

ENVIRONMENTAL MANAGEMENT PROGRAM – PHASE II**(TC-00-11-03-4-GY)****EXECUTIVE SUMMARY****Requester:** Republic of Guyana**Executing Agency:** Environmental Protection Agency (EPA)**Type of Technical Cooperation:** Non-reimbursable

Amount and Source:	IDB: (FSO)	US\$1,280,000
	Local:	US\$ 320,000
	Total:	US\$1,600,000

Terms:	Execution Period:	24 months
	Disbursement Period:	30 months

Objectives: The main objective is to consolidate a sustainable environmental management system for the country and to develop sector-wide capacity for the implementation of environmental programs. This objective will be achieved by (i) strengthening environmental management human resources capacity both within EPA and sector-wide and consolidating the institutional framework for environmental management, (ii) increasing the physical and financial capacity for implementation of environmental management programs and, (iii) Preparing the ground to invest in strategic environmental and natural resources management projects.

Description: The Environmental Management Program – Phase II - EMPII consists of three components: (1) Development of human resources and institutional capacity for environmental management, (2) Implementing physical and financial capacity for environmental management and, (3) Preparing pre-investment studies for priority environmental and natural resources management projects. These three components will be implemented over a period of 24 months.

1. Developing Human Resources and institutional capacity for Environmental Management (US\$548,000)

The project will support a financial transition mechanism to consolidate the existing environmental management system, until the GOG assumes full responsibility to cover all EPA recurrent costs. For this purpose the project will provide limited support for the salaries of the Executive Director and the other Directors until the budget of 2002 becomes effective (with a limit of US\$150,000) and for an outside legal counsel to develop legislation pertaining to environmental health and solid waste management and disposal. To continue to build human resources capacity, the project will fund training for EPA staff, staff in partner agencies, and the wider community (NGOs, consultants, private sector, media) in areas such as permit writing, auditing, negotiation, environmental impact assessment, environmental management systems, monitoring and sampling, general pollution control practices. EPA staff will also undergo training in supervision and project management. To ensure that EPA personnel can learn from their peers in the region and elsewhere, the project will fund limited support for travel by junior staff and mid-level managers to attend conferences, workshops, and training sessions directly related to environmental management.

The EPA will design and implement public education and awareness program for environmental requirements. The EPA will also obtain technical assistance in hazardous waste management and emergency response planning. The Guyana Bureau of Standards will finalize and make effective national standards for air, water, noise, and hazardous waste. The EPA will also obtain technical assistance to design a public disclosure program to regularly disseminate information on environmental performance of permitted entities to the public.

2. Physical and Financial Capacity for Environmental Management (US\$406,000)

The project will provide support for the purchase of selected office equipment, two-way radios, minor renovations to the EPA's existing offices and one 4x4 vehicle. EPA staff and staff in partner agencies will undertake locally provided training courses in geographic information systems (GIS), database management, and systems administration. The project will also provide support for the purchase of a server, additional desktop computers, network infrastructure, and various software packages.

The EPA will establish an environmental monitoring plan that places special emphasis on water quality monitoring. The project will support the procurement of monitoring equipment, including basic water quality monitoring kits and equipment for the EPA's field stations.

The Institute of Applied Science and Technology - IAST/EPA environmental laboratory staff will undergo training in good laboratory practices, especially quality assurance and quality control. Selected laboratory equipment will be procured for the environmental laboratory to reinforce existing environmental analytical capabilities.

3. Pre-investment studies for priority environment and natural resources management projects (US\$ 250,000)

Guyana is in urgent need to invest in sustainable development projects and environmental remediation. The preparation of pre-investment studies will allow prioritizing and designing projects to seek donor financing. Preliminary and pre-feasibility studies of at least two priority environmental or natural resources management projects will be prepared. The selection of the projects will be consistent with the priorities presented in the Guyana Environmental Action.

Environmental/ Social Review:

The CESI/TRG reviewed this Technical Cooperation on July 20, 2001 and suggested the participation of the Amerindians on water quality monitoring program.

Benefits and Beneficiaries:

This project will provide critical assistance to Guyana at a crucial junction in the development of its nascent environmental management regime. The project will consolidate the significant institutional development gains that were realized during the first EMP. Through the implementation of new requirements and continued strengthening of institutional capacity, the project should lead to actual physical improvements in Guyana's environment before project end. Further, the project will establish a solid foundation for sustained environmental management in Guyana and realization of the goals of Guyana's National Environmental Action Plan.

Risks:

There are several potential risks to this project: (i) the general development context in Guyana in which it is difficult to recruit and retain qualified managers, particularly in a newer sector such as environmental management; (ii) the dependence of the implementation of an environmental management regime on the continued and enhanced coordination and collaboration of a

variety of government entities; (iii) the fact that the concept of environmental management is still relatively new in Guyana and that, given Guyana's difficult economic situation, environmental protection may be sacrificed for short-term economic development and poverty alleviation; and (iv) the ability of the Government of Guyana to ensure the financial sustainability of the EPA during the early stages of project execution.

These potential risks have been given full consideration in design of this project, and the project has been designed to mitigate these risks to the maximum extent practicable.

Bank's Country and Sector Strategy:

The Bank's Strategy for Guyana for the 1998-2001 period seeks to promote sustainable growth and poverty reduction through Bank Group programs designed to address the country's principal development challenges. The simultaneous improvement of public sector efficiency and the enabling environment for the private sector underpins the achievements expected in the social sectors, the provision of infrastructure and safeguarding the environment. The TC supports the country's strategy by strengthening the managerial capacity of the EPA which is the public Institution responsible for ensuring the integrity of the Guyana's resources endowment and the control of environmental pollution, which has direct impact on the health of the population.

Special Contractual Conditions:

As conditions precedent to first disbursement the Bank will require:

(i) The appointment of the Executive Director of EPA in accordance with the human resources strategy. The EPA will hire the new Executive Director following a competitive procedure and fulfilling qualifications agreed by the IDB. (Paragraph 3.5)

Other conditions

(i) Resources from the Bank contribution can be used to finance recurrent costs of EPA up to the date when the 2002 budget goes into effect, but the amount used can not exceed US\$150,000.(Paragraph 3.4)

Poverty-targeting and Social Sector Classification:

This operation does not qualify as a social equity enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (Document AB-1704)."

