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Message from the Executive Director

During 2002, the Environmental Protection Agency (EPA) continued to successfully carry out its responsibilities under the Environmental Protection Act.

The EPA is grateful for the support it has received and continues to receive from International and Regional institutions in the execution of its mandate. In the year under review, Phase I of the Environment Management Programme (EMP) funded by the Inter American Development Bank (IDB) which commenced in 1998 came to an end. Phase II of the EMP commenced in 2002 providing US\$ 1.28 M to build the EPA's capacity for environmental management.

The two-year UNDP funded Environmental Awareness and Capacity Building Programme which supported the Education, Information and Training (EIT) Programme also came to an end in 2002. Notable achievements of this programme include more than twenty workshops across Guyana to increase public awareness on Biodiversity, Solid Waste Management and Integrated Coastal Zone Management. A network of environmental clubs was also established across Guyana to engage youth in the environmental management and Curriculum Modules were developed for a pilot level for integration of environmental education into the school curriculum.

Funds under the Guyana Environmental Capacity Development Programme (GENCAPD) and the Government of Guyana have been earmarked for public awareness of best practices in mining to be implemented by the EPA.

The EPA continues to coordinate the efforts of stakeholders in environment management and recognizes the contribution of various committees that serve it in an advisory capacity. Such partnership is valuable to the achievement of sustainable management of the environment and it is hoped that it will continue and even grow stronger in the future.

Executive Director

About the Environmental Protection Agency

Our Mission

The mission of the Environmental Protection Agency (EPA) is, **to ensure management, conservation, protection and improvement of the environment, the prevention or control of pollution, the assessment of the impact of economic development on the environment and the sustainable use of natural resources.**

Functions of the EPA

The EPA was established under the Environmental Protection Act (EPA) No 11. of 1996. This Act gives the EPA overall responsibility in Guyana “*to take such steps as are necessary for the effective management of the natural environment so as to ensure conservation, protection and sustainable use of its natural resources*”. Although an Environmental Unit was created in the Office of the President after the passing of the EP Act, the EPA itself did not become fully staffed and operational until 1998.

The functions of the EPA are clearly stated in the EP Act, Part II 4 (1). These functions can be classified into three broad categories, namely, regulatory, coordinating and the promotion of public participation in environmental protection.

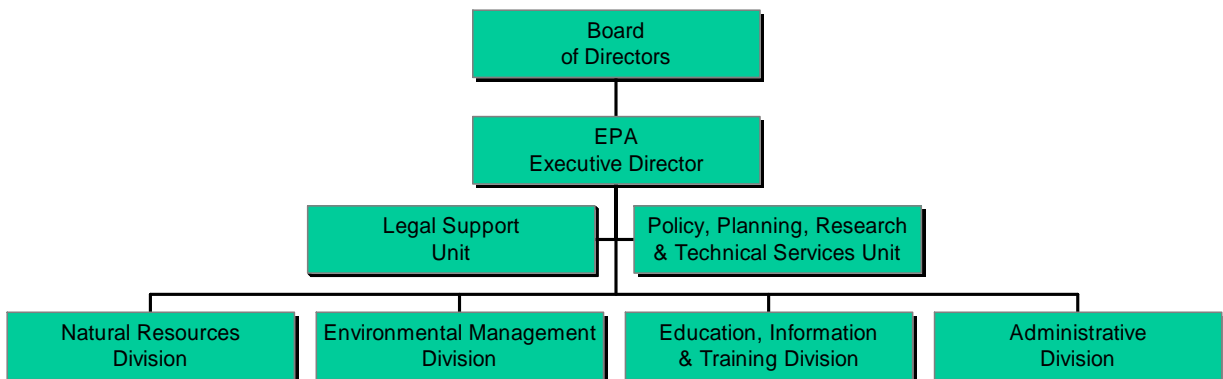
The Agency’s regulatory function gives it the responsibility to monitor and enforce the EP Act and associated regulations. This function of the EPA ensures that development integrates measures for environment protection.

The EPA has a major coordinating function with regard to the sustainable use and conservation of Guyana’s natural resources. The work of the EPA is complex, spanning a range of interconnected issues, making coordination with private and public sector and non-governmental organizations necessary for the accomplishment of its mandate.

