



1. Project Data:		Date Posted : 02/12/2004	
PROJ ID: P006970		Appraisal	Actual
Project Name: Solid Waste Management Project	Project Costs (US\$M)	50.50	54.24
Country: OECS Countries	Loan/Credit (US\$M)	Global Environmental Facility (GEF) 12.5 IBRD/IDA 11.5 Sub total 24.0	GEF 10.4 IBRD/IDA 7.6 Sub total 18.0
Sector(s): Board: ENV - Solid waste management (87%), Central government administration (13%)	Cofinancing (US\$M)	EU 9.5 CDB 8.7 EIB 1.9 Sub total 20.10 Total 44.10	N/A Subtotal 28.04 Total 46.04
L/C Number: C2714; C2715; C2716; L3879; L3880; L3881; L3882			
	Board Approval (FY)		95
Partners involved : EU CDB EIB	Closing Date	12/31/2000	06/30/2003

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2. Project Objectives and Components

a. Objectives

Organization of East Caribbean States (OECS) Solid Waste Management Project .

- To reduce public health risks and protect the environmental integrity of the islands and their coastal and marine systems by improving domestic solid waste management facilities;
- To significantly enhance public health and environmental quality by strengthening the countries' capacities to manage effectively and dispose of solid waste in an environmentally sustainable manner .

Ship-generated Waste Management Project .

- To protect the environmental integrity of coastal and marine systems in the Caribbean Sea by facilitating compliance with the International Convention for the Prevention of Pollution from Ships (MARPOL), 73/78 Annex V. This entailed the reduction of the pollution caused by ship-generated solid waste, establishing a supporting legal framework and the preparation of plans and programs to address the problems of collection, treatment and disposal of liquid waste and to identify regional opportunities for waste recycling .

b. Components

National

- Investments and improvements in systems for solid waste management storage, collection and disposal;
- Investments in port reception facilities for ship and small craft-generated wastes;
- Procurement of equipment to support efforts for waste recovery and recycling;
- Development or upgrade of landfill sites;
- Rationalization of the existing framework for ship and land-based solid waste management;
- Procurement of equipment for the effective treatment of hospital wastes (Antigua & Barbuda, St Lucia, St. Kitts & Nevis only);
- Grenada Dove conservation (Grenada only).

Regional

- Technical Assistance for the preparation of sewage master plans;
- Support activities and technical assistance, including harmonization and enforcement of legislation and regulations, investigation of regional markets for recyclable materials and organization of seminars and workshops;
- Project management support.

c. Comments on Project Cost, Financing and Dates

Complex financial structure with 4 loans, 3 credits and 7 Global Environmental Facility (GEF) grants. US\$ 3.74 million (7.4%) cost overrun due largely to increased costs for landfill construction which necessitated securing

additional donor funding and this substantially delayed project completion by 2.5 yrs.

3. Achievement of Relevant Objectives:

Improving domestic solid waste management facilities

This objective was eventually achieved except in Dominica . While the infrastructural requirements were largely addressed in most states, including new or upgraded landfills and new collection and disposal equipment, an increasingly bleak macro-economic situation in Dominica reduced government subventions to inadequate levels and led to non-acceptance of the IBRD loan . With the exception of Dominica there were significant benefits to public health and the environment. However, the cost of the landfill sites was significantly higher than estimated at appraisal and insufficient funds delayed the project completion by more than two years .

Strengthening the countries' capacities to manage and dispose of waste in an environmentally sustainable manner .

This objective was partially achieved . Semi-autonomous Solid Waste Management Entities (SWME's) were established within an appropriate legislative framework and sustainable operational systems, except again for Dominica, which lacked the capacity and funding to sustain the initiative . More frequent collection coverage was achieved and disposal practices improved substantially in most cases . Cost recovery mechanisms have only decreased reliance on government subventions in three of the six countries in the project . Sewerage masterplans (except in Grenada) and performance indicators envisaged did not materialise .

Compliance with International Marine Waste Requirements

Compliance with MARPOL was achieved, but not in the manner in which the project design envisioned . The shipping agents preferred to hire private operators, rather than use the advocated public barge and bin system, which had not been sufficiently developed). The costs of this approach were well over the appraisal estimate and the barges were underutilized, not bringing in sufficient revenue to cover their operating costs, let alone maintenance . In Antigua and Barbuda there was a lack of agreement over responsibilities due to this leading to the failure to introduce an appropriate bill to parliament.

4. Significant Outcomes/Impacts:

The Bank played a catalytic role in facilitating six OECS countries to jointly address an urgent environmental problem. A co-ordinated strategy for solid waste management was established at both regional and national levels . SWME's were implemented in each participating country, public awareness was substantially increased and arrangements were put in place for ship waste disposal . In most states an appropriate supportive legislative framework was established and cost recovery was improved in some cases . A further success was the strong country ownership at all levels of government . The Grenada dove and medical waste components were satisfactorily implemented.

5. Significant Shortcomings (including non-compliance with safeguard policies):

Some serious project design flaws and other constraints were evident :

- (a) The estimated costs for the construction of landfills were much too low, leading to a shortfall in funding which in turn delayed the project while the additional funding was secured . This item was 124% higher than estimated at appraisal.
- (b) For the ship waste component, the idea of using public bins for waste was premature since the system was still under development. A workable solution using private sector resources was eventually agreed, but the system that evolved was more costly and less-utilized than anticipated . The volume of waste from cruise vessels was lower than foreseen and some states were reluctant to sign an MOU because of the lower than expected revenue . In Antigua and Barbuda there was a failure to bring a ship-generated waste bill to parliament due to the reluctance of the Port Authority to formalize responsibilities .
- (c) Technical assistance for sewerage masterplans was poorly appraised, did not fit institutional realities and was severely underfunded.
- (d) Economic problems in Dominica prevented the country from achieving a sustainable strategy; the IBRD loan was not taken up.
- (e) The complexity of the project's financing structure led to delays in project administration and the failure to prepare performance indicators, as required, affected the ability to monitor progress satisfactorily .

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Satisfactory	Moderately Satisfactory	[the ICR's 4-point rating scale does not provide for a "moderately sat." rating]. The project did have many successful features, especially the establishment of the SWME's, but not all the objectives were fully achieved and some shortcomings were evident . These included project design flaws in respect of the cost of landfills and the barge and bin ship's waste disposal system. The higher

			cost and lower usage of this system made some states reluctant to commit to it. Technical assistance sewage masterplans were only completed in one instance and performance indicators to monitor progress were not instituted.
Institutional Dev .:	Substantial	Substantial	
Sustainability :	Likely	Likely	
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

- While a regional approach to build a shared strategy to tackle a common problem is sound, too many participants and too complex a structure can create bureaucratic challenges . Where possible, ways to simplify such projects should be sought .
- Public awareness and education are essential to ensure "buy-in"for major changes.
- Project design needs careful crafting and flexibility when countries with different sizes, capacities and development needs are participating

8. Assessment Recommended? Yes No

9. Comments on Quality of ICR:

Generally very well presented and candid . Financial analysis would have been improved with a summary table of the final costs for *all* financiers.