

ENVIRONMENTAL PROTECTION AGENCY



ANNUAL REPORT 2008

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MESSAGE FROM THE EXECUTIVE DIRECTOR

The thrust to ensure sound environmental and natural resources management, to promote public participation through the integration of environmental concerns for sustainable development, and to effectively and efficiently fulfil the mandate of the Environmental Protection Agency (EPA) continued during 2008.

The Agency benefited from significant institutional strengthening and capacity building through the networking mechanism currently in existence. In addition, improved operational systems were enhanced internally with the Agency's relocation of Offices from the Institute of Applied Science and Technology at University Campus, Turkeyen, to the new location at 7 Broad and Charles Streets, Charlestown, Georgetown.

A new position of a Special Projects Officer was also added to the organizational structure of the Agency. This position is included under the Natural Resources Management Division and is expected to enhance the Agency's capacity to prepare and implement projects with major focus on the implementation of the KfW Small Grants Component of the Guyana Protected Areas System (GPAS) Project. In addition, the position of Environmental Economist was filled through the placement of a fellow from the Overseas Development Institute (ODI) of the United Kingdom. The fellowship is for a two-year period and it is intended that the work started by the previous Environmental Economist would be continued.

In 2008 there were also the successful sourcing of funds for projects as well as the execution of several projects, including significant progress of the KfW Small Grants Project with the implementation of several sub-projects, the drafting of the Wildlife Management and Conservation Regulations, the development of the National Biodiversity Research Information System (NBRIS), the completion of the Biosafety Clearing House Project and the Post Darwin Initiative Project, and the commencement of the Biodiversity Enabling Activity project among others.

The EPA continued to pursue a comprehensive approach to environmental management based on its legislation, standards and guidelines in 2008. In addition, the Agency engaged in partnership with several sectoral agencies, particularly those in the planning sector, to identify environmental quality objectives and develop synergistic processes to achieve them.

Logistical support for the achievement of all objectives, the evaluation and procurement of materials, equipment and services through core funding, was efficiently achieved by the Administrative Division. Financial management of available resources was executed with a high degree of professional integrity worthy of commendation. The human resources complement was maintained at a high caliber despite several challenges through sound human resources management.

The year also saw a marked increase in applications for Environmental Permits (507), an increase by 121 over the previous year. One hundred and sixty-two (162) of these applications were for new projects, 188 for existing projects, 18 for renewal of environmental authorizations, three 3 for variance of environmental authorization, and 3 for transfer of environmental authorization. In addition, 133 applications were received for noise permits.

Progress was also realized in the execution of the Agency's programmes in Education, Information and Training which were delivered through innovative and novel methods, increased collaboration and partnerships, teamwork and maximum resource utilization.

The Audited Financial Statement for 2008 was received in November, 2009 and again included a "disclaimer of opinions", regarding the financial statements of the Wildlife Division not being included with the EPA's financial statements.

The achievements of the EPA during the year 2008 were indeed commendable and are a reflection of the sterling contribution of the team of committed, dedicated and professional staff and partners working towards progress, sustainable development, enhancement of the environment and a better future for all.

Doorga Persaud

Executive Director

EXECUTIVE SUMMARY

In 2008, the Agency continued to make steady progress in the implementation of its programmes towards the realisation of its mandate.

The Agency benefited from institutional strengthening and capacity building through the networking mechanism currently in existence. It was also able to improve its internal operational systems since relocating from the Institute of Applied Science and Technology at University Campus, Turkeyen, to 7 Broad and Charles Streets, Charlestown, Georgetown.

The Natural Resources Management (NRM) Programme aimed at coordinating and maintaining a programme for the conservation and sustainable use of biological diversity in Guyana accomplished success in sourcing of funds for and the execution of the work programme for the year.

The NRM Programme achieved accelerated progress on the KfW Small Grants Project with the implementation of several sub-projects. Other major achievements included the drafting of Wildlife Management and Conservation Regulations, the development of the National Biodiversity Research Information System (NBRIS), the completion of the Biosafety Clearing House Project and the Post Darwin Initiative Project, and the commencement of the Biodiversity Enabling Activity Project.