The EPA has a responsibility to promote the participation of the public in the process of integrating environmental concerns in planning for sustainable development. This is achieved by providing information to the public on environmental issues and problems and EPA’s procedures and processes.

The Organizational Structure of the EPA

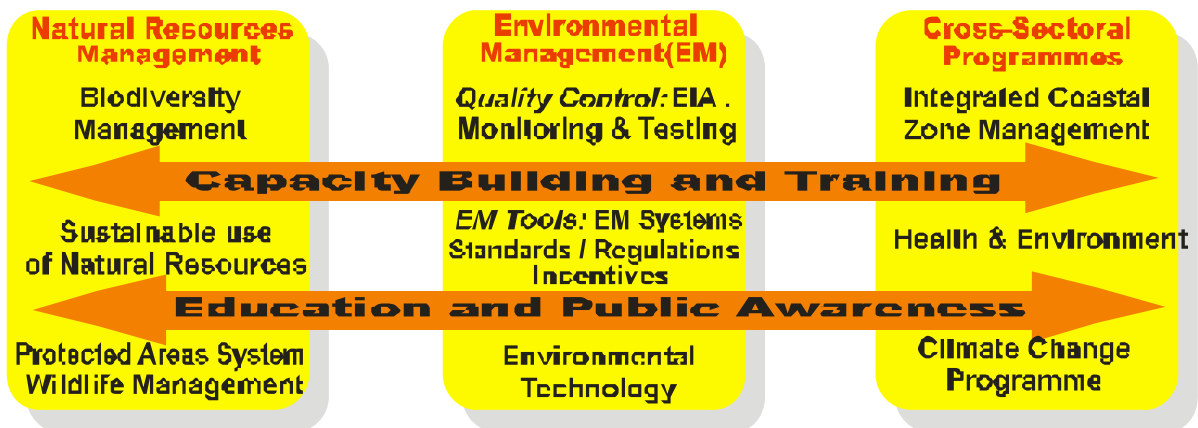
The chart below shows the EPA's organizational structure in 2002. Both the Chairman of the EPA Board and the Executive Director of the EPA report to the President of Guyana who is the Minister with responsibility for the Environment.



EPA's Programmes

The work of the Environmental Protection Agency is implemented under four Programmes: Natural Resources Management, Environmental Management, Education, Awareness and Capacity Building and Cross-Sectoral Programmes. Natural Resources Management encompasses Biodiversity Management, Sustainable use of Natural Resources and Protected Areas Management. The focus of Environmental Management include Environmental Quality Control including Monitoring and Testing; Environmental Management Tools such as Environment Management Systems, Standards, Regulations and Incentives and Environmental Technology. The Cross-Sectoral Programmes address Integrated Coastal Zone Management, Health and Environment and Climate Change while the Education, Awareness and Capacity Building Programme cuts across and complements the three technical Programmes.

The diagram below depicts the EPA programmes, their components and links.



1.0

Administration

The Administrative Division comprises the Financial, Human Resources and Administrative Units and provides the financial and human resources and support services necessary for the work of the Environmental Protection Agency.

1.1 Human Resources

The EPA staff complement of forty five was distributed in the four Divisions as follows:

| DIVISION | NO. OF STAFF |
|--------------------------------------|--------------|
| Administration | 22 |
| Environmental Management | 13 |
| Natural Resources Management | 4 |
| Environmental Information & Training | 6 |
| TOTAL | 45 |

Staff Appointments

An Administrative Director, Accounts Clerk and Administrative Assistant and five Environmental Officers were appointed to fill vacancies within the Agency.

Training

Officers of the EPA participated in training in the following areas:

Training for trainers

This one-day training course was planned and delivered by the Cyril Potter College of Education with funding from the UNDP under the Public Awareness and Capacity Building Programme implemented by the EPA. All EPA staff benefited from this training.

Reviewing of the EIA for Amaila Falls

This training was conducted by SENES Consultants of Canada for Officers within the Environmental Management Division of the EPA with funding under the IDB Environment Management Project -Phase 1.

Air Quality

This training was conducted by SENES Consultants primarily for Officers within the Environmental Management Division. This training was part of the Greenhouse Gas Reduction Project implemented by the EPA and SENES Consultants and funded by CIDA.