Exceptions to Bank Policy:

The project will provide transitional financing, limited to US\$150,000, for salary compensation of the Executive Director and 3 Director positions (Environmental Management, Administration, and Education, Information & Training) until the fiscal year 2002 budget becomes effective. The exception to Policy OP-402 is justified by the need to maintain an adequate level of EPA operating capacity while a financial transition mechanism is put into place to consolidate the existing environmental management system, with the GOG assuming full responsibility to cover all EPA recurrent costs

Procurement:

The procurement of works, goods and consulting services will follow bank procedures. International competitive bidding will be obligatory for purchases of more than US\$250,000 for goods and related services. Bidding of amounts below this ceiling will take place in accordance with local legislation. The hiring of consultants will follow Bank's procedures.

I. BACKGROUND

A. Guyana's environment

- 1.1 The territory of Guyana covers an area of approximately 215,000 square kilometers. The coastline is approximately 430 km long. About 95 percent of the total territory of Guyana is covered with forest and woodland vegetation, of which approximately 170,000 square kilometers is tropical high forest vegetation. Altogether Guyana has about 140,000 square kilometers of exploitable forest, of which 104,000 square kilometers is still inaccessible.
- 1.2 Guyana faces a peculiar paradigm. The country has a vast, thinly populated territory that is well endowed with rich forest cover, promising mineral resources, and globally significant biodiversity. Yet, with a population that is highly concentrated in Georgetown and the coastal zone, Guyana still faces the environmental challenges posed by urbanization, industrialization, and agricultural development. Although the impacts of forestry and mining have had significant impacts in certain areas, for the most part, Guyana has not yet seen widespread degradation of its natural environment. However, the country faces some serious environmental challenges that affect: (i) the current living conditions of its population, particularly due to improper solid waste and sewerage disposal; (ii) the survival of its ecosystems due to the potential risks posed by logging, mining, agriculture, and other development, and (iii) as a consequence of (i) and (ii), the long-term sustainable development of Guyana's economy.

B. Environmental policy

- 1.3 Traditionally Guyana's legal environmental framework has fallen far short of what would be necessary in order to deal with its environmental issues. The two main problems have been (i) the lack of modern and adequate environmental standards and regulations, and (ii) the scattering of statutory responsibility for the environment among different institutions with overlapping responsibilities and confusing roles. Up until recently, most of the laws that dealt with the environment were passed in the first half of the century, meaning that Guyana's environmental legislation was obsolete.
- 1.4 Recognizing the many weaknesses in its environmental framework, Guyana's Parliament in 1994 established a National Environmental Action Plan (NEAP). In 1996, Parliament passed the Environmental Protection Act. This law established a new institutional and regulatory framework for environmental management in Guyana, including the establishment of the Environmental Protection Agency (EPA). The Environmental Protection Act makes environmental impact assessments (EIAs) a mandatory part of many development projects, and establishes the framework for the development of subsidiary regulations.

- 1.5 The EPA's mission statement is, "to promote, facilitate and coordinate effective environmental management and protection and the sustainable use of Guyana's natural resources." The EPA's statutory mandate is quite broad, and includes: (i) implementing steps and systems for the effective management of the natural environment ensuring conservation, protection and sustainable natural resource use, (ii) coordinating the environmental management activities of all persons, organizations, and agencies, (iii) preventing or controlling environmental pollution, (iv) playing a coordinating role in the preparation and implementation of the cross-sectoral programs of environmental contents, (v) promoting public participation in the process of integrating environmental concerns in development planning, and (vi) coordinating a national environmental education and public awareness program.
- 1.6 The EPA has recorded a number of accomplishments to enhance the institutional framework for environmental management in Guyana. The EPA has developed regulations for air emissions, water effluent, hazardous waste, noise pollution, and environmental authorizations. All of these regulations have recently become effective and are presently being implemented. Complementary national numerical standards are under development. EPA has also developed environmental guidelines for several key industries. Many activities are now subject to EIA requirements. Since its establishment in 1996, the EPA has required EIAs for approximately 25 projects and has issued approximately 55 environmental authorizations in the form of environmental permits, construction permits, operating permits, and authorization letters.
- 1.7 Other aspects of the institutional framework for environmental management in Guyana include the Environmental Assessment Board (EAB) and the Environmental Tribunal. The EAB, which is required under the Environmental Management Act to review EIAs, has been appointed and made operational. The Environmental Tribunal, required under the Act to hear appeals of EPA and EAB decisions, has also been established. The Natural Resources and Environment Advisory Committee (NREAC) is a high-level body consisting of the heads of agencies with responsibility for environment and natural resources management. The NREAC meets regularly to ensure inter-agency coordination and communication
- 1.8 The Guyana Forestry Commission (GFC) has prepared a Code of Practices for Forest Operations that establishes environmental guidelines for the forestry industry. This code is currently being enforced through Timber Sales Agreements and will be enacted into law under pending amendments to the Forestry Act. These amendments have been drafted and are now to be laid in Parliament. Also with IDB support, the GGMC has led a multi-stakeholder process to develop new environmental regulations for the mining industry. It is anticipated that these regulations will become effective in the latter part of 2001.
- 1.9 The Ministry of Agriculture has established a Pesticides and Toxic Chemicals Board which is currently developing regulations to control the use of pesticides

and toxic chemicals. Enactment of such regulations is important, as they will provide a preventative mechanism for dealing with substances with potentially significant human health and environmental impacts. With EPA assistance, the Ministry of Health is in the process of revising the Public Health Act to refocus it on environmental health. These revisions are important as it is expected that existing public health inspectors will play a key role in the implementation of the new environmental management regulations. The Ministry of Local Government, which bears significant responsibility for solid waste management, will also collaborate with the EPA in the implementation of the environmental regulatory regime.

