the project in mid-1999, and the actions specified were merely early administrative activities and the start of studies – that is, the initiation of inputs rather than meeting specified commitments and delivery of outputs. This left the project without a road map for any substantial environmental management activity.

2.6 The components to achieve project objectives (Annex B, Box C) lacked immediate environmental goals to operationalize environmental management. Thus the government and the

11. "Management" disappeared from this phrase in the project files during implementation without apparent comment, perhaps because it might give the impression that EMA was to manage the PAs' environmental work, although the word is in the Loan Agreement.

12. But the project documents suggest that the design benefited from 14 earlier similar environmental management projects assisted by the World Bank. The assessment did not review these earlier projects to clarify this point – a larger task.

13. Memorandum and Recommendation of the President, March 6, 1995, Technical Annex, Annex B.

Bank missed the opportunity to give needed environmental substance to the project design, but which would have surely required a longer and more realistic implementation period.¹⁴

2.7 Costs broken down by objective or component are not available, either at appraisal or as actuals in the ICR, but by agency they are as follows:

<u>By Agency</u>	<u>Cost (US\$ millions)</u>	
	<u>Appraisal</u>	<u>Actual</u>
Ministry of Planning and Development	1.13	0.30
Environmental Management Authority	5.25	10.36
Participating Agencies	<u>3.20</u>	<u>0.09</u>
Total	<u>10.31</u>	<u>10.75</u>

The limited breakdown of agency costs at appraisal in the Technical Annex is not matched by actual costs in the ICR so has not been included above. Unspent PA funds were eventually used to finance a third of the cost of the EMA headquarters building, an added activity. UNDP provided US\$0.95 million to assist MoPaD to move ahead with EMA establishment while the project was processed. The Bank retroactively financed \$400,000 of early costs.

Implementation Arrangements

2.8 The project was to be implemented initially by the Ministry of Planning and Development until the Environmental Management Agency became operational some months after project start up. In particular, MoPaD was to be responsible for procurement and financial control of the project, in which it was already experienced. An Environmental Task Force (a precursor to the EMA board of directors) of senior people from public, private, and NGO bodies was appointed in early 1995 to guide MoPaD in the early stages. The EMA Board was to draw up operational policies to be implemented by the Chief Executive Officer. The Bank and the Board were to carry out annual reviews of project progress and set priorities for the following year.

Implementation

2.9 The project ran for over five years with the loan closing date being extended by a year. Although much has been done, the record and mission enquiries indicate that **project activities were of much less scope and volume than planned**, concentrating almost entirely on EMA (96 percent of costs compared to 56 percent planned), with little expenditure on any other agencies. Expenditure on EMA for construction, equipment, and operating costs doubled from \$5.25 million to \$10.36 million, leaving only about \$400,000 for all other activities.

2.10 The **Ministry of Planning** used only a quarter of its allocated expenditures during an initial 18 months of relative inactivity, possibly because EMA was already in existence.

2.11 **EMA was slow to** get activities underway against what was perhaps an unrealistic schedule, and because new staff were inexperienced and early budgets were cut by government

14. This might have been achieved instead by a quick follow-up project to fill the gaps, but the Bank did not at the time appreciate the nature of the problem, and indeed as late as 1999 the Country Assistance Strategy (March 24, 1999) proposed following-up with additional institutional projects for establishment of National Parks and a Wildlife Authority. These projects would have addressed biodiversity concerns especially, but the Bank did not apparently take a direct interest in resolving degradation problems caused by past environmental mismanagement.

during a period of financial stringency. In particular, the project schedule did not allow for the time needed to develop procedures and systems.¹⁵

2.12 There were also **management disruptions**. EMA's first Board of Directors was soon replaced by a more effective and qualified group, but thereafter the Board changed each time the government changed (eventually making five times in seven years). Since EMA senior management was also changed early on, continuity and management buy-in to some project content was eroded, particularly the study program. EMA staffing, after a slow start (caused in part by an overwhelming number of applicants) soon exceeded planned levels although there was unexpectedly high turnover later. Funds saved from not implementing the PA component were used in part for EMA's headquarters building. This building is suitably sized and located in central Port of Spain, and was occupied in late 2001.

3. Ratings

Outcome

The outcome criterion is based on the ratings for three sub-criteria (Relevance, Efficacy, and Efficiency) and is the extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently.

3.1 The outcome of the project is rated moderately unsatisfactory. Quality at entry was poor in relation to the project design not capturing the core of government's commitment and backing off from environmental action. The government's completion report is similarly reserved on whether the project has achieved its objectives, referring only to significantly advancing progress toward its objectives. The main issue was the failure to establish the kind of broad-based environmental management system envisaged at appraisal and there is no evidence that the wider system will ever come into being. Even EMA activities were well below what was needed to establish it as a fully-fledged organization and the effectiveness staff training, in contributing EMA capability, has been undermined by high staff turnover. Planned legislation has not been enacted and there has been no action on the most serious environmental issues some ten years after government was jolted into institutional action at the time of the Rio Earth Summit. The implementation schedule was over ambitious and short at four and half years, especially in requiring numerous activities to be conducted simultaneously by a new organization (for example, 11 major studies in the first two years).¹⁶ Stakeholder expectations for the project to mitigate pollution problems were not achieved.¹⁷

15. Project designs frequently underestimate the time needed for mobilization and start up activities, which can then place projects in a priority-distorting catch-up mode. In reporting difficulty with the Bank's procurement regulations EMA noted that requirements for international competitive bidding were very restrictive, and bid thresholds were low compared with the Bank's normal practice.