Mining and the Environment

An Environmental Officer within the Environmental Management Division of the EPA participated in the Mining and Environment Advance International Training Programme in Luleå, Sweden from the 16th September to the 12th October 2002. The course was sponsored by Sida (Swedish International Development Cooperation Agency) through CENTEK (International Training and Development Centre) at the Luleå University of Technology.

Environmental Policy and Environmental Management Systems

An Environmental Officer within the Environmental Management Division of the EPA participated in a two-month course on Environmental Policy and Environmental Management Systems in Osaka, Japan.

Environmental Management

A Senior Environmental Officer in the Environmental Management Division of the EPA participated in a six-month post-graduate training course in Environmental Management in Dresden, Germany. The Course was conducted by the International Centre for Post-Graduate Studies in Environmental Management (CIPSEM) at the Technical University of Dresden, Germany.

EPA Officers at Staff Retreat



1.2 Financing

The Agency received a subvention of G\$ 61.3 million in 2002, compared to G\$ 60.4 million in 2001. This placed constraints on the Agency with regard to filling vacant positions and providing support for field activities.

The IDB Phase 1 (Environmental Management Programme – ATN/SF-5432GY) came to an end on the 30th April, 2002. The audit for this program was conducted by the Office of the Auditor General (see Annex 1).

The IDB Phase 2 (Environmental Management Programme – ATN/SF-7679-GY) was signed on 24th January 2002. In this phase the EPA is expected to benefit from a grant of US\$ 1.28 M.

The UNDP funded Environmental Education and Awareness Programme and the Marine Turtle Conservation Programme both came to an end on the 31st December 2002. Audits for these two projects are expected to commence in early 2003.

The Audit for the Environmental Education and Awareness Programme for 2001 was completed and the EPA is in receipt of the report from the Office of the Auditor General.

2.0 Natural Resources Management

Sustainable management of Guyana's natural resources is a responsibility of the EPA. The Agency's mandate in this area is carried out through its Natural Resources Management Division (NRMD). This Division is organized into the Biodiversity, Protected Areas and Wildlife Units.

During 2002, the NRMD was staffed by a Director overseeing its work, a Biodiversity Specialist, and three Environmental Officers (EO); one serving in the Protected Areas Unit, and two in the Biodiversity Unit. The position of Environmental Officer for the Wildlife Unit remained vacant in 2002, resulting in the work of this unit being shared among the existing staff of the Division.

2.1 Biodiversity Management

The Biodiversity Unit retained its focus on the implementation of the National Biodiversity Action Plan (NBAP-1999). Major areas of focus of this Unit included Access and Benefit Sharing, Biodiversity Research, Biodiversity Monitoring and Biosafety. The achievements in 2002 in these areas were as follows:

Access and Benefit Sharing (ABS) and Intellectual Property Rights (IPR)

- The EPA and Iwokrama agreed that the draft ABS protocols developed by the latter organization would be used as the base on which national protocols would be formulated.
- A submission on Bio-prospecting Regulations made to the Attorney General's (AG) Chamber was withdrawn because of recommended amendments in accordance with the Bonn Guidelines on Bio-prospecting and Access and Benefit-sharing. The Bonn Guidelines were adopted by the Convention of Biological Diversity and it was agreed that the national regulations on bio-prospecting be prepared in accordance with these Guidelines.
- A link was established with Iwokrama for ABS and IPR to have a more national approach in developing a strategy to deal with these issues.

Biodiversity Research

- The system for recording applications, permits and reports was improved with the introduction of a coding system to facilitate easier retrieval and monitoring.
- The NRMD collaborated with the Information Technology specialist to redesign the existing biodiversity database to make it more user-friendly.

- The Priority Setting Workshop for Biodiversity Research was completed and the Report prepared. Key priority areas identified for research include: Mangrove Ecology and Regeneration, Wildlife Identification, Characterization and Management among others.
- A Memorandum of Understanding between the EPA and the Smithsonian Institution, Washington DC, USA was formulated for collaboration on biodiversity research and data-sharing between the two Institutions.