- 1.10 Guyana has made significant gains in improving the policy and institutional framework for environmental management. However, these gains are fragile. Although attitudes are changing, acceptance of the importance of environmental management is not yet widespread. Furthermore, institutional capacity—particularly human resources capacity—for implementation of new requirements is still relatively weak. Additional work is needed to reinforce the gains made to date and to create momentum toward effective environmental management.

C. Bank's strategy for Guyana

- 1.11 The Bank's Strategy for Guyana for the 1998-2001 period seeks to promote sustainable growth and poverty reduction through Bank Group programs designed to address the country's principal development challenges. The simultaneous improvement of public sector efficiency and the enabling environment for the private sector underpins the achievements expected in the social sectors, the provision of infrastructure and safeguarding the environment. This operation supports the country's strategy by strengthening the managerial capacity of the EPA, which is the public Institution responsible for ensuring the integrity of the Guyana's resources endowment and the control of environmental pollution, which has direct impact on the health of the population.

D. Previous Bank experience and involvement of international financing agencies

- 1.12 A Technical Cooperation (TC) agreement between the Bank and the Government of Guyana was signed in February 1997 and was initiated in August 1998. This US\$1.5 million Environmental Management Program (EMP I), ATN/SF-5432-GY, provided support for capacity building of the newly created EPA, developed the Guyana's legal and regulatory framework in the environment and natural resources management areas and improved the environmental management and monitoring capacities. Additional resources were provided through the Swedish Trust Fund to finance EPA's Executive Director from August 2000 to July 2001 (ATN/SC-7037-GY and ATN/SC-7317-GY). An evaluation of the Environmental Management Program conducted in April 2000 concluded that the Program met its objectives.

- 1.13 In addition to the EMPI, the Bank's involvement in Guyana's environmental sector includes the Electricity Sector Program and Technical Cooperation for the Implementation of the Electricity Sector Program (986/SF-GY and ATN/MT-5429-GY), which financed the development of environmental guidelines for the electricity sector. The Bank has also financed the Environmental Improvement of the Georgetown Interim Disposal Site (GY-0059) and provided funding for coastal zone management training. The Georgetown Solid Waste Management Program (GY-0055) is under preparation. In addition to these projects, the IDB has financed the Agriculture Sector Loan (965/SF-GY, 966/SF-GY and ATN/SF-5098-GY), which included support for the establishment of the Pesticides and Toxic Chemicals Board.
- 1.14 Guyana has benefited from other bi-lateral and multi-lateral support for the environmental management sector. Through the Guyana Forestry Commission Support Project, the British Department for International Development (DfID) has provided support to the GFC to develop a Code of Practices for Forest Operations, while strengthening the GFC's capacity for environmental management. The Canadian International Development Agency (CIDA) has provided support to the GGMC under the Guyana Environmental Capacity Development (GENCAPD) Project to develop environmental standards for the mining sector while strengthening GGMC's capacity for environmental management. The United Nations Development Program (UNDP) has provided on-going support to the EPA under the Assistance to the EPA in Implementing an Environmental Education, Awareness and Capacity Building Program Project. UNDP has also provided support for the preparation of the National Biodiversity Strategic Plan (NBSP) under the Convention on Biodiversity. The EPA has benefited from other assistance from the World Wildlife Fund (WWF) for a natural resources utilization impact study in the Northwest and for wildlife surveys. The Organization of American States (OAS) has provided support for implementation of the Caribbean Program for Adaptation to Climate Change (CPACC).

E. Accomplishments and lessons learned

1. Accomplishments

- 1.15 Under the Environmental Management Program, the EPA has recorded a significant number of accomplishments. These include:
- a. **Strengthening of the EPA:** At the beginning of the TC, the EPA has just a nascent organization. The Agency is now established with a clear organizational structure, operating procedures, and record of sound financial management and project implementation. The EPA has established robust management information systems that include significant network and geographic information systems (GIS) capabilities. The fact that the EPA has attracted additional responsibilities from Government and significant additional financial support from donor agencies is an indication of the increasing institutional strength of the Agency. It is also important to note

that Government subvention for the EPA increased dramatically during the life of the project, from G\$7.6 million in 1997 to G\$33 million in 2000 (current dollars).

- b. **Expansion of the legal regime:** The EPA drafted and Government enacted new national rules for air, water, noise, hazardous waste, and environmental authorizations. The EPA has also assisted in the preparation of draft legislation for forestry, mining, and environmental health.
- c. **Implementation of regulations:** The EPA has required EIAs for approximately 25 projects and has issued approximately 55 environmental authorizations in the form of environmental permits, construction permits, operating permits, and authorization letters. In 2000, the EPA conducted 92 field inspection for routine compliance and in response to specific complaints, with 63 closed through voluntary enforcement. The EPA has developed operation guidelines for eco-tourism, asbestos removal, service/gas stations, rice mills, poultry processing plans, abattoirs, hotels, closure plans, mining exploration and operation, wood working, tire disposal, and drainage and irrigation. The EPA has also developed an EIA review manual and prepared operating guidelines for the EAB.
- d. **Community outreach:** The EPA has implemented a number of public education and awareness programs and has worked with schools and communities to establish a national network of 37 community-based environmental clubs.
- e. **Inter-agency coordination:** The EPA has established MOU with the Ministry of Health, the Ministry of Local Government, the Ministry of Public Works and Communication, GFC, and the GGMC.

2. Lessons learned

- 1.16 Despite these accomplishments, the EPA is still in its early stages of development. Additional support is warranted to consolidate the Agency's performance and establish clear momentum for sustainability. In this regard, there are a number of important lessons learned to be drawn from the first TC that can inform the EMPII and other similar projects. These include:

- a. **Institutional development takes time:** The original 18-month timeframe for the Environmental Management Program was insufficient in light of the state at which EPA was at the beginning of the project and the project objectives. Developing new institutions takes time.
- b. **Human resources are critical to institutional development and sustainability:** Developing, attracting, and retaining human resources is a peculiar challenge in the Guyana context. The EPA benefited significantly from the project's support for a strong management team. A remaining

challenge is to continue to strengthen environmental management human resources in Guyana, not just in the EPA, but in the entire environmental sector.