16. These 11 studies were: National Environmental Action Plan, Institutional Rationalization Studies (28 organizations), National Environmental Information System, Pollution Inventory, Environmental Data Base, Alternative Mediation Incentive, Training Needs and Design, Polluter Pay Principal (Phases I and II), Innovative Finance Mechanism, Natural Resource and Environmental Accounting. There was also to be a Mid-term Evaluation Study. The absence of anything on market-based instruments is notable.

17. Thus, there is skepticism amongst stakeholders of government's commitment to sound environmental management given the failure to even begin to clean up and correct conspicuous environmental problems. Some environmentalists interviewed by the mission see EMA's prospects of success as remote in the absence of the broader environmental management system and more substantial evidence of government commitment to environmental clean up in particular.

Relevance of Objectives

The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals.

3.2 **The overall objective and the sub-objectives are all highly relevant to the needs of the country's environmental program, and remain so.** The Bank's Country Assistance Strategy in 1999 emphasized safeguarding the environment as a priority for support, although since then the plans for doing so have not borne fruit as lending operations have drastically diminished. Trinidad and Tobago's relatively high income and growing economy is placing great stress on the environment and past environmental degradation has left some longstanding environmental problems. Achievement of the project objectives would also help Trinidad and Tobago meet its obligations under a number of international environmental treaties – for example the Montreal Protocol (ozone depletion), Ramsar (wetlands), UNFCCC/CPACC (climate change), and CBD (biological diversity).

3.3 Given varied and widespread environmental problems, the project strategy reflected government's recognition that sound environmental management would require a very broad institutional framework. This was to comprise all the many government agencies with environmental impact and responsibilities in a strengthened and rationalized system, a countrywide environmental information network and a new agency, EMA, to provide coordination and oversee compliance. The Environmental Management Act (originally 1995 but reenacted in 2000), expresses the intention clearly:

“The objects of this Act are to... (c) “ensure the establishment of an integrated environmental management system in which the Authority [EMA], in consultation with other persons, determines priorities and facilitates co-ordination among governmental entities to effectively harmonize activities designed to protect, enhance and conserve the environment;...”[emphasis added to highlight key words].

In addition, new laws and rationalization of existing laws would be needed with EMA charged with enforcing the laws (backed up by an environmental court).

3.4 With the coming of another oil and gas boom (from the recent vast new finds offshore) the country can be expected again to go through a period of more rapid development and of abundant resources. This will place the environment under increased pressure and without sturdy and effective environmental management it will be difficult to avoid further degradation of natural resources and rising pollution. Thus the project objectives remain highly relevant.

Efficacy

The extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance.

3.5 **Effective institutional capacity to plan and implement sound environmental management was not fully established.** Efficacy is therefore rated modest as the main objective of establishing effective institutional capacity was not achieved and there were several shortfalls on secondary objectives as discussed below. The environmental management capability left by the project is much more concentrated than planned on EMA as a single-purpose government environmental agency, with reduced capability in the absence of planned coordination mechanisms, training and environmental studies, and given high staff turnover.

3.6 This broad vision has yet to be achieved and it is uncertain whether it will be achieved in the near term. Renewed effort to achieve original objectives would be appropriate, particularly to pursue strengthening of the PAs' capabilities for environmental management. Achievement of secondary objectives is reviewed in the following paragraphs.

3.7 **EMA was not brought to full operational capacity.** Generally EMA had a rocky start and has still to completely settle down after seven years of existence. Any achievements have been hard won and, not surprisingly, much still needs to be done to bring EMA's capabilities up to the challenging task. It now has an approved complement of 72 staff, but only some 40 positions were filled in April 2002. The new headquarters building has provided a secure home and will be a positive factor in keeping staff. In Tobago, the Department of the Environment is in effect acting as the agent of EMA, subject to the wishes of the Assembly, but this may depend more on compatible personalities than any institutional arrangements.

3.8 **The National Environmental Action Plan was not given priority, was delayed until 1999, and did not formally prioritize environmental management tasks.** The delay allowed the preparation of a National Environment Policy (NEP, an agreed new step), but most critically the delay adversely affected EMA's work program as priorities had not been established. This left EMA drifting with neither full steam up nor its voyage mapped out. When the NEAP was eventually completed, the suggested high priorities – water pollution and catchment degradation – were low on EMA's agenda.¹⁸ With respect to the second half of this objective – implementing measures consistent with NEAP findings – the ICR notes that the NEP tended to take over the work program planning objective of NEAP and the EM Act tended to become the guide for EMA rather than the project documentation.

3.9 **New environmental legislation was slow to be drafted, given EMA's limited early capacity, with none completed until after the project ended and only about half of the Acts have become law** (Annex B, Table 2). Some of the most critical Acts have apparently stalled (with parliamentary procedure to blame in part), especially those concerning air and water quality and solid waste management.¹⁹ These new laws and regulations address specific pollution problems but legislative action on past environmental damage has yet to be pursued.²⁰

3.10 **Enforcement and strengthening penalties of existing environmental laws would have substantial results.** An exercise has been completed recently to rationalize and catalogue over 140 pieces of existing legislation with environmental content. Stakeholders suggest that if this major exercise were to lead to greater observance of current environmental policies and laws it could alone be as effective as new laws in achieving environmental management objectives. However, the laws would have to be fully enforced and the fines (which were trivialized by inflation) made substantial in today's money. A downside of not enforcing existing environmental provisions in the law is that the seriousness of the government's intent with respect to the environment may be questioned. A related issue is that the Environmental Commission (the "High Court" for environmental disputes) has been in place for well over a year,

18. EMA more recently identifies the three leading priorities as water pollution, solid and hazardous wastes, and vehicle emissions. Management identified a useful set of factors in setting priorities as: severity, potential impact from resolution, short-term/long-term choices, politics, staff skills, and willing partners.