Biodiversity Monitoring

- A process was initiated to establish a collaborative relationship on monitoring and data sharing with the Guyana Forestry Commission, Guyana Geology and Mines Commission and the Department of Fisheries.
- A draft strategy for Biodiversity Monitoring was completed.
- Three biodiversity-related complaints were investigated as follows:
 - (i) Release of caimans by a wildlife exporter at La Bonne Intention (LBI), East Coast Demerara.
 - (ii) Occurrence of caimans in Peter’s Hall, East Bank Demerara
 - (iii) Illegal wildlife holding facility in Middle Street, Georgetown.

Biosafety

- The Biodiversity Specialist participated in a meeting in Argentina to initiate a proposal for funding of a National Biosafety Framework (NBF).
- The NBF proposal was developed and submitted for approval to the UNEP/GEF Regional Coordinator for Latin America and the Caribbean.

2.2 Protected Areas

Protected Areas Regulations

- Draft Protected Areas Regulations, under the EP Act 1996, were reviewed by the Protected Areas Secretariat.

Coordination of the Establishment of a National Protected Areas System for Guyana

- Conservation International – Guyana (CI-G) was given permission by the Government of Guyana to serve as the lead Agency in the Protected Area (PA) process in the Kanuku Mountains. Phase Two of the Consultation process commenced and the EPA actively participated in this process.

- The Government of Guyana signed a Memorandum of Understanding (MoU) with CI-G on 26 November, 2002, for CI-G to lead the process for the proposed Protected Area in the Southern Region. The MoU specified that the area should be declared as a PA by June 2003. CI-G is required to provide US\$2,000,000 for a trust fund to be established for the area.
- The Programme Manager of Fauna and Flora International (FFI) visited Shell Beach in August 2002 based on the organisation's interest in funding specific operations of Guyana Marine Turtle Conservation Society (GMTCS) and in building local capacity through the EPA.
- Site visits were made to Corentyne Coast, East Coast Demerara, and the Pomeroon River estuary with the objective of identifying an Amenity Area (AA) Site in Guyana. The management of the AA Site is expected to be funded by the Caribbean Regional Environment Programme (CREP). The site selected is the Corentyne Coast from No. 43 to No. 74 Village.

Participation in Community Consultations at Kanuku Mountains

- EPA participated in the community coordinators workshop held in Lethem by CI-G, in April 2002, as a training exercise for Community Leaders.
- Several Community Resource Evaluations (CREs) were completed. This exercise was scheduled to be completed in 2002 but CI-G requested extensions that will take the process into 2003.

Protected Areas Secretariat (PAS)

- Two new members joined the PAS, one representing the Ministry of Amerindian Affairs and the other the Amerindian NGOs.
- The PAS held regular meetings during the year 2002. Even though attendance by members could be better, the PAS was able to make recommendations on the Protected Areas Regulations, and work with its partners to co-ordinate activities of the Lead Agencies at two of the priority sites.

Support to the Lead Agencies of identified Protected Areas

- The EPA participated in the several activities of the lead agencies. These included work in the Kanuku Mountains, Shell Beach, and the Southern Region.
- Guyana Marine Turtle Conservation Society (GMTCS) presented its workplan to the NRMD for 2002. FFI indicated special interests in Shell Beach and in working with EPA and GMTCS in the PA process.

- CI-G presented a map of the Southern Region of Guyana to the Government to propose it as a Protected Area. Discussions were ongoing as regards declaring this site a protected area.

Linkages at the National, Regional and International Levels on Protected areas

- The EPA has developed a working relationship with Fauna & Flora International (FFI), a conservation NGO, based in the United Kingdom. FFI has indicated an interest in the PA process and is keen in building local capacity and in funding some aspects of the PA process with special focus on Shell Beach.

Meetings with Donors

- Two representatives from World Bank (WB) had a meeting with EPA and it was agreed that a summary of the Participation Plan for PA be sent to the World Bank by the end of the March, 2002. A teleconference was held with the World Bank on 5 August 2002 and a new Task Team Leader was identified. The WB began the process to review and update the 1998 NPAS project document.
- Discussions were held with World Wildlife Fund for Nature (WWF) in February as regards funding for Shell Beach and Mount Roraima. In June 2002, the first draft of WWF proposal for Shell Beach was completed.