- c. **Engagement of stakeholders is critical, but time-consuming:** Work in the mining sector demonstrates that stakeholder acceptance of the environmental management agenda is critical for sustainability, but the process to engage stakeholders can be quite time consuming. Furthermore, a participatory process to develop requirements is important to the sustainability of those requirements. Rather than establish fixed dates for enactment of requirements, it is better to ensure that there is reasonable further progress toward their enactment through a participatory process.
- d. **Government commitment is critical:** The EPA is a Guyana institution and the Government of Guyana is ultimately responsible for its success. The Government has demonstrated its commitment to environmental management through the development and enactment of new legal requirements through a continually increasing Government subvention to the EPA, but the GOG budget allocation still fails to cover all EPA recurrent costs. Continuing Government support is critical to the long-term viability of the EPA.

II. OBJECTIVES

- 2.1 The overall objective for this project is to consolidate a sustainable environmental management system for the country and to develop sector-wide capacity for the implementation of environmental programs. This objective will be achieved by (i) strengthening environmental management human resources capacity both within EPA and sector-wide and consolidating and enhancing the institutional framework, (ii) increasing the physical and financial capacity for implementation of environmental management programs; and (iii) Preparing pre-investment studies for priority environmental and natural resources management projects.

III. PROGRAM DESCRIPTION

A. Participating organizations

- 3.1 The EPA will be the Executing Agency for this project. The EPA is headed by an Executive Director and currently includes four Divisions: Environmental Management, Natural Resources, Administration, and Education, Information & Training. The Environmental Management and Natural Resources Divisions have replaced what was formerly the Operations Division. Establishing a separate division for environmental management and natural resources is warranted due to

EPA's clear statutory mandate for both "green" and "brown" environmental issues. The EPA current has a staff complement of 4 managers, 23 technical personnel, and 14 administrative personnel. EPA is governed by a Board of Directors which is appointed by the President. An organizational chart for the EPA is included in Annex III-2.

- 3.2 Other sector-wide beneficiaries will include: the GFC, the GGMC, the Ministry of Health, the Ministry of Local Government, the Ministry of Labor, the Ministry of Agriculture, and the IAST. The GGMC and the GFC each have an Environmental Unit. The Natural Resources and Environment Advisory Committee is the principal mechanism for ensuring coordination and collaboration of these various agencies.

B. Components, outputs and activities

- 3.3 This project consists of three components: (1) human resources and institutional framework for environmental management, (2) physical and financial capacity for environmental management and, (3) pre-investment studies for priority environmental and natural resources management projects. These three components will be implemented over a period of 24 months. A logical framework for the project is included in Annex III-1.

1. Human resources for environmental management (US\$548,000)

a) EPA human resources capacity strengthened

- 3.4 The project will provide transitional financing for compensation of the new Executive Director and 3 Director positions (Environmental Management, Administration, and Education, Information & Training) until the fiscal year 2002 budget is expected to become effective. Financing for these positions will be in accordance with the human resources strategy. After the transition period, Government will assume all financial responsibility for all EPA recurrent costs. Resources from the Bank contribution can be used for recurrent costs up to the date when the 2002 budget goes into effect, but the amount used cannot exceed US\$150,000.
- 3.5 Prior to first disbursement, the EPA will appoint a new Executive Director in accordance with the human resources strategy. The EPA will hire the new Executive Director following a competitive procedure and fulfilling qualifications agreed by the IDB. It is anticipated that this new Executive Director will be a citizen or bona fide resident of Guyana. To facilitate the transition, the project will continue to provide financing for the compensation of the EPA's present internationally recruited Executive Director at present levels for up to 6 months. Upon appointment of the new Executive Director, the present Executive Director will assume the role of Advisor to the Executive Director.

- 3.6 The project will finance legal technical assistance to develop new legislation pertaining to environmental health and solid waste management. The project will also support the periodic use of local and international experts to provide assistance in such areas as reviewing EIAs, permit development, and project management. Although the general need for such experts can be anticipated, the EPA will determine the exact timing and nature of this assistance in consultation with the IDB.
- 3.7 EPA staff and staff in partner agencies will receive technical training in such areas as permit writing, auditing, negotiation, and environmental impact assessment¹. To the extent practicable, the EPA will make this training available to NGOs and the private sector. EPA staff will also undergo managerial training in such areas as supervision and project management. Training of this nature is critical if the EPA is to develop managerial capacity over the long term. To ensure that EPA personnel can learn from their peers in the region and elsewhere, the project will provide limited support for travel by junior staff and mid-level managers to attend conferences, workshops, and training sessions directly related to environmental management.
- 3.8 The project will support locally provided training courses for staff, partner agencies, and the wider community (NGOs, consultants, private sector, media) in such critical areas as environmental management systems, environmental planning, monitoring & sampling, and general pollution control practices. The training will be conducted so as to provide maximum practical impact and to build on-going capacity for training and mentoring in Guyana. As such, local curricula will be developed and courses will be offered on a part-time basis over extended periods to allow participants to apply their knowledge and use real life experiences as case studies in class. This effort will be coordinated with other planned and ongoing programs.

b) Institutional framework for environmental management strengthened

- 3.9 Under the EMPI, the EPA developed and made effective new regulations for air, water, noise, hazardous waste, and environmental authorizations. It is now critical that these new requirements be implemented. At the same time, additional regulations and standards must be developed and made effective. Experience from other countries has demonstrated that, particularly for smaller firms, lack of understanding of regulatory requirements is a significant barrier to compliance. In many instances, education alone can result in greatly enhanced compliance rates. The project will finance design and implementation of a public education and awareness program for environmental regulations, including radio and television slots, newspaper advertisements, brochures, fact sheets, posters, and outreach workshops.

¹ EPA will include adequate conditions to warrant that the beneficiaries of training will pay back if they do not work for the beneficiary public agency after the completion of the training program.