19. Environmental legislation has a long record of lapsing after drafting, as noted in the Technical Annex to the President's Report for the project (para. 8). Environmental issues are said to have come to government attention initially at the time of the 1972 UN Human Environment conference in Stockholm, after which Environmental Protection Bills were drafted in 1976 and 1989 but were never brought before parliament.

²⁰ A Bank reviewer of this report notes that this is a common finding in developing countries, and that the USA's Super Fund was slow in coming, but Trinidad and Tobago has the opportunity soon to change this pattern by using a small part of the resources from the coming petroleum boom for environmental clean up.

but has yet to try a case. Its continued inactivity plays to the views of skeptics who question the need for such a costly institution, believing that the existing courts could handle environmental cases.

3.11 The capacity for environmental management of the Participating Agencies was increased only modestly; there was no attempt to rationalize their activities. Although MOUs have been signed between EMA and 29 PAs, the PAs did not have the budget or suitable staff to establish EM units and only \$90,000 of the planned \$3.2 million for PAs was used. PAs did appoint Environmental Officers but often their junior rank and lack of training made them of limited effectiveness. Neither the PA rationalization studies nor the PA staff training program were carried out. There were also disagreements between EMA and PAs on financial matters (fees for services). In consequence, the environmental management capacity of these government agencies remains limited and EMA is unable to provide coordination on EM without reciprocal expertise in the PAs.

3.12 The study for National Environmental Information System (NEIS) was completed but a network with the PAs coordinated by EMA could not be established. The NEIS has not contributed significantly to effective EM, especially since environmental indicators were neither established nor published. In consequence, neither the public nor government has a clear picture of progress in environmental improvement. The failure to pull information routinely from widespread sources throughout government possibly explains the limited environmental data available. EMA's web site contains an NEIS site, but it has no indicators or current information since it was last updated over three years ago in March 1999. Partly as a result of this lack of data, EMA's annual State of the Environment report has been of mixed quality. For example, the report for 2000 focuses on air quality and in some 50 pages provides an excellent general handbook on the subject, discusses two local studies on air quality, the status of legislation and related EMA actions, but it does not provide any data or analysis of air pollution severity or trends in the country.

3.13 Public awareness work was reduced by limited budgets, but even so, publishing, community projects and the introduction of new and improved courses in schools, and University of the West Indies activities, broadened environmental awareness and contributed to an increasing flow of public complaints on environmental matters.

3.14 Environmental training for EMA and PA staff, and the private sector, was reduced by budget shortages and by reluctance to use international recruitment to make up for local skill deficits. Some EMA staff received on-the-job training and went on overseas courses but skilled environmental management capacity was not greatly improved overall, especially as there was high staff turnover.

3.15 Few of the project's environmental studies were completed (four of 11): NEAP, the pollution inventory, the NEIS, and one on beverage container legislation. The delays and limited completion of studies was attributed to an ambitious target, low priority by EMA, limited EMA staff capable of supervising such studies, and reluctance to use international consultants. Some of the studies contributed to the drafting of issue-specific legislation. The failure to complete the studies program meant that information gaps constrained important steps needed to strengthen the national EM system.²¹

21. EMA completed three non-project studies in partnership with other agencies on air pollution, environmental literacy and standards for waste water effluent.

3.16 The major shortfalls in executing the project as planned would have been less important if the reduced environmental management system put in place had nonetheless showed signs of achieving substantial environmental improvements, but this is not so. A summary of the **limited actions taken so far on the main environmental issues** is in Annex B, Table 3.

Efficiency

The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives

3.17 **Project efficiency has been only modest.** A project of this nature is not amenable to standard rate of return estimation. This assessment concludes that efficiency has been modest given that project costs have almost equaled appraisal estimates (excluding the additional costs for EMA's headquarters) while project achievements are well below expectations in both scope and quantity. There is also a lack of substantial environmental improvements (compounded by inadequate qualitative monitoring) to show for the mounting costs of environmental management (a growing EMA, an inactive Environmental Commission and mounting Green Fund resources levied from the private sector which have yet to be beneficially employed for environmental improvements).

Institutional Development Impact

The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through better definition, stability, transparency, enforceability, and predictability of institutional arrangements.

3.18 **Institutional development impact has been modest overall.** For a project heavily targeted on institutional change, this rating and the efficacy rating are obviously closely linked. Institutional development impact, however, is rated without reference to plans and targets. Given what was agreed at the outset as being needed for effective environmental management, substantial is too high a rating and therefore the assessment falls back on modest as for the related efficacy rating (with these two ratings having some mutual reinforcement). Much of the input for EMA's establishment pre-dates the project. EMA's linkages with the PAs remain weak in the absence of the necessary reciprocal capacity in each agency and a functioning information network fed by those agencies. While the project achieved some strengthening of EMA, but much less than planned, it did not achieve more than limited outputs for the broader EM institutional arrangements across the PAs, and the critical legislation is only partially in place even now and may be stalled on important items. Training and studies were well below expected achievements and there is little evidence that the National Environmental Information System is having much impact.

Sustainability

The resilience to risk of net benefits flows over time.

3.19 **Sustainability of the partially formed environmental management system is rated as likely,** even though capacity is weak in the PAs, where the bulk of EM occurs, and EMA is not autonomous. Benefit flows are likely to be much lower than planned, since it is unlikely that such a single agency, in a "command and control" mode, can achieve the far-reaching results expected from managing the environment given the traditional social and political culture of Trinidad and Tobago. A flow of benefits from significant environmental rehabilitation is yet to materialize as

no such program exists. Hence low expectations have low risk of failure. Risks have already been seen: budgetary shortfalls for EM activities, the politicization of EMA's board (with wholesale and frequent changes), EMA's location in a service ministry, the relative failure of the PA component, and delays on some important EM actions and activities. But these risks are already reflected in reduced results and lowered expectations.