2.3 Wildlife Management

Wildlife Management and Conservation Regulations

- A workshop, in conjunction with Iwokrama, was held to train trainers on the draft Management and Conservation Wildlife Regulations. Funding was provided by the DFID. The trainees would sensitise hinterland communities about the draft Regulations.

Capacity Building

- The NRMD collaborated with the United Nations Development Programme (UNDP) on the development of a proposal on Capacity Building in Natural Resources and Pollution Management.
- The first EPA/FFI workshop was held in December 2002 on “*Protected Areas Management in Guyana: Institutional Management, Roles and Responsibilities.*” During the training exercises of the workshop participants were able to develop a management model for Pas. The workshop was funded by the Darwin Initiative and administered by FFI.
- The Biodiversity Specialist attended a Conservation Priority Setting Workshop in Paramaribo, Suriname. The Workshop was co-sponsored by CI, the Guyana Shield

Initiative (GSI), World Conservation Union (IUCN) and UNDP. The final maps and outputs of the workshop were being finalized by the sponsors.

- The Division was represented at the Sustainable Utilization Area (SUA) planning meeting for Iwokrama. The meeting contributed to the development of a SUA plan that integrated issues of the road and river corridors and some aspects of the Wilderness Preserve.
- An Environmental Officer of the Protected Areas Unit attended a WWF proposal writing workshop on 13 August 2002 in Georgetown.

Public Awareness

- Four articles on Natural Resources were prepared for the national newspaper, *Guyana Chronicle*.
- Support was provided to EIT for media and biodiversity workshops.
- Posters were produced for the University of Guyana's Career Day and GuyExpo 2002.
- A brochure on the Biodiversity Research Process was produced.
- Presentations on Biodiversity were made to selected Primary and Secondary Schools in Region 4, by some officers of the Division.

3.0 Environmental Management Division

The Environmental Management Division has three (3) units; each unit is responsible for different sectors. These are the Mining, Forestry and Tourism Unit, the Agriculture and Fisheries Unit and the Industry, Infrastructure and Energy Unit. The work of the Division can be divided generally into three (3) areas of focus: Authorisation, Response and Development. Authorisation refers to facilitating new and existing operations through the environmental permitting process and monitoring of these operations for compliance with the environmental permit and Environmental Management Plan. Response refers to addressing the complaints received by the Agency. Development involves all the research and development activities of the Division. This includes the development of standards, regulations, guidelines, code of practices, execution of surveys, etc. The Division is also involved in public awareness issues relating to environmental management.

3.1 Environmental Authorisation

The Agency continued to issue Environmental Authorisations to new developmental activities in 2002. A total of fifty eight (58) applications were received and forty four (44) Environmental Authorisation in the form of Environmental Permits, Construction Permits and Letters of Approval were issued. Of these, eleven (11) went through some aspect of the Environmental Impact Assessment process while a further ten (10) had to develop Environmental Management Plans.

- **Registered Consultants**

Eleven (11) more EIA consultants registered with the Agency in 2002 thus taking the tally of registered consultants to 23 at the end of the year.

- **Authorisation of Existing Activities**

Activities continued under the Pollution Management Program that started in 2001 to have operations that are existing to register with the Agency. Registration and verification of these activities continued throughout the year. Various strategies were used to bring these operations on board. A major success for the year was collaboration with other sector agencies such as the Guyana Forestry Commission. To date, there are 495 registered operations with almost 25% of these verified.

- **Compliance Monitoring**

Though restricted, the Division continued to monitor some operations for compliance to the Environmental Permit and Environmental Management Plans. The main operation monitored was the Omai Gold Mines Ltd through ground and surface water testing and review of monthly environmental reports.

EIA Public Hearing



3.2 Development and Research

▪ Regulations and Standards

- The Division, along with the Guyana Geology and Mines Commission, reworked the Code of Practice for Sand and Sapolite Mining.
- The Agency collaborated with the Guyana National Bureau of Standards to develop several environmental standards during the year.

▪ Response

A complaint handling procedure was developed which allows for the more efficient management of complaints.

3.3 Projects

- **SIMAP/BEAMS:** The Agency participated in the IDB Phase II review of SIMAP towards a third phase. The objective was to integrate environmental management into projects at the various levels of management within the project phase. This was also the case with BEAMS. Sensitisation of the various parties involved in both programmes are set for 2003
- **CIDA/EPA/SENES Climate Change Greenhouse Gas Project:** The project has employed two project officers who are housed by EPA. Collection of data and information is underway. This project will end in October 2003.