The KfW Project which is funded by the German Government through the German Development Bank (KfW) contributed to the improvement of livelihoods, especially those of Amerindian communities at Shell Beach, the Kanuku Mountains and the established Protected Area - Kaieteur National Park which benefited from Projects through small grants provided by the the Project.

The NRM Programme also successfully took the lead in Biosafety Clearing House (BCH) Implementation in Guyana and this facilitated the exchange of scientific, technical, environmental and legal information on Biosafety and Living Modified Organisms (LMOs) among sector Agencies in Guyana.

Significant progress was also made in finalizing the draft Wildlife Management and Conservation Regulations which will lead to the sustainable use and conservation of wildlife in Guyana.

In its Environmental Management Programme, the Agency satisfactorily utilized a comprehensive approach to environmental management, based on regulations, standards and guidelines developed by the Agency in collaboration with other sector agencies during the year. This led to successes in the management, protection and improvement of the environment, the prevention of pollution and the assessment of the impact of economic development activities on the environment.

A National Hazardous Waste Inventory and Management Strategy was developed in collaboration with the Caribbean Environmental Health Institute (CEHI) and the Agency continued to resolve environmental concerns expressed by the public through specific and strategic interventions at various levels of decision-making.

The Agency continued to receive a wide range and an increasing number of complaints. A total of 279 complaints were received in 2008 and the trend of a high number of recurring complaints continued with forty percent of them in 2008 being new and 60 percent recurring. The Agency was able to investigate and address slightly more than half of the complaints received and referred a quarter of the total amount of complaints to other agencies including NDCs and the CH&PA.

Monitoring of permitted operations and enforcement of Permit conditions continued. The Agency embarked on reviewing compliance and monitoring reports required under or in pursuance of an Environmental Authorization. The Anti-Littering Programme developed in 2007 was implemented during the year with satisfactory progress.

The Agency processed 507 applications for Environmental Authorizations representing a thirty-one percent (31%) increase compared with last year. This upward trend has been observed for several years and the Agency is challenged to manage and process applications as staff has not been increased accordingly. As such the Agency is looking towards addressing increasing its capacity in this area.

In 2008, collaborations and partnerships were fostered and maintained. Resource maximization was achieved through teamwork and good management.

New areas of interdivisional collaboration emerged; these included waste management climate change, marine litter, water safety and anti-littering.

Efforts to promote a better understanding and appreciation of the natural environment continued. The Agency developed, tailored and delivered environmental information for a range of target groups in many areas of the country.

Capacity within the Agency was built through opportunities for training both locally and abroad. Relevant members of staff attended workshops and meetings as necessary to upgrade knowledge and information on global and regional developments in a number of areas of the Agency's work.

With teamwork and shrewd management of available resources, the Agency has been able to satisfactorily implement its work programme. In an effort to achieve its mandate the Agency will continue to explore available opportunities to garner adequate resources to continue and enhance its work.

1.0 THE ENVIRONMENTAL PROTECTION AGENCY

1.1 MISSION OF THE EPA

The mission of the Environmental Protection Agency (EPA) is to *“take measures necessary for effective protection and management of the natural environment, coordination of conservation programmes, sustainable use of natural resources, assessment of the impact of development activities on the environment and the integration of appropriate environmental provisions into development planning”*.

1.2 VISION OF THE EPA

The Vision of the Environmental Protection Agency (EPA) is:

Ultimately, the EPA will be a results-oriented, adaptable organisation, with adequate resources and a fully staffed complement of trained professionals to deliver on its mission.

1.3 ENVIRONMENTAL PROTECTION ACT

On June 5, 1996, the **Environmental Protection Act (EP Act)** was passed by Parliament, thereby establishing the Environmental Protection Agency (EPA). The EP Act mandates the EPA to oversee the effective management, conservation, protection and improvement of the environment, the prevention and control of pollution, the assessment of the impact of economic development on the environment, and the sustainable use of 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 objectives of the EPA are to protect Guyana's environment and in so doing, contribute to global environmental protection and conservation. To achieve these objectives, the EPA implements a number of programmes and approaches including education, partnership, collaboration, regulation, and enforcement.

1.4 FUNCTIONS OF THE EPA

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

As part of its regulatory function, the Agency enforces the EP Act (1996), the Environmental Protection (Amendment) Act (2005), and the Environmental Protection Regulations (2000). This function of the EPA ensures that development integrates measures for environment protection.