- 3.10 The project will provide technical assistance to support EPA's efforts to undertake an assessment of hazardous waste issues in Guyana and to develop priorities for implementation of the hazardous waste regulations.
- 3.11 It is important for Guyana to develop the capacity and institutional framework to respond to incidences such as tailing pond ruptures, oil spills, and other types of environmental emergencies. The project will finance a technical assistance to assist EPA when working with other relevant agencies and the private sector to address the environmental aspects of national emergency response planning. This will include assessing current emergency response mechanisms and capacity, enhancing coordination and communication mechanisms, establishing a documented plan to respond to environmental emergencies, and developing a long-term strategy to address human and equipment capacity building needs.
- 3.12 Public disclosure program have been proven highly effective in empowering communities, influencing markets, and ensuring companies have information about their environmental performance relative to competitors and other industries. The EPA has already undertaken some preliminary work to investigate opportunities to develop a public reporting program along the lines of Indonesia's Program for Pollution Control Evaluation and Rating (PROPER) or the United States Toxic Release Inventory (TRI). The project will finance technical assistance to support EPA's efforts to undertake a consultative process to design and implement a transparent and credible system to regularly disseminate information on the environmental performance of permitted entities and ambient environmental conditions to the public. This public reporting program may be in the form of data on environmental releases like TRI and/or some type of ranking or grading system based on objective criteria like PROPER.

**2. Physical and financial capacity for environmental management
(US\$406,000)**

a) EPA further equipped

- 3.13 Much progress has been made in providing the EPA with basic accommodation and equipment. However, additional investments are necessary to ensure that EPA has the resources to fulfil its mandate. The project will finance the purchase of selected office equipment and minor renovations to the EPA's existing offices. Although modest, these investments are critical to the development of the Agency's human resources strategy, as the EPA must provide a comfortable and secure work environment to attract and retain good staff. Implementation of the regulations will depend on greatly increased staff mobility. The project will support the procurement of an additional 4x4 vehicle and two-way radios.

b) Information management systems enhanced

- 3.14 Information technology is critical to effective environmental management. The EPA has already developed robust management information systems, but critical

investments are still necessary to ensure the effectiveness of those systems. The bank will finance locally provided training courses in GIS, database management, and systems administration for EPA and other agencies. The project will also finance the purchase of an additional server, additional desktop computers, additional network infrastructure, and various software packages. EPA will obtain technical assistance, particularly through exchanges with other agencies, to improve its web site and to develop a strategy to maximize the use of the Internet for training, communication, and reference.

c) Monitoring and modeling program established

- 3.15 Effective environmental monitoring and modeling is necessary to develop baseline information, understand the potential impacts of new developments, and establish priorities for the enforcement of regulations and standards. Good information about environmental conditions will strengthen EPA's credibility and build a solid public constituency for environmental management.
- 3.16 Technical assistance will be provided to establish an environmental monitoring plan that identifies: priority areas for ongoing baseline monitoring; parameters and indicators; monitoring procedures; environmental modeling systems; and responsibilities for implementation. This plan will place special emphasis on water quality monitoring. During the first year of execution, the EPA will present a detailed nation-wide water quality monitoring plan including the location of monitoring stations, variables and parameters that will be analyzed, sampling frequencies, quality assurance procedures, schedules, and costs. This effort will be coordinated with other planned and ongoing programs. On this basis of this plan, the project will support the procurement of monitoring equipment, including basic water quality monitoring kits and equipment for the EPA's field stations and air quality modeling programs and systems.
- 3.17 The EPA will designate at least 25 environmental officers or inspectors in partner agencies to work in conjunction with the EPA in monitoring, inspection, and the enforcement of regulations and standards. To the extent practicable, the EPA will also identify opportunities to engage people in communities, particularly rural communities and Amerindians, in the monitoring, inspection, and enforcement system. By using volunteer or part-time community members, the EPA should be able to greatly increase its ability to monitor outlying areas at minimal cost. A technical assistance will be provided finalize the development of operating procedures for monitoring, inspection, and enforcement, including enforcement guidelines, entry and inspection procedures, handing of complaints, sampling, chain of custody, and documentation, with all officers and volunteers trained on these procedures as appropriate.

d) Laboratory analysis capacity strengthened

- 3.18 Credible analytical services are necessary for effective monitoring and enforcement. Lack of good data can undermine the credibility of regulatory

agencies. In conjunction with the IAST, the EPA has already established an environmental laboratory that has some basic capacity for environmental analysis. To ensure the credibility of the EPA, IAST/EPA environmental laboratory staff will undergo training in good laboratory practices, especially quality assurance and quality control. Selected laboratory equipment will be procured for the environmental laboratory to reinforce existing environmental analytical capabilities.

- 3.19 The establishment of an environmental regulatory regime in Guyana should lead to opportunities for private sector investment in the provision of laboratory services. During the first year of the project, the EPA will undertake a study of laboratory services to identify opportunities for privatization and private sector investment.

3. Priority pre-investment studies for environmental and natural resources management (US\$250,000)

- 3.20 Guyana is in urgent need to invest in sustainable development projects and environmental remediation. Guyana's Environmental Action Plan prioritize actions in coastal Zone management, liquid and solid waste management, forestry management, biodiversity conservation and support of Amerindians communities. The Bank is already supporting the GOG to address the solid waste management issues. The project will finance the preparation of preliminary and pre-feasibility studies of two priority investment projects. An international consulting firm will be contracted to develop the studies. The studies will be develop in two phases. During the first phase an assessment of investment priorities will be carried on and two projects will be selected. The selection of the projects will receive the Bank's non-objection. During the second phase pre-feasibility studies will be prepared. This studies will be the bases for an eventual future environmental investment program to be considered for IDB or other donor support.