3.4 Training

- A Senior Environmental Officer attended a 6 month training course in Environmental Management at the Technical University of Dresden, Germany
- An Environmental Officer II attended a 4 week training course on Sustainable Mining in Sweden
- An Environmental Officer II is on no-pay leave pursuing her Master's Degree in Biotechnology.

3.5 Boards

The Division represents the Agency on the following Boards:

- Guyana Geology and Mines Commission (GGMC)
- Guyana National Bureau of Standards (GNBS)
- Central Housing and Planning Authority (CHPA)
- Guyana Sea Defence (GSD)

3.6 Response

▪ Inspections:

Approximately one hundred and twelve (112) field inspections were conducted to investigate cases of public complaints and environmental emergencies. This figure indicates an increase from the previous year.

• Response to Complaints:

The Division received one hundred and nineteen (119) complaints for the year, seventy three (73) of which were investigated. Five (5) complaints had been referred to other Sector Agencies for further action while others are pending or closed subsequent to correspondence with the polluter. These figures do not reflect the number of follow-up visits that would have been conducted to ensure compliance with the Agency's recommendations.

Analysis of Complaints for 2002

| Complaints | Inspections | Status of Complaints | |
|------------|-------------|----------------------|----------|
| | | Closed/Pending | Referred |
| 119 | 73 | 41 | 5 |

- **Environment Emergencies**

The EPA responded to environmental emergencies during 2002, which included the molasses spill at the Caribbean Molasses Company Inc. and flooding in Cane Grove.

- **Equipment**

The Division also acquired additional field testing equipment during the year which puts the Agency in a better position to implement proper environmental management.

EPA Officer Collecting Water Sample



4.0 EDUCATION, INFORMATION AND TRAINING

The Education Information and Training (EIT) Programme complements the Natural Resources, Environmental Management and Cross- Sectoral Programmes by promoting public awareness in these areas. The EIT Programme also promotes EPA's procedures and processes, for example, the Environmental Permitting Process and the Biodiversity Permitting Process.

The EIT Programme focuses on the production of Environmental Education Materials, conducting of Outreach, observance of International Environmental Days, formation and support of Environmental Clubs and implementation of Training for different target groups.

4.1 Environmental Education Materials

A range of new informational materials on environment issues were developed. These included:

- 10 Brochures
- 1 Booklet
- 5 Fact Sheets
- 8 Bookmarks

In addition the EIT Programme produced the following:

- EPA Calendar 2002 , which this year reflected the theme “Environment and Health”
- EPA Annual Report 2001, reflecting the theme *Networking and Partnership*.

4.2 Environmental Clubs

A number of Environmental Clubs have been formed and affiliated to the EPA. This year, two additional clubs were affiliated bringing the total to sixty-one. In building the capacity of these clubs the EPA:

- Conducted four Seminars for the clubs in regions 2, 6, 4 and Georgetown. At these seminars the Clubs participated in activities aimed at enhancing their ability to:
 - Hold a successful Meeting
 - Develop a good work-plan
 - Plan, Organise and Implement a Project.
- Badges were designed, printed and distributed to members of Environmental Clubs. The badges identify each club by name and logo and reflect the Environmental Club Motto: “*Making a Difference*”.

Green Fund Projects

Environmental Clubs were granted funding for the following projects:

- Environmental Sign Boards - Youths for a Better Environment / Mahaicony Secondary School.
- Collection, identification and documentation of Insects in the Annai area – Annai Youth Wildlife Conservation Club / Annai
- Rehabilitating a fish pond and tackling a garbage problem – Cleanliness is next to Godliness Environmental Club / 8th of May Secondary School and Youth Cleaners Environmental Club / C. This two-part joint project involving two school clubs on the Essequibo coast.