3.20 One notable and serious risk remains. Amalgamation of the Ministry of the Environment, created in 1999, with the Ministry of Public Utilities is viewed with concern in environmental circles since there is obviously an apparent, even real, conflict of interest in the arrangement. Thus, the function of public utility service provision (an acknowledged source of widespread and serious pollution problems) is combined with the supervision of the agency responsible for monitoring and policing observance of the very environmental laws meant to control such problems. So long as this arrangement continues there will be concern about the objectivity of actions taken or not taken by EMA in relation to pollution and conservation issues linked in any way to public utilities.

Bank Performance

The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project)

3.21 **Bank performance is rated satisfactory overall after a weak start.** Quality at entry was poor because of weak and ambiguous project design, and the watering down of earlier environmental objectives during design. The failure to persist with the original appraisal plan to include high-priority environmental improvement as a project objective robbed the project of needed substance. Generally the Bank did not appreciate the limitations imposed on project options by human resource constraints in Trinidad and Tobago. Over-mighty expectations may account for some of the disappointments. Early supervision must have fallen off in vigor and focus once the achievement of the main project objective was erroneously declared after only a year of implementation.²² Later supervision made amends and EMA was appreciative of Bank supervision inputs, but would have welcomed even more such assistance and special expertise. Eventually support for environmental management activities were casualties as the Bank's lending pipeline collapsed quite rapidly.

Borrower Performance

The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability.

3.22 **Borrower performance was unsatisfactory on balance**, especially in not fully funding project operations early on, delayed passage of legislation, allowing the important PA component to fail and in failing to ensure that other important project activities were completed. The failure of the PA component may indicate less commitment to countrywide and agency-wide EM than was assumed in the project design. Slow processing of legislation could undermine the effectiveness of EMA and absence of progress on the policy to reverse environmental damage

22. Within a year of the project's approval, supervision reports (April and July 1996) redefined the project objective as merely establishing EMA (which in fact was done as a condition of loan effectiveness) and thus could report internally that the major project objective had been achieved.

casts further doubt on the depth of government commitment to the environment. Similarly some “environmental anachronisms” noted (leaded gasoline, reef walking, paving in Queens Park Savanna, and the like) are a reminder of relatively small environmental improvement initiatives that are outstanding, and have potentially high gains in public credibility for government environmental concerns. Environmental stakeholders expect more from the government, but other priorities seem to be receiving greater attention.

4. Findings, Lessons Learned and Outlook

Major Findings

4.1 **Effective national environmental management capability has yet to be established and a number of issues require attention if there is to be a chance of making inroads on identified environmental problems.** The points that follow raise questions about the likelihood of EMA in the current situation being able to effect fundamental environmental improvements, the difficulty of enforcement given cultural norms, the incomplete institutional tools for the job, and the absence of major environmental management impact. The last point concerns the Bank’s own assessment capability.

4.2 **Cultural norms and lack of incentives may constrain effective environmental management.** Basing environmental management predominantly on regulations and enforcement is problematical in a culture that has long been characterized more by a laissez-faire attitude to the demands of authority than general observance of formalities.²³ The limitations of the power of a single environmental agency to influence the actions of many other government agencies was recognized by the Bank and gave rise to the PA component, which was only partly implemented. To achieve broad environmental impact EMA will now have to rely on general compliance with new legislation (noting that existing environmental legislation was widely ignored) as well as on a good deal of environmental altruism in the absence of market-based instruments. This is a tall order, especially in the long-established and close-knit culture of a small island society with all the acknowledged social constraints that that implies. A more institutionalized basis for broad environmental management still seems essential.

4.3 **The regulatory framework remains weak** so long as legislation on the most critical areas (air and water pollution, and waste management) is incomplete. Little improvement can be expected in these critical areas of environmental concern while these bills remain in limbo, either affected by the polluters themselves or by EMA’s activities in managing environmental affairs. On the positive side, the rationalization and cataloguing of some 140 existing laws with environmental content could have great impact if the laws were enforced with penalties updated for inflation. Also, the appropriate role for the Environmental Commission was a matter of debate among local observers, especially as it had yet to have to act on a matter, on the grounds that the existing court system can handle environmental law.

4.4 **The town and country planning process, in channeling development in an environmentally responsible way, is constrained by lack of physical planners and the**

23. Examples familiar to many Trinidadians include that few private sewer systems, which are required in new housing developments, function properly for long after the new houses are sold; there has been habitual ignoring of vehicle visible emission requirements (including by public sector vehicles witnessed by the Bank mission), and that physical planning guidelines are seldom a constraint on the desires of commercial development. EMA’s Environmental Police are now making a difference, especially on vehicle emissions.

prevalence of freelance development largely outside the planning process.²⁴ Valuable natural resources, especially land and species, are continually under threat from unauthorized development. Lack of development and planning discipline, and apparent inability or unwillingness of authorities to step in, also threaten to undermine enforcement of environmental management laws and processes. If planning laws and decisions cannot be enforced routinely and regularly, the future for enforcing environmental law also looks bleak. This could jeopardize EMA's effectiveness in its current "command and control" mode, although public awareness work can help. It is not clear that the recently approved environmental legislation (for EIAs and CECs) can be any more successful than ignored or inappropriate planning decisions in reducing environmental damage and undue losses to development.