C. Organization and execution

- 3.21 The EPA will be the Executing Agency and primary beneficiary. Within the EPA, the Executive Director will be responsible for project implementation and management. The EPA will be responsible for fulfillment of the work plan and realization of the project outputs. EPA's Administrative Director will administer all project funds and will generate the necessary financial reports.
- 3.22 The Bank's Country Office in Guyana will conduct disbursements following standard Bank procedures for technical cooperation. A revolving fund will be established, with an initial disbursement equivalent to 5 percent of the total cost of the operation. Subsequent disbursements will be made to replenish the revolving fund, but can be halted if the Bank finds unsatisfactory progress or if Government fails to satisfy the Special Conditions. In such a case, the Bank will communicate the matter in writing to the Executing Agency and the Borrower.

- 3.23 Government counterpart funding will primarily be applied to EPA managerial salaries after Bank support for those salaries is phased out. Government will make timely budgetary allocations to cover these expenses, and the funding will be managed directly by the EPA.

D. Expected results

- 3.24 Implementation of this project is expected to render the following results:

- a. Continued functioning of the EPA with succession of management.
- b. Increased human resources capacity for environmental management within EPA and the environmental sector as a whole.
- c. Professional development of senior technical personnel and mid-level managers at EPA.
- d. Implementation of the newly enacted regulations for water, air, hazardous waste, noise and environmental authorizations that were developed under the Environmental Management Program.
- e. Enactment and implementation of national standards for water, air, hazardous waste, and noise and environmental regulations for mining and forestry.
- f. Enhanced inter-agency coordination and collaboration, including a system for inspection and enforcement of environmental regulations.
- g. Establishment of an effective program for environmental modeling and monitoring, particularly water quality monitoring.
- h. Establishment of a public reporting system and adoption of environmentally friendly processes and technology by industry.
- i. A well equipped and reliable IAST/EPA laboratory functioning.
- j. Two pre-feasibility studies of priority investment projects.

E. Supervision and reports

- 3.25 The IDB Country Office will bear principal responsibility for day-to-day supervision of project implementation through regular contact with the EPA and other agencies. The IDB Headquarters project team will conduct regular supervisory missions and will remain in close contact with both the Country Office and the EPA to monitor project implementation. The EPA will generate the following reports:

1. Initial report

- 3.26 Within 60 days of contract signature, EPA will present a report to the Bank that will include (i) a detailed work plan for the project, specifying activities, timeframes, and responsibilities, and (ii) a procurement plan, including specifications, timing, and procurement method for planned acquisitions and execution of physical investments.

2. Progress reports

- 3.27 EPA will produce bi-annual progress reports, the progress reports will detail progress made in implementing the work plan, any significant actual or anticipated problems, proposed adjustments to the work plan and their justification, and progress toward achieving the project's purpose and expected results.

3. Final report

- 3.28 EPA will present a final report one month after the conclusion of project execution. The final report will assess the merits of the original project design, summarize project accomplishments and shortcomings vis-à-vis the original project design, and make recommendations for future similar IDB projects.
- 3.29 The Bank will reserve funds to contract a mid-term evaluation and an ex-post evaluation to assess attainment of project objectives and expected results. These evaluations will focus on fulfillment of the project's outputs and purpose, particularly the outlook for long-term sustainability of EPA functions. The mid-term evaluation will include any relevant recommendations for adjustments to the project.

F. Costs and financing

- 3.30 The total cost of the project is estimated at the equivalent of US\$1,600,000. The Bank's contribution will be the equivalent of US\$1,280,000, to be disbursed in United States dollars, and derived from the net income of the Fund for Special Operations. Government of Guyana counterpart funding will be the equivalent of US\$320,000. Estimated project costs and Bank and Government contributions are summarized in the following table.
- 3.31 Bank contributions will primarily fund technical assistance, training, equipment, and EPA management salaries for the initial stage of the project. Government of Guyana contributions are estimates and will primarily fund EPA management salaries after the IDB support ends and the operation and maintenance costs of equipment. Although not reflected in the project budget, the Government of Guyana will continue to provide funding for recurrent expenditures, including, but not limited to salaries for EPA staff and the staff of other agencies, operation and maintenance expenditures, and accommodation for the EPA.

Table 3.1
Budget
(US\$ thousands)

	IDB	LOCAL	TOTAL
Staff Compensation	129	248	377
Technical Assistance	228	-	228
Training	241	-	241
Equipment and Supplies	257	42	299
Travel and Accommodations	29	-	29
Prefeasibility Study	250		250
Monitoring and Evaluation	40		40
SUBTOTAL	1,174	290	1,464
Contingencies (10%)	106	30	136
TOTAL	1,280	320	1,600

IV. BENEFITS AND RISKS

- 4.1 This project will provide critical assistance to Guyana at a crucial junction in the development of its nascent environmental management regime. The project will consolidate the significant institutional development gains that were realized during the first EMP. Through the implementation of new requirements and continued strengthening of institutional capacity, the project should lead to actual physical improvements in Guyana's environment before project end. Further, the project will establish a solid foundation for sustained environmental management in Guyana.
- 4.2 There are several potential risks to this project. The first potential risk is the general development context in Guyana in which it is very difficult to attract and retain qualified staff. The potential implications of this risk should not be underestimated. For example, the difficulty that the EPA experienced in attracting qualified managers led to a significant delay in the start-up of the Environmental Management Program. The Operations Division of the EPA has lost 5 staff members to emigration in the past two years—the equivalent of 35 percent of its staff. Others EPA staff members have left to join the private sector or to pursue further studies. This situation is not unique to the EPA, but it is particularly problematic for the Agency as the environmental sector is still relatively immature and lacks any depth of skilled and experienced human resources base. To manage this risk, the project will provide limited funding for the cadre of managers while the EPA recruits new managers at salary levels that

the Government is prepared to sustain. The project will also provide support for development of human resources capacity within the EPA and on a sector-wide basis.