4.3 International Environmental Days

- World Biodiversity Day: Activities in observance of this day were carried out in collaboration with the Natural Resources Management and included a Radio Message, Radio and TV Panel Discussions, Newspaper Article, School talks at 13 Schools and a Book Display in the EPA's Document Centre.
- World Environment Day: EPA organized a week of activities - *Guyana Environment Week* (GEW), to bring focus to the International theme: *Give Earth a Chance*. Highlights of the observances included:

- *2002 Environmental Quiz*:

Thirty-two (32) Secondary Schools across Guyana fielded teams from Form Two level for the competition. This year, Texaco West Indies Ltd. was the sponsor of the EPA / Texaco 2002 Environmental Quiz. The EPA Environmental Quiz 2002 came to an end in the month of May with the finals on the 22 May between Anna Regina Multilateral School and Bygeval Secondary School. Anna-Regina won the competition. Quiz matches were televised twice weekly with the broadcast starting in May and running throughout the month of June.

- *Green-Walk*

This activity took place on 2nd June heralding Guyana Environment Week. More than twenty (20) organizations representing Government Ministries, Conservation Institutions, Private and Public Sector and Schools participated. All along the route from the Umana Yana to the Botanic Gardens the walkers were entertained by the steel band and stereo music. An impromptu banner competition awakened the competitive spirit of the groups. At the end of the walk, Green Walkers were addressed by the Resident Representative of UNDP and the Mayor of Georgetown.

Green-walks were organized by Environmental Clubs in Regions 2, 5 and 6. An EPA contingent of (fifteen) 15 participated in the Green-Walk in Region 6 which was held on 8 June marking the end of Guyana Environmental Week.

- *Environmental Exhibition*

More than twenty groups and organizations participated in this event to mark World Environment Day on 5 June. Speakers at the opening ceremony included Minister of Agriculture, Mr Navin Chandarpal, UNDP Resident representative Mr Richard Olver, Executive Director of the EPA, Mr Balgobin Parsaud and a Sixth Form student of Queen's College, Richard Daby. Queenstown Community High school played steel band music and a poem was recited by a student from St Margaret's primary school. The exhibition opened from 10:30 a.m. - 5:00 p.m. and was visited by hundreds of school children as well as members of the public.

- *Media Programme*

The Executive Director of the EPA presented a World Environment Day Message on radio. Officers of the EPA participated in radio and TV programmes including: a panel discussion on radio, Girl Talk on channel 9, Morning Show on channel 4. In addition the "Our Environment" column in the Sunday Chronicle featured articles relating to the *World Environment Day* theme.

▪ Other Environmental Days

Book displays and newspaper articles were prepared for World Wetlands Day, World Water Day and World Ozone Day.

4.4 Outreach

▪ Presentations : Officers of the EITD delivered presentations to the following audiences:

- Youths at a workshop organized by the National Library.
- Youth groups at Mon Repos Primary School.
- Youths at the Red Cross Association.
- School Children at eight schools on the occasion of Ozone Day

▪ Competitions: EITD worked with Head Teachers of New Amsterdam Schools on 8 March 2002, to plan a Creative Arts Competition and a School Beautification Competition. The creative arts competition was judged in New Amsterdam on 21, 23 and 24 May 2002. Entries were received in all categories.

▪ Exhibitions: EPA participated in two exhibitions:

- Career Day organized by the University of Guyana.
- GuyExpo organized by the Ministry of Tourism.

EPA's Booth at Guyexpo 2002



- Community Awareness Action Plan: EIT prepared a draft plan to raise environmental awareness of communities.

- Media

Articles were prepared weekly for the “Our Environment” column in the Sunday Chronicle.

- Documentation Centre

Sixty new books were entered into the library database. Posters, calendars and brochures were distributed by Centre to the public on a request basis.

4.5 Training

In-house training was conducted for EPA in the following areas:

- Presentation skills and training techniques: This workshop organized by EIT was conducted by senior tutors of CPCE on 9 February 2002.
- School Yard Ecology Workshop: Four officers of EITD and two officers within the Administrative Division were trained by two EIT officers who were trained through the Audubon Society.
- Sixth Meeting of the Conference of Parties to the Convention of Biological Diversity: EPA Staff were brought up-to-date with the proceedings and outcomes of this meeting by Guyana's representative to that meeting.