4.5 Significant environmental improvements are notably absent 10 years after the government embarked on establishing environmental management capability. Moreover, environmental degradation continues and public skepticism is not allayed by the few small environmental successes to date. The absence of "headline" environmental programs to begin to tackle at least one or two of the egregious environmental issues is conspicuous seven years after the original Environmental Management Act of 1995 and the formation of EMA. The cost of this inaction is high in terms of public perceptions and support for serious environmental management. A number of small successes, for example, lead poisoning and noise pollution in specific instances, cannot compare with making a start on cleaning up the worst cases of past pollution such as the Caroni River and making popular bathing beaches safe. Funding for such improvements may be available from the recently introduced Green Fund (from a levy on businesses), which is for environmental projects carried out by communities and NGOs. The fund has already received over TT\$130 million but has not yet disbursed any money as procedures and systems are being finalized.

4.6 There is currently no legislation requiring the restoration and cleaning up of environmentally damaged sites and systems (which were caused by at least a century of largely unconstrained pollution, dumping, and misuse of natural resources). However, the Environmental Management Act 2000 refers to "protect, enhance and conserve" the environment with respect to both government's commitment and EMA's role. Similarly the National Environmental Policy (1998) refers to environmental improvement, rehabilitation, reforestation, and restoration, and to correcting for past development decisions that have affected the "environmental health of the country." The government is said to be committed to "return to suitable use" areas of past contamination. Legislation and programs are needed to add substance to these pronouncements.²⁵

4.7 Environmental anachronisms persist. Examples are that leaded gasoline is still available and cheaper than unleaded;²⁶ the growing pleasure boat service industry (for both local and foreign owners) is unconstrained by environmental rules commonly in place elsewhere (which is a probable growth stimulant); organized reef walking in the country's only marine park (in Tobago); the recent paving of six acres of a national natural heritage site (the Queen's Park Savanna in central Port of Spain); and that the Caroni River remains in some minds "an open

24. A minister reportedly has commented in parliament to the effect that 75 percent of development is unauthorized (i.e., ignores planning codes and requirements).

25. EMA management notes that it was not intended that EMA itself take on the resolution of major environmental problems.

26. EMA's Annual Report for 2000 (page 56) notes that Trinidad and Tobago is committed under a UNDP/IBRD regional program to phasing out leaded gasoline by 2002, but that was not apparent in April 2002 during the mission's visit. Reportedly that change would make Trinidad the last Caribbean country to ban leaded gasoline. Ironically, the lead for the gasoline (about 48,000 kg per year) has to be imported while the alternative additive is produced locally.

sewer” despite decades of concern and some past efforts to clean it up.²⁷ Political inaction on these phenomena can be attributed to low public interest in environmental issues.²⁸ These environmental anachronisms, which are no longer tolerated in more environmentally aware societies, are unnecessary blots on the country’s environmental record. Such blatant cases of pollution and natural resource degradation should not be difficult to correct if commitment existed. They could have been the core of some “quick fixes” that the government’s ICR regrets were missing from the project design.²⁹

4.8 The declining quality of Bank supervision files hinders comprehensive evaluation.

The usefulness of the Bank’s formal records for performance assessment has been weakened by the introduction of information technology, as valuable information has been lost from the storyline. In the past OED has commented on the quality of the Bank’s formal project files and has occasionally elevated comments to a finding or issue. In this case, tracking implementation in the Bank’s files was particularly difficult as the files are quite sparse, partly because much of supervision had been conducted from a field office and those files were not forwarded to headquarters. But perhaps of more general significance, the paper files at headquarters were not consistently bound chronologically but contain many loose-leaf folders, multiple copies of documents are included and, in the age of e-mail, only the most formal printed documents are available. Internal memos arguing issues and reaching decisions, frequently with informative annotations, are notably absent from the records for the project. It is believed that much of the missing details are in unarchived e-mails. This made tracking implementation and the handling of issues more difficult than was the case in the more adequately documented past.

Lessons Learned

4.9 The project design was weak in having no environmental improvement goals, leaving the project with open-ended institutional objectives and insufficient purpose.

Specific and monitorable development objectives are a strong incentive to effective project implementation. Also, generating support for environmental management would have been easier if the project had included specific environmental objectives that included tackling some of the acknowledged environmental issues. A commitment to at least starting on some critical environmental rehabilitation work, as a condition of Bank involvement, would have given the project some much-needed impetus and greater impact.

4.10 Justification for Bank involvement in the institutional groundwork of such a long-term process as environmental management should be built on a clear understanding between the parties and a commitment by the Bank as to continued assistance. The failure to follow-up with a related operation, for whatever reasons, has weakened the value and impact of

27. The Caroni River has long been a catalyst of environmental concern. In 1959 a commission of enquiry on pollution of the river, led by Justice Blagdon, recommended the establishment of an agency to manage environmental matters.

28. Competing priorities and concerns are public safety and the crime rate, corruption, employment and social services, education and a series of close elections resulting in frequent government changes or, as most recently a tie and a constitutional impasse. The record of the heavily attended 1997 National Consultation on Sustainable Development listed the following priorities: Human Development, Human Welfare, Planning and Resource Management, Governance, Pollution, and Management and Mitigation of Natural Hazards. But the first five issues listed provide another insight to the prominence of environmental concerns in the conference proceedings: Poverty and underemployment, Land use, Exploitation of wildlife, Health, and Waste Management.

29. As in many ICRs, significant points such as this one raised by borrower in their ICRs, or in comments on the Bank’s ICR, are seldom explicitly addressed by the Bank’s ICR. This failure to complete that loop reduces the value of the borrower’s contribution and can give the impression that the borrower’s views are not given full consideration in the ICR process.

the Bank's role in the initial institution-building phase, which was only the starting point of a long process.