- 4.3 The second potential risk is that the implementation of an environmental management regime in Guyana is dependent on the continued and enhanced coordination and collaboration of a variety of Government entities. Experience from other countries has shown that this can be a very difficult issue. This risk is mitigated, however, by the fact that there is already a significant amount of inter-agency communication and collaboration in Guyana. The Natural Resource and Environment Advisory Committee is a senior level body that meets regularly to ensure communication and coordination among the various agencies. Furthermore, the concept of a networked approach in which several agencies, not just the EPA, will share responsibility for environmental management appears to be widely accepted, if not yet fully practiced. These institutional relationships and management systems will be strengthened during project implementation.
- 4.4 The third risk is that the concept of environmental management is still relatively new in Guyana. Given Guyana's difficult economic situation, environmental protection may take a back seat to economic development and poverty alleviation. Mitigating this risk is the fact that there appears to be at least a basic acceptance of the importance of environmental management at a political level. Furthermore, the EPA has made some significant progress in educating the public on the importance of environmental management. By strengthening those on-going efforts and supporting efforts to educate industry and further involve communities in environmental management efforts, the project should address this risk.
- 4.5 The fourth risk is the long-term sustainability of the project. It is reasonable to question the ability of the Government of Guyana to ensure the continuing viability of the EPA during and after this project, particularly because the Government will need to begin financing all management salaries from fiscal year 2002. This risk is mitigated by several factors. First, the Government of Guyana has already confirmed its commitment to the long-term financial sustainability of the EPA. Second, the project includes a clear process to establish local compensation levels for managers and to recruit managers at those levels. Third, IDB support for salaries will be phased out after during the initial stages of the project, thereby requiring Government support for all salaries during the project implementation period. Finally, the EPA has prepared a financial plan that clearly demonstrates that the Agency can maintain financial viability if Government earmarks additional new revenue sources. The Agency will continue to work toward adoption of this plan during project implementation.

V. MONITORING AND EVALUATION

- 5.1 The EPA will provide bi-annual progress reports that describe the progress of outputs and activities as well as expenditures. Both the Bank headquarters and the Country Office will closely monitor implementation through regular communication with the EPA.
- 5.2 The Bank will conduct a mid-term evaluation mission after the first year of execution. The mid-term evaluation (described in section III.E.) will be prepared prior to the mission and will serve as a basis for discussions during the mission. The EPA will also contract with a local NGO or research institution to provide brief reports on project implementation every 6 months. The Bank and the Government of Guyana have agreed to undertake ex-post evaluation as described in section III.E.

ENVIRONMENTAL MANAGEMENT PROGRAM – PHASE II
(TC-00-11-03-4-GY)
LOGICAL FRAMEWORK

INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
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1.1	Continued functioning of the EPA with succession of management.	1.1	EPA Evaluations and reports.	1.1	Government commitment to fund EPA at national levels.
1.2	Increased human resources capacity for environmental management within EPA and the environmental sector as a whole.	1.2	Professional development of senior technical personnel and mid-level managers at EPA.	1.3	Implementation of the newly enacted regulations for water, air, hazardous waste, noise and environmental authorizations that were developed under the Environmental Management Program.
1.4	Enactment and implementation of national standards for water, air, hazardous waste, and noise and environmental regulations for mining and forestry.	1.5	Enhanced inter-agency coordination and collaboration, including a system for inspection and enforcement of environmental regulations.	1.6	Establishment of an effective program for environmental modelling and monitoring, particularly water quality monitoring.
1.7	Establishment of a public reporting system and adoption of environmentally friendly processes and technology by industry.	1.8			

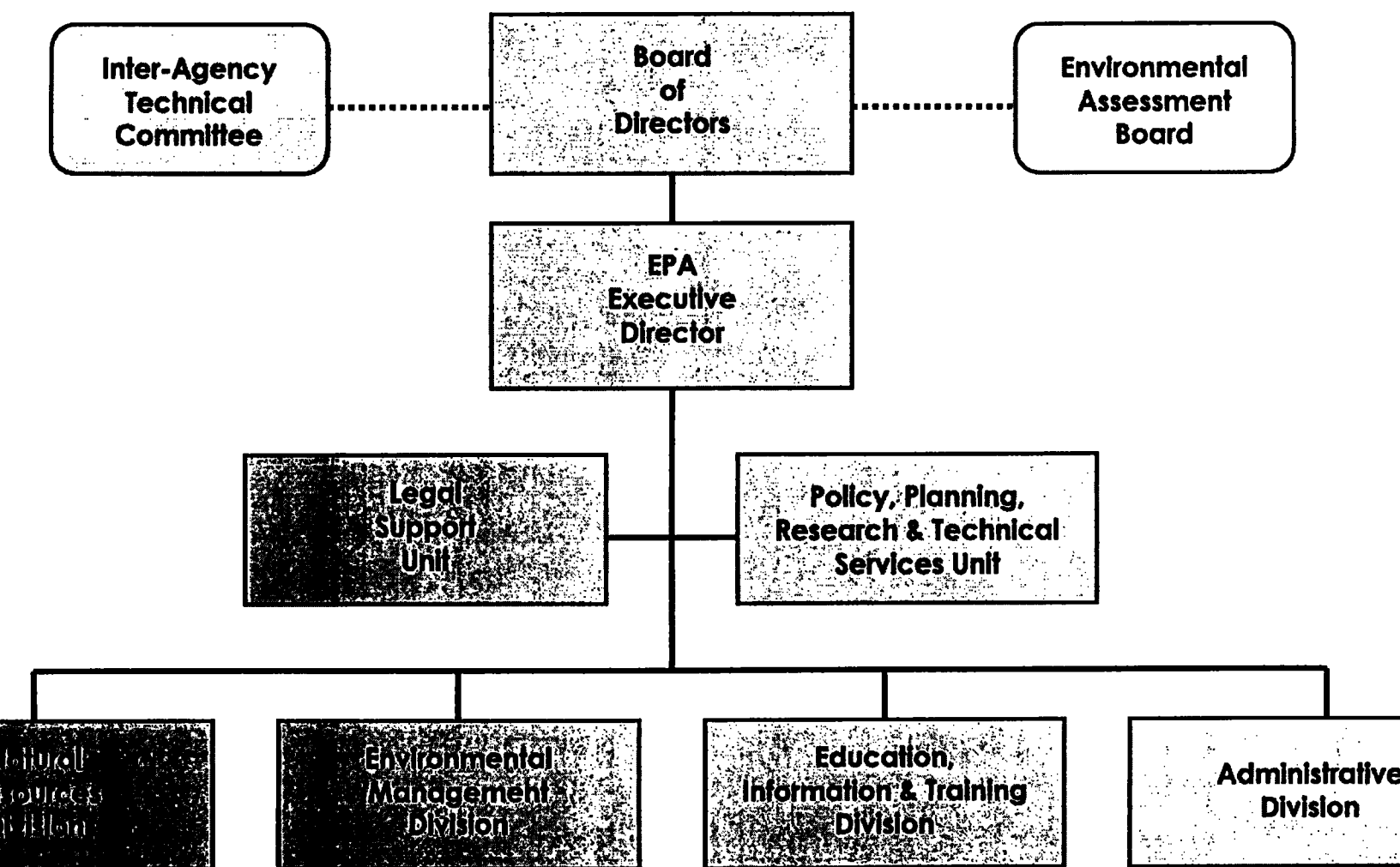
EXECUTIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
RESULTS & OUTPUTS			
Output 1: Human Resources and Institutional Framework for Environmental Management. Human resources capacity enhanced and strengthened.	1a.1 Government support for salaries of Executive Director and Directors secured by the end of 1 st quarter of FY 2002. 1a.2 Outside legal counsel secured with new legislation pertaining to environmental health and solid waste management developed. 1a.3 Number of EIAs reviewed and approved. Number of environmental permits. 1a.4 EPA management systems running to ensure the documentation of all policies and procedures. 1a.5 EPA staff trained in such areas as permit writing, auditing, negotiation, environmental impact assessment, supervision, and project management.	1a.1 EPA evaluations and reports.	1a.1 Local managers recruited at local salaries. 1a.2 Government provided sufficient support for managers' salaries.
Human resources capacity enhanced.	1b.1 EPA staff, staff in partner agencies, and representatives from the wider community (NGOs, consultants, private sector, media) trained in environmental management systems, environmental planning, monitoring & sampling, hazardous waste management, and general pollution control procedures. 1b.2 On going capacity for training and mentoring established in Guyana.	1b.1 Evaluations.	1b.1 Course participants willing to commit to extended training. 1b.2 Course participants remain in Guyana.
Institutional framework for environmental management strengthened.	1c.1 MOU between EPA and the GGMC, GFC, Ministry of Health, Ministry of Local Government, Ministry of Agriculture, Ministry of Labor, and other relevant agencies reviewed and revised and functioning. 1c.2 Procedures for coordination of agency actions established.	1c.1 Evaluations.	1c.1 Existing inter-agency communication and collaboration continued.