The EPA also coordinates sustainable use and conservation of Guyana's natural resources. This, and its regulatory function, is complex, spanning a range of interconnected issues and requiring collaboration with private, public sector and non-governmental organizations.

The EPA also has a responsibility to promote the participation of the public in the process of integrating environmental concerns in the planning for sustainable development. This requires the provision of information to the public on environmental issues and problems, and on EPA's procedures and processes.

1.5 ORGANIZATIONAL STRUCTURE OF THE EPA

Figure 1 below shows the Organizational Structure of EPA during 2008. The Chairman of the EPA Board and the Executive Director of the EPA both report to the President of Guyana in his capacity as Minister of Environment.

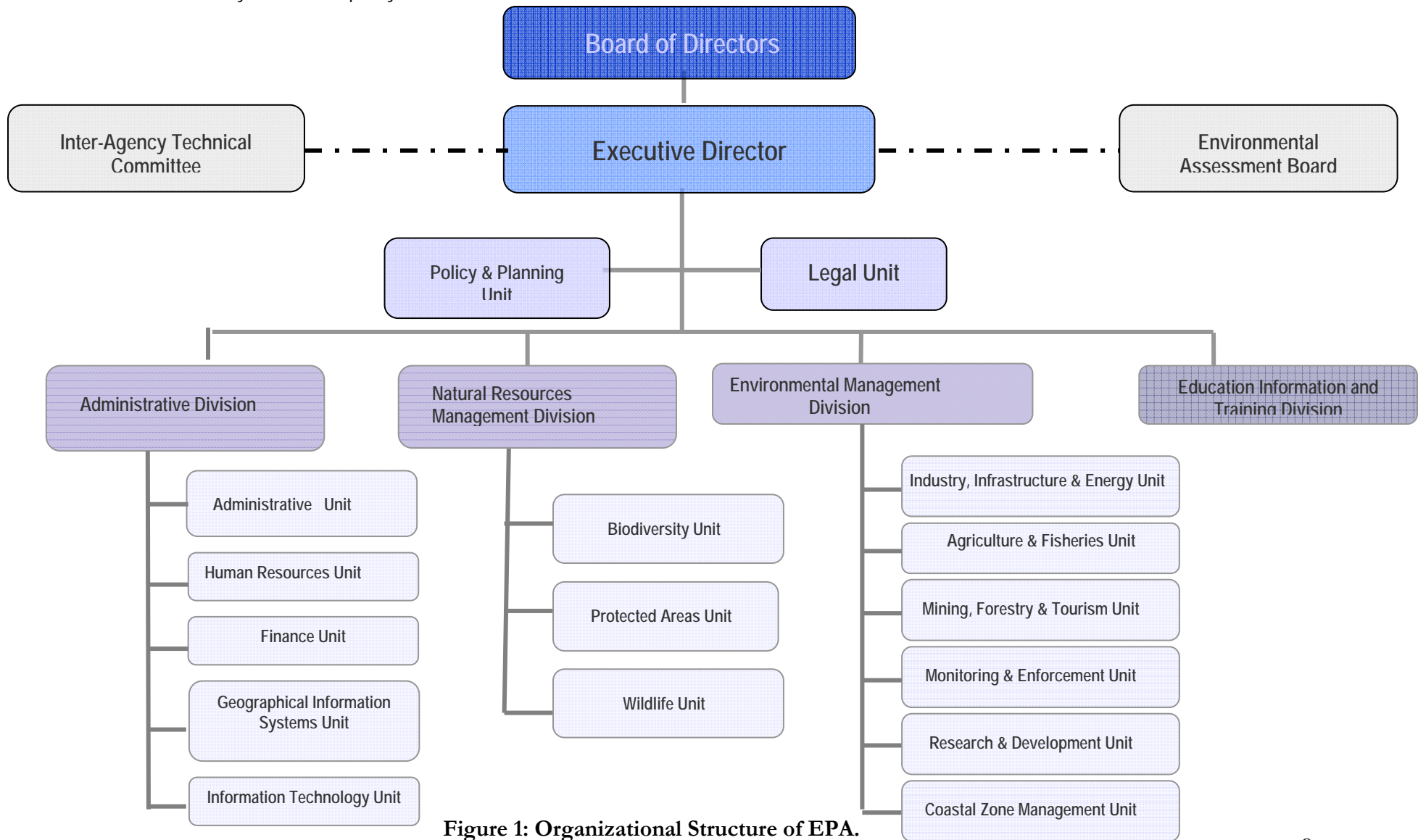


Figure 1: Organizational Structure of EPA.