4.11 EMA should be located in a neutral part of the government structure, or even outside it, where there is no possibility of a real or perceived conflict of interest arising in its environmental activities. It should be more detached from the day-to-day political scene where its decisions can be based on technical and economic considerations without political factors intruding.

Outlook

4.12 Much has been achieved in putting in place new organizations for environmental management (EMA, the Environmental Commission, the Green Fund, and the Special Environmental Police unit) and introducing some of the required institutional "rules of the game" for EM (the EM Act and some environmental laws), but there are substantial issues needing attention if the EM system is to be able to accelerate to full effectiveness. At the moment EM is coasting along at a comfortable pace, without noticeable impact on major environmental issues. Some knowledgeable environmentalists are skeptical whether the recent institutional efforts will actually yield significant environmental benefits. There is a general belief in such circles that there is less than fully earnest efforts being made in important areas of concern, and this impression needs to be corrected. A determined effort to act on correcting past environmental problems, as policy suggests is intended, is a high priority. The current environmental situation requires an extended period of vigorous activity by EMA and others to make up the backlog of concern on pollution and conservation issues before a steady state of environmental management to the benefit of all is achieved. It is to some extent too early to know whether political will, public support, and institutional resources are sufficient to make a real difference to Trinidad and Tobago's environmental status.

Annex A. Basic Data Sheet

TRINIDAD AND TOBAGO: ENVIRONMENTAL MANGEMENT PROJECT

Key Project Data (amounts in US\$ million)

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs	10.31	10.75	104
Loan amount	6.25	5.47	87
Cofinancing	0.95	1.0	105
Cancellation		0.78	
Date physical components completed	6/30/1999	6/30/2000	
Economic rate of return	NA	NA	

Cumulative Estimated and Actual Disbursements

	<i>F95</i>	<i>FY96</i>	<i>FY97</i>	<i>FY98</i>	<i>FY99</i>	<i>FY00</i>
Appraisal estimate (US\$M)						
Actual (US\$M)						Data not provided by ICR.
Actual as % of appraisal						
Date of final disbursement:						

Project Dates

	<i>Original</i>	<i>Actual</i>
Initiating memorandum		04/22/1994
Negotiations		01/12/1995
Board approval	-	03/30/1995
Effectiveness	07/27/95	07/12/1995
Closing date	12/31/1999	12/31/2000

Staff Inputs (staff weeks)

	<i>Actual No. Staff Weeks</i>	<i>Actual US\$</i>
Preappraisal	22.4	62.0
Appraisal/Negotiations	32.3	87.0
Supervision	71.2	192.1
ICR	4.5	13.0
Total	130.3	354.1

Mission Data

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Staff days in field</i>	<i>Specializations represented</i>	<i>Implementation Progress</i>	<i>Dev. Objective</i>
Identification/ Preparation	04-05/94	5		ES, EE, OO, EEg, Ag		
Appraisal	06-07/1994			Ag, FA, EL, EE, EEg, TI		
Supervision	12/10/95	1		Ag	S	S
	4/19/96	3		2 Ag, ES	S	S
	6/28/97	1		ES	S	S
	11/18/97	2		ES, NR	S	S
	6/15/98	2		ES, NR	S	S
	1/11/99	1		NR	S	S
	4/27/99	1		FMS	S	S
	6/7/99	2		NR, SL	S	S
	10/3/99	1		NR	S	S
	11/29/99	3		NR, ES, EL	S	S
	3/13/00	2		NR, ES	S	S
	8/21/00	4		NR, ES, FMS, PS	S	S
	11/14/00	1		NR	S	S
Completion	03/06/2001	1		NR		

Ag=Agriculturalist; EE=Environment Economist; ES=Environment Specialist; EEg=Environment Engineer; EL=Environmental Lawyer; TI=Training and Institutions Specialist; NR=Natural Resource Management Specialist; FMS=Financial Management Specialist; PS=Procurement Specialist; SL=Sector Leader

Other Project Data

Borrower/Executing Agency:

FOLLOW-ON OPERATIONS

<i>Operation</i>	<i>Credit no.</i>	<i>Amount (US\$ million)</i>	<i>Board date</i>
None			

Annex B. Supplementary Tables and Boxes

Table 1: State Of The Environment: Trinidad and Tobago” In 1995

Category*	“Key Trends”	Management “Challenges”
General	“...an <u>environmental deficit</u> in the form of pollution of our rivers and coastal waters, the deforestation of our hillsides, the degradation of marine ecosystems and wetlands, and the loss of scarce farmland to industrialization and urban development.”	Government as a catalyst for change** Environmental Monitoring Information/Inventories Improved Management Public Awareness Industry Participation Voluntary Compliance Regulations Enforcement of regulations
THE LAND	a. Soil contamination from waste disposal b. Loss and alteration of forests and watersheds c. Loss of agricultural productivity	Safe disposal of waste Land tenure and ownership Recycling Sustainable forestry management Soil and water conservation
FRESH WATER	a. Drinking water supplies lost and quality threatened b. Major river systems heavily polluted c. Wetlands serious affected	Watershed management Water conservation Upgraded sewage treatment
THE ATMOSPHERE	a. Persistent localized air quality problems b. Global threats to T&T	Motor vehicle emissions External air pollutants Atmospheric change
COASTAL AND MARINE	a. “Hot spots” of pollution and damage (beach sand mining) b. Tourism pressures c. Loss of coastal wetlands d. Fisheries at risk	Integrated management Enhanced scientific effort Sustainable tourism development
BIODIVERSITY	a. Degradation and loss of habitat b. Growing species lost or at risk c. Degradation of protected areas	Comprehensive inventories Compliance with international agreements on biodiversity

Source: Environmental Management Authority (brochure)

Notes: * Noise pollution was omitted from this environmental benchmarking.