ENVIRONMENTAL SUMMARY		INDICATORS		MEANS OF VERIFICATION		ASSUMPTIONS	
<p>on management regime mented.</p>	<p>1d.1 Education and awareness program for new regulations designed and implemented.</p>	<p>1d.2 Priorities for permits established and permits or authorizations for approximately 50 facilities developed.</p>	<p>1d.3 National standards for air, water, noise, and hazardous waste finalized and made effective.</p>	<p>1d.4 Hazardous waste issues assessed and priorities established.</p>	<p>1d.5 The mining & forestry environmental regulations enacted and enforced.</p>	<p>1d.6 National environmental emergency response plan developed.</p>	
<p>gulatory pollution control res enhanced.</p>	1e.1 Technical exchanges implemented.	1e.2 Public disclosure program designed and implemented.	<p>2a.1 EPA's existing offices implemented and equipped.</p>	<p>2b.1 EPA staff and staff in partner agencies trained in GIS, database management, and systems administration.</p>	<p>2a.1 Evaluations, physical inspection.</p>	<p>2b.1 Evaluations, physical inspection.</p>	<p>ation management system ced.</p>
	1e.1 Private sector will collaborate.	2a.1 Government develop long-term solution office space.					
<p>nt 2: Physical and Financial for Environmental ment.</p>	<p>2a.1 EPA's existing offices implemented and equipped.</p>	<p>2b.1 EPA staff and staff in partner agencies trained in GIS, database management, and systems administration.</p>	<p>2a.1 Evaluations, physical inspection.</p>	<p>2b.1 Evaluations, physical inspection.</p>	<p>2a.1 Government develop long-term solution office space.</p>	<p>2b.1 EPA staff and staff in partner agencies trained in GIS, database management, and systems administration.</p>	<p>ation management system ced.</p>

SUMMARY		INDICATORS		MEANS OF VERIFICATION		ASSUMPTION	
Monitoring and modeling plan established.	2c.1	Environmental monitoring plan developed and implemented.	2c.1	Plans, monitoring results, physical inspection results, physical inspection.	2c.1	Communities will participate in project	
	2c.2	Monitoring equipment (e.g., water quality monitoring kits, field station equipment) procured and used.	2c.2				
Laboratory analysis capacity enhanced.	2d.1	Environmental laboratory staff trained in good laboratory practices.	2d.1	Physical inspection, cross check of lab results, reports.	2d.1	IAST & EPA cooperation continued.	
	2d.2	Selected laboratory equipment will be procured.					
Pre-Investment		3a.1	Two pre-feasibility studies concluded.	3a.1	Consultant reports.		
Investment studies.							

EPA Organizational Structure

April 12, 2000



PROPOSED RESOLUTION

GUYANA. NONREIMBURSABLE TECHNICAL COOPERATION FOR AN
ENVIRONMENTAL MANAGEMENT PROGRAM - PHASE II

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such agreements as may be necessary with the Co-Operative Republic of Guyana, and to take such additional measures as may be pertinent for the execution of the plan of operations referred to in Document AT-_____ with respect to a non-reimbursable technical cooperation for an environmental management program - phase II.
2. That up to the sum of US\$1,280,000, or its equivalent in convertible currencies, is authorized for the purposes of this resolution, chargeable to the net income of the Fund for Special Operations.
3. That the above-mentioned sum is to be provided on a non-reimbursable basis.