1.6 PROGRAMME AREAS

The Environmental Protection Agency implements its mandate through four Programmes: Natural Resources Management; Environmental Management; Education, Awareness and Capacity Building; and, Cross-Sectoral Programmes.

1.6.1 NATURAL RESOURCES MANAGEMENT

Having ratified the Convention on Biological Diversity, Guyana committed to developing National Strategies, Plans and Programmes for the conservation and sustainable use of biodiversity and to take legislative, administrative and policy measures towards achieving these goals. The mandate of the Environmental Protection Agency includes the coordination and maintenance of a programme for the conservation of biodiversity and its sustainable use in Guyana. The Natural Resources Management Division (NRMD) of the Agency has a dedicated focus on implementing a programme towards meeting this mandate.

To achieve its objectives, the NRMD collaborates with various sectoral agencies and institutions in Guyana. These include: the Guyana Forestry Commission, Ministry of Agriculture, Wildlife Division, Guyana Geology and Mines Commission, University of Guyana, National Parks Commission, among others. The Division also collaborates with several local and international Non-Governmental Organizations (NGOs), such as Conservation International – Guyana (CIG), the Guyana Marine Turtle Conservation Society (GMTCS), among others, and most importantly with the local communities. Further, the Division works with international organisations such as the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), the World Wildlife Fund for Nature (WWF), and the Kreditanstalt für Wiederaufbau (KfW, the German Bank for Reconstruction and Development).

The most important strategy documents guiding the work of the NRMD are the National Biodiversity Action Plan (NBAP I and II), which outline the major programme areas for biodiversity management in Guyana. These include Conservation of Biodiversity, Sustainable use of Biodiversity, and Conservation and Sustainable use of Wildlife.

1.6.2 ENVIRONMENTAL MANAGEMENT

The Environmental Management Division (EMD) implements programmes towards enabling the Agency to achieve its mandate for pollution control and prevention. As such, the Division ensures that developmental projects conform to the goal of sustainable development by overseeing an environmental authorization process and an environmental monitoring and enforcement process. Some of the strategies adopted by the EMD to assure that it fulfils its mandate are:

- **Authorising New Developments:** Any new development that may have a significant effect on the environment is required to conform to the Agency's authorization process which involves application, screening, publication of the Agency's decision, EIA (or not), decision to grant or not grant, and environmental authorization.
- **Monitoring of Environmental Authorisations:** The EPA has the responsibility to ensure that developers mitigate against pollution and remediate as necessary. The Agency also monitors the ambient environment as well as specific requirements of Environmental Authorizations.
- **Authorising Existing Developments:** The Agency, through the Environmental Protection (EP) Regulations (2000), is in the process of regularizing existing industrial activities through a registration process. These operations are required to apply to the Agency for an Operation Permit which is granted once the operation is in compliance with good environmental management practices.
- **Developing Competencies in Environmental Management:** The EPA recognizes that the role of the Agency would be much more effective if the stakeholders are aware of their responsibilities and the means by which these can be met.
- **Developing Regulations:** In keeping with the EP Act, EMD has begun and will continue in the pursuit of regulations development.
- **Reviewing and Developing Standards, Environmental and Operational Guidelines, Codes of Practice, etc.**
- **Coordinating Environmental Management through Stakeholders, e.g.:**
 - the EPA-UG on-going environmental management research programme; and
 - Inter-agency collaboration in the area of environmental authorizations and complaints responses.
- **Managing Environmental Complaints:** EMD continues to resolve legitimate environmental complaints.
- **Preparing for environmental emergencies.**
- **Enforcement.**

1.6.3 EDUCATION, INFORMATION, AND CAPACITY BUILDING

The promotion of public awareness and participation in protection, conservation, and sustainable use of the environment is a key function of the EPA as outlined in the EP Act (1996). This function of the Agency is the responsibility of its Education, Information and Training (EIT) Division.