- Protected Areas in Guyana. Sustainable Livelihoods and Biological Diversity Conservation: EPA Staff discussed this presentation made by Environmental Officer within the Natural Resources Management Division.
- 36th Annual Conservation Conference of the CCA : A representative of EIT participated in this event in Trinidad from 27 – 30 November 2002 and made a presentation under the theme of the conference “Partnership in defence of the Environment – Involving the Youths” – focused on the work with Environmental Clubs of Guyana.
- Library Science: Documentation Assistant at the EPA participated in the training course conducted by the Library Association of Guyana

Workshops

Biodiversity Workshops

The final three of eight workshops in the Biodiversity Series were planned and implemented in Regions 1, 4 and 7. The workshops aimed at raising awareness of biodiversity issues in Guyana and targeted regional officials in Regions 1 and 7 and media practitioners in Region 4.

Coastal Zone Workshop

A Coastal Zone Workshop was held in Region 5 and catered for students from five (5) schools in that area. A similar workshop was conducted in Region 6.

EPA Officers at a Workshop involving the Forestry Sector



5.0 GEOGRAPHIC INFORMATION SYSTEMS

The GIS unit of the EPA provides support of a geographic nature to other Divisions and Units of the EPA. This is done with the intention of improving their decision making abilities. Support includes management of all geographic data of the Agency, creation of specialized applications, analysis of data and preparation of maps.

- Procedures were developed that address the transfer of data from Global Positioning System (GPS) receivers into a format suitable for use in a Geographic Information System (GIS).
- Data collection, processing and management procedures for GPS receivers were developed in collaboration with other staff.
- The EPA supported and contributed to the preparation of a proposal to NASA to acquire high resolution elevation data through the Shuttle Radar Topography Mission (SRTM) project. The SRTM project was executed in early 2000 by NASA in which a shuttle orbited earth and collected elevation data of its surface. The raw data needed to be subsequently processed into a format that can be readily used in GIS software. NASA was therefore accepting proposals from relevant agencies and institutions for projects that could benefit from priority processing of that data. Our proposal was prepared to address our need to better manage our coastal zone. We collaborated with counterparts in Barbados who had a similar need and submitted one proposal.
- Support was provided to the Guyana Integrated Natural Resource Information System (GINRIS) in providing GIS training for local counterparts.
- A system for the collection, processing and dissemination of metadata (that is, data about data); in other words a metadata clearinghouse mechanism (CHM) was tested. This was later demonstrated to members of the GINRIS technical committee.
- ArcIMS 4.0 software was procured and fully tested within the EPA. It was one of the requirements for the creation of the metadata CHM mentioned above.
- As a first, we provided consultancy services to the National Parks Commission (NPC) in the digitization of their biodiversity park plan.
- The EPA GIS internal website was further developed and included a few new services:
 - The national places gazetteer (listing of all places in Guyana and their geographic location) was converted into a digital form and stored in a web capable database. A web interface that allowed users to browse or search through it was developed along with the ability to display any place on an online map.
 - A web database driven glossary of GIS terms was created and made accessible to staff through the internal GIS website.
 - Added documentation covering various aspects of GIS for use by EPA staff.
- A system for the management of EPA's paper maps (known as the Map Management System) was designed along with a corresponding database in Microsoft Access.
- A presentation was given to the Central Housing and Planning Authority (CH&PA) on how it may use GIS to improve its operations.
- The Sea Defence Management Information System (SDMIS) which was developed in 2001 as part of the Caribbean Planning for Adaptation to global Climate Change (CPACC)

project's Coastal Resource Inventory System (CRIS) was packaged into an installation program and presented to the Guyana Sea Defense's, Project Execution Unit.

- A number of maps were prepared for the Ministry of Education. These showed distribution of Arapaima, Leatherback turtles, Jaguars and Harpy Eagles within Guyana.

6.0 Information Network

Significant progress was made on the following databases:

- Biodiversity Research Applications Database System
- Asset Register Database
- Response Information System
- Pollution Register Developed
- Permitting Database Upgraded.

Routine maintenance was carried throughout the year.

A number of services were implemented. These include:

- Distributed file system (DFS)
- Internet Security Accelerator (ISA)
- Microsoft Exchange Mail
- Security
- Data Management

A Norton Antivirus Server was set up to safeguard the system against viruses.

Both the intranet (our internal website) and our external website were modified and improved.