** Includes “greening” of government operations; rationalizing government policy-making and operations to ensure efficiency and fairness in environmental management; ensuring that appropriate skills and resources are available to do the job; strengthened enforcement of existing regulations; and working cooperatively with industry and the public.

Table 2 Status of Environmental Legislation Managed by EMA

Legislation	Year Drafted	Adopted
1. Waste Management (Solid Waste Disposal) Rules	2000	
2. Beverage Containers Bill	2000	
3. Air Pollution Rules	2000	
4. Air Pollution (Fees) Regulations	2000	
5. Water Pollution Rules	2000	
6. Water Pollution (Fees) Regulations	2000	
7. Environmental Code ^{a/}	2000	4/00
8. Environmentally Sensitive Areas Rules	2/01	3/01
9. Environmentally Sensitive Species Rules	2/01	3/01
10. Noise Pollution Control Rules	2/01	3/01
11. Certificate of Environmental Clearance Order	4/01	5/01
12. Certificate of Environmental Clearance Rules	4/01	5/01
13. Hazardous Waste Rules	In-hand	
14. Non-hazardous Waste Rules	In-hand	

a/ An evaluation of written laws and programs that address environmental issues with recommendations for rationalization and modernization.

Table 3 Actions on Internal Environmental Issues Identified at Appraisal (March,1995)

Problem/Issue	Action (EMA, <i>Annual Report, 2000</i>)
1. Spillage and leakage of crude and processed <i>petroleum products</i>	103 incidents investigated, mostly oil spills, of which Gulf of Paria spill took longest to resolve. Other outcomes not reported. Reported on remediation criteria for gas station storage tank replacement.
2. Industrial pollution from other products, by-products and waste	
3. <i>Sewage pollution</i> (streams, rivers, swamps, coastal waters and ground water)	Water pollution legislation developed and forwarded. Biological monitoring of fresh water (in cooperation with the University of the West Indies) continued, but outcomes are not reported.
4. <i>Air pollution</i> (smoke and gasses from agricultural and industrial sources, and vehicles)	Air pollution legislation developed. Responsibilities for drafting vehicle emissions regulations agreed with Bureau of Standards. Diesel fuel standards published for comment. Stack pollution standards developed with stakeholders.
5. <i>Solid waste</i> (including unsorted hospital waste and other hazardous materials placed in landfills)	Demerara Road remediation completed (battery waste was used as road metal). Lead monitoring of (harmed) children to continue. Otherwise, consultants recommended programs, technical work on waste disposal and beverage container bill completed.
6. Illegal <i>land clearing</i> causing erosion (especially in the Northern Range),	Not reported.
7. <i>Quarrying</i> of stone, gravel and sand causing river pollution	Not reported.
8. <i>Damage to soil, beaches and coast lines</i> from unsuitable/unauthorized development	Technical input to data collection programs for Chaguaramas, SW Tobago and Point Lisas. Investigation of environmental impact of development on Petit Trou Lagoon, Tobago (findings not reported).
9. Loss of, and damage to <i>habitat and biodiversity</i> by industrial and urban development	Poster and essay writing competitions held in addition to "other activities" by the NBSAP task force.
10. <i>Wetland damage and loss</i> (Caroni and Nariva Swamps)	Not reported.
11. <i>Coral reefs damage</i> (boat operators and tourists)	Not reported.
12. <i>Removal of beach sand</i> for construction	Not reported. (Resolved in Tobago by imports.)

Box A: Trinidad and Tobago's Environmental Status in 1995

“As a result of oil-based industrialization and continuing urbanization, Trinidad and Tobago faces a number of environmental pollution and natural resources management issues. Major industrial pollutants include crude and processed petroleum products which escape from wellheads, pipelines, road-tankers, processing, storage, and loading facilities, and ocean-going tankers. The pollutants affect water (streams, rivers, swamps, coastal waters and ground water), in turn impacting on water quality for human consumption, fisheries and recreational aspects. They also damage soil, beaches and coastlines. Other industrial products and by-products feature as pollutants with similar effects. Agro-processing activities (including sugar milling and refining, rum and alcohol manufacture), result in water and atmospheric pollution (smoke from cane and bagasse burning). Gases and particulate matter from industry and vehicles also pollute the atmosphere (most of Trinidad and Tobago's vehicles still use leaded gasoline). Solid waste, which includes unsorted hospital waste and other hazardous materials, are interred in landfills. The burning of combustible solid waste at landfill sites also contributes to atmospheric pollution. Noise features as a serious pollutant, especially to urban dwellers.

The major renewable natural resources management issues include uncontrolled clearing of forest and other vegetation from hillsides, especially those of Trinidad's Northern Range, which results in soil erosion, the consequential siltation of streams, rivers, and canals and, increasingly, flooding. The quarrying of stone, gravel and sand also contributes significantly to river pollution - suspended solids not only silt up watercourses, but [increase water supply costs].... Another casualty of Trinidad and Tobago's industrial and urban development is the loss of, and damage to habitat and associated biodiversity. Two of Trinidad's major wetlands have been damaged, possibly irretrievably. The Caroni Swamp has suffered incursions from road building, solid waste disposal and dredging. The Nariva Swamp, a RAMSAR site, has been invaded by mechanized rice farming [reportedly resolved later]. With its extensive biodiversity, with species from both the Caribbean islands and the South American continent, Trinidad and Tobago has significant eco-tourism potential but many ecological sites are unprotected and are deteriorating rapidly. Tobago's coral reefs have already suffered serious damage from the activities of irresponsible and ignorant boat operators and thoughtless tourists.”

IBRD, *Memorandum and Recommendation of the President, Environmental Management Project*, March, 1995

Box B Extract From Government's Policy Letter (January 12, 1995)

“The Government of Trinidad and Tobago is seeking the support of the World Bank for its efforts to strengthen the legal, regulatory and institutional framework for national environmental management and to develop the required institutional capacity to operate the new system effectively. The Government considers the program as being of very high priority. This strong commitment reflects, first of all, our concern to put in place an environmental management regime and supporting systems which will ensure that as we continue to develop the country, the growth that takes place is sustainable and consistent with the need for resource conservation and environmental preservation. Additionally, we wish to deal effectively with some of the problems that have arisen from improper environmental management. These include forest destruction (especially in the Northern Range); river pollution, irresponsible quarrying of limestone, gravel and sand; water pollution, particularly in the west coast; soil pollution resulting from indiscriminate use of agricultural chemicals; and improper disposal of liquid and solid wastes.”

Source: World Bank, *Environmental Management Project, Technical Annex*, March 6, 1995

Box C Project Components (Loan Agreement)

1. Establishment and operation of the **Environmental Management Authority**.
2. Implementation of a **public awareness program** on environmental issues and the importance of environmental management.
3. Implementation of an **environmental training program** for the public and private sectors.
4. Carrying out of **studies** on: (a) a national environmental action program (NEAP); and (b) the rationalization of the public institutional framework responsible for environmental management and enforcement.
5. Carrying out of **studies and other activities on environmental issues**.
6. Provision of **training and support**, including, inter alia, equipment and supplies, to the **Participating Agencies**.
7. Establishment of a **national environmental management information system**.

Annex C. Statements of Project Objectives

In the documents of some projects there are material differences between different documents as to what a project comprises (e.g., in those for a project assessed in parallel with this one – The Water Sector Institutional Strengthening Project). It is not clear why this is the case, although there is probably a tendency for legal drafters to prefer looser language than may have been provided by technical staff, and in loosening the language emphasis may change and activities may be cut. In this case there are potentially confusing differences of emphasis, but with one point of substance that figures in the assessment. This is whether it was intended that the project would actually achieve environmental improvements, or just contribute to strengthening environmental management institutions (both organizations and the laws, rules and regulations). The main statements are compared in Table C1.

Table C1 Statements of Project Objectives in Different Project Documents

	Memorandum of the President (MP)	MP Technical Annex	Loan Agreement
1.	Build effective institutional capacity to plan and implement sound environmental management (EM)	Put in place the necessary institutional arrangements for regulation and management of the environment	Improve (the Borrower's) institutional and legal framework for environmental management
2.	Complete a National Environmental Action Plan (NEAP) (to decide EMA's immediate priorities and future work program) ^{a/}	Define and support a priority environmental work program, based on a National Environmental Action Plan	Define and implement a work program for environmental priorities
3.	Strengthen the legal and regulatory framework for environmental management ^{a/}		
4.	Implement measures for improved EM consistent with NEAP ^{a/}		

a/ Numbers 2 – 4 in the PR were described as “Other goals.....”.

Although the project Loan Agreement is particularly bland and open-ended in its interpretation of objectives (possibly intentionally to allow wide interpretation without constraining definitions), it is startlingly explicit in referring to “Define and implement a work program for environmental priorities” (emphasis added). That would have been a Herculean task in the short time available had it been taken literally by implementers. The MOP uses “implement” twice, but not explicitly in connection with direct environmental impact, while the MOP's Technical Annex (which has the most detailed project description) refers to supporting a priority environmental work program. In no case are any specific priorities mentioned for environmental rehabilitation or improved environmental management. Information on project content (in the main text) shows, however, that the references in the various objectives statements to implementing environmental management priorities were not followed up in the details of what comprised project components and funding. To that extent the project objectives statement promised more than could be delivered by inputs and the project concept and design were somewhat confused.

There is no guidance currently given to OED staff on which version of objectives to use to measure outcomes against, but informal queries suggest that generally the Appraisal Report version for “projects” (or Memorandum of the President for other types of operation) is favored as being most reflective of the designers' intentions, while the legal document is recognized as

being the ruling version ultimately. This assessment derived a statement of objectives from the MOP.

The ICR for the project took as “objectives” only the first two points in the MOP statement, but also analyzed and rated outcomes by the project components as listed in the Technical Annex:

- Support to the MoPaD
- Operationalization of EMA
- Support to Participating Agencies
- Training and Training-related TA
- Studies and Planning Exercises

All outcomes were rated satisfactory by the ICR except Training.

Annex D. Actions on Environmental Issues Identified at Appraisal

(the Borrower is invited to complete this table)

Problem/issue	Action	Comments
Environmental Pollution		
1. Spillage and leakage of crude and processed <i>petroleum products</i>		
2. Industrial pollution from other products, by-products and waste		
3. <i>Sewage pollution</i> (streams, rivers, swamps, coastal waters and ground water)		
4. <i>Air pollution</i> (smoke and gasses from agricultural and industrial sources, and vehicles)		
5. <i>Solid waste disposal</i> (including unsorted hospital waste and other hazardous materials placed in landfills)		
6. Noise, especially in urban areas		
Resource management issues		
7. Illegal <i>land clearing</i> causing erosion (especially in the Northern Range),		
8. <i>Quarrying</i> of stone, gravel and sand causing river pollution		
9. <i>Damage to soil, beaches and coast lines</i> from unsuitable/unauthorized development		
10. Loss of, and damage to <i>habitat and biodiversity</i> by industrial and urban development		
11. <i>Wetland damage and loss</i> (Caroni and Nariva Swamps)		
12. <i>Coral reefs damage</i> (boat operators and tourists)		
13. <i>Removal of beach sand</i> for construction		