A National Environmental Education Strategy formulated in 1998 serves as a guide in the promotion of public awareness and public participation in the protection, conservation and sustainable use of the environment.

Through its EIT Programme, the Agency interfaces and provides information in a range of formats to a wide segment of the population to raise environmental awareness and knowledge.

The delivery of the EIT Programme entails working in close collaboration with the Environmental Management and the Natural Resources Management Programmes of the EPA as well as a number of Sectoral Agencies and Non-Governmental Organizations.

The purpose of the EIT Programme is twofold; it promotes public awareness of and participation in environmental decision-making, as well as informs the public of systems and procedures established by the EPA for environmental management and conservation.

1.6.4. CROSS-SECTORAL PROGRAMMES

Currently, the EPA plays a role in a number of cross-sectoral programmes including integrated coastal zone management (ICZM), climate change and solid waste management.

ICZM focuses on three major activities: assessment of the potential damage and loss to the Coastal Zone (vulnerability assessment) in face of sea-level rise, assessment of steps that are in place for the Coastal Zone to adjust/adapt to sea level rise, and management of infrastructure and natural resources.

The Climate Change programme focuses on the establishment of measures for adaptation to consequences of climate-related environmental problems.

As part of its role regarding environmental coordination, the Agency's primary approach is to work with, and to create strategic partnerships with, existing organizations.

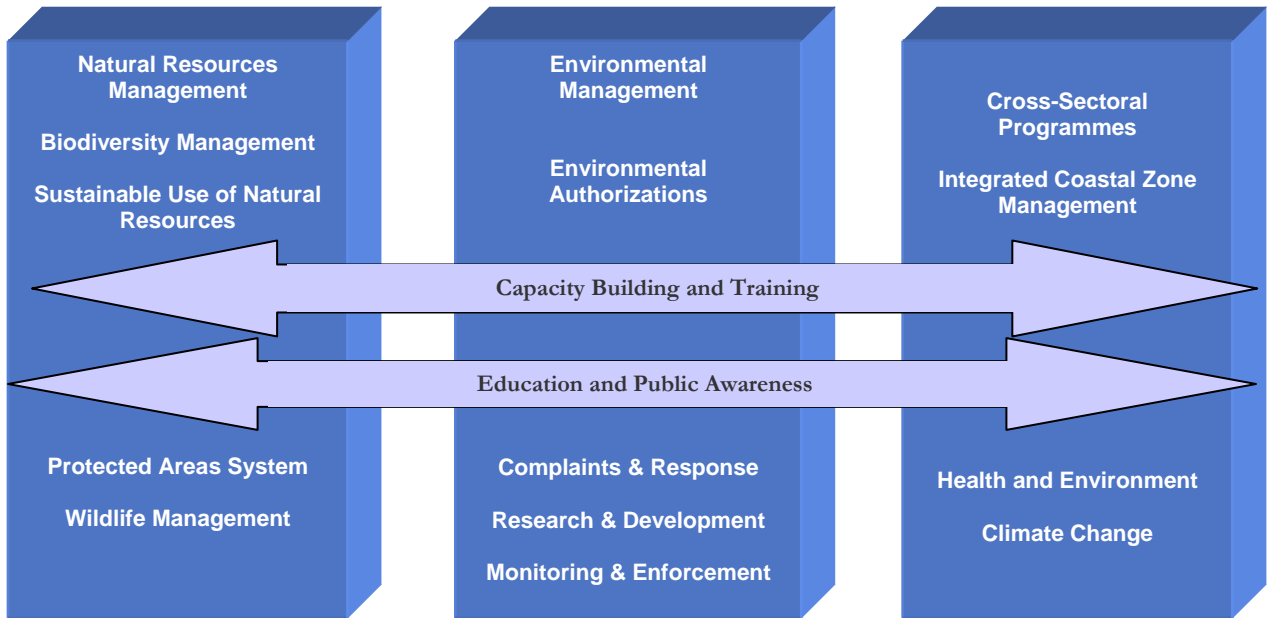


Figure 2: EPA Programmes, Components and Links.

2.0 ADMINISTRATIVE DIVISION

The Administrative Division continues to provide administrative and logistical support to all Divisions of the Agency. The Administrative Division efficiently assists with the evaluation and procurement of materials, equipment and services through core funding from Government subvention and through several donor-funded Projects managed by the Agency. Some of the Donors included KfW, UNDP, and WWF.

2.1 FINANCE UNIT

The Agency received subventions from the Government of Guyana totalling G\$50.4 million in 2008, compared to G\$43.6 million received in 2007. The 2008 subventions were supported by other miscellaneous funding including the EPA Trust Fund. Below are highlights of the major activities completed by the Unit during the year 2008.

Draft Financial Statements for the year ended December 31, 2007 were prepared and submitted to the Audit Office of Guyana.

The audit for the year ended December 31, 2006 was completed, and the Agency received the Audited Financial Statement from the Audit Office of Guyana on November 04, 2008.

Quarterly Financial Overviews were prepared and submitted to the Ministry of Finance.

Monthly Financial Reports were submitted to the Board of Directors, and the Management of EPA.

The Unit provided support to several Projects implemented by the Agency during the period, and all financial reporting requirements for these projects were met in accordance with project-specific guidelines.

Assistance was also provided for the financial management of sub-projects under the KfW Small Grants Project during 2008. Monthly Financial Overviews were prepared for the Project and submitted to the Board of Directors and the Head of the Presidential Secretariat.

The 2007 Audit for the KfW Small Grants Project was conducted by the Audit Office.

Audits on the Caribbean Regional Environmental Programme (CREP) and the National Biosafety Framework Projects were done by the Audit office during the year. The Audited Financial Statements were received by the Agency and copies were submitted to all relevant parties. The Reports were accepted by the respective Donors.

Draft Financial Statements for the completed World Wildlife Fund (WWF) project was prepared and submitted to the Audit Office of Guyana.

The Agency's Budget for the year 2009 was prepared and submitted to the Office of the President.

2.2 ADMINISTRATIVE UNIT

During 2008, the Administrative Unit, under the guidance of the Administrative Director and with the support of the Human Resources Unit, coordinated the relocation of the Agency's Offices from the Institute of Applied Science and Technology at the University of Guyana Campus, Turkeyen, to the new location at 7, Broad and Charles Streets, Charlestown.

The following equipment, supplies and services were procured by the Agency during 2008:

- One Digital Camera, one HP Scanner, and HP Colour LaserJet Printer were purchased with funding from the Biodiversity Clearing House (BCH) project;
- Office Stationery was purchased with funding from the Government of Guyana; and
- A Grass Cutter was purchased with funding from the Government of Guyana.

The following works were carried out with funding from the Government of Guyana:

- Installation of cubicles in all Divisions of the Agency;
- Extension of the bridges at the Agency's Charlestown location;
- Rehabilitation of building and fence at the Agency's Charlestown Office including changing of roof, replacement of plumbing system, construction of a curb wall around the building to prevent flooding in the lower flat, and painting of the building; and
- The reconnection of the electricity, water and telephone services to the Agency's Office at the Charlestown location was also facilitated.

The year 2008 proved very challenging for the Agency in terms of managing its vehicles. Significant efforts and costs were expended towards the maintenance of the vehicles to ensure that the Agency's transportation needs were adequately met.

All efforts were made to ensure that equipment were serviced and maintained in working condition to effectively meet the needs of the Agency; among these were air condition units and radio sets.

The fixed asset register was updated and a physical verification of fixed assets conducted during the year. This was especially important to ensure accountability during and after the relocation. Additionally, the Unit coordinated and facilitated the process of obtaining the requisite approval for the disposal of damaged and obsolete assets during the year and disposed of the assets so approved by the Ministry of Finance.

The Unit maintained stock records for all items procured by the Agency and facilitated physical checks by the Finance Division for compliance with procedures and accuracy of record keeping. Additionally, the Agency ensured that as far as possible, adequate stock levels were maintained to meet the needs of the various divisions within the Agency.

2.3 HUMAN RESOURCES UNIT

The Human Resources Unit, as part of the Administrative Division under the supervision of the Administrative Director, is responsible for recruiting a skilled and committed workforce to achieve the Agency's mandate.

The Unit is committed towards building a team of committed professionals at the Agency who are empowered by knowledge and skills to fully express competence and excellence.

The Unit's achievements for 2008 are as follows:

Staffing

A total of sixteen (16) suitable candidates were recruited to fill vacancies in the various Divisions of the Agency as shown in the Table 1 below:

<i>Divisions</i>	<i>Number of Staff Recruited</i>	<i>Designation</i>
Administration	7	Drivers (2), Office Attendant, Executive Assistant, Handyman, GIS Technician, ODI Fellow
Education, Information & Training	1	Documentation Assistant
Natural Resources Management	2	Environmental Officer, Executive Assistant
Environmental Management	6	Environmental Officers I (5), Environmental Officers II (1),

Table 1: Staff Recruitment in 2008.

At the end of 2008, fifty-two (52) members of staff were in the employ of the Agency and were distributed across the four Divisions as shown in the Figure 3 below:

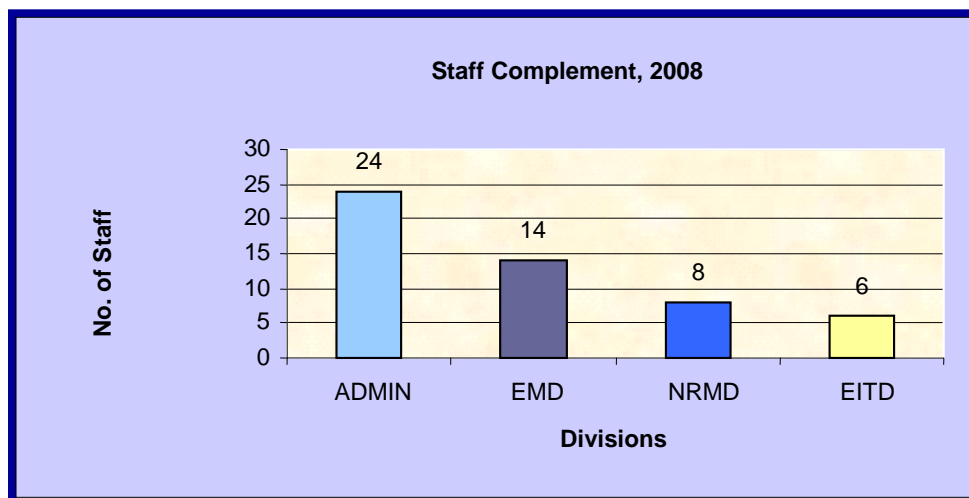


Figure 3: Staff Complement at end of 2008.

Of the fifty-two staff members, thirty-two (32) were females and twenty (20) were males; they were distributed across the four Divisions as shown in Figure 4 below.

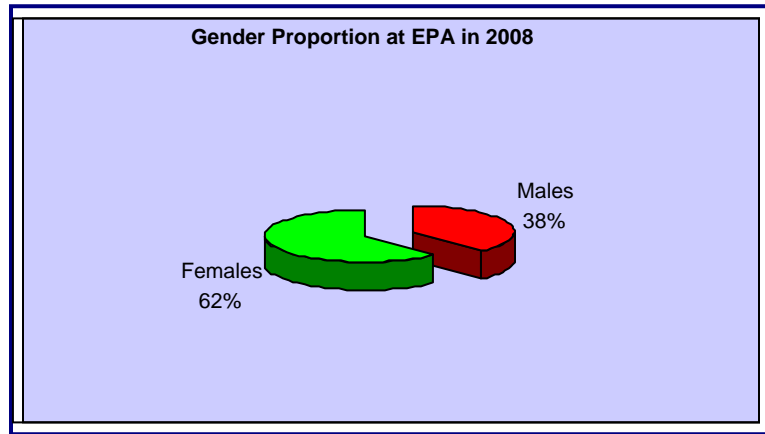


Figure 4: Gender Proportion at EPA in 2008.

Though there was a decline in the number of persons leaving the Agency in 2008 as compared with 2007, the Agency continued to experience a high rate of staff turnover (Figure 5). During 2008, fourteen (14) persons resigned from the Agency compared to seventeen (17) in 2007, and nine (9) persons in 2006 and 2005 respectively. Additionally, one (1) Staff met the age of retirement and proceeded on retirement leave, and one Staff died in a tragic incident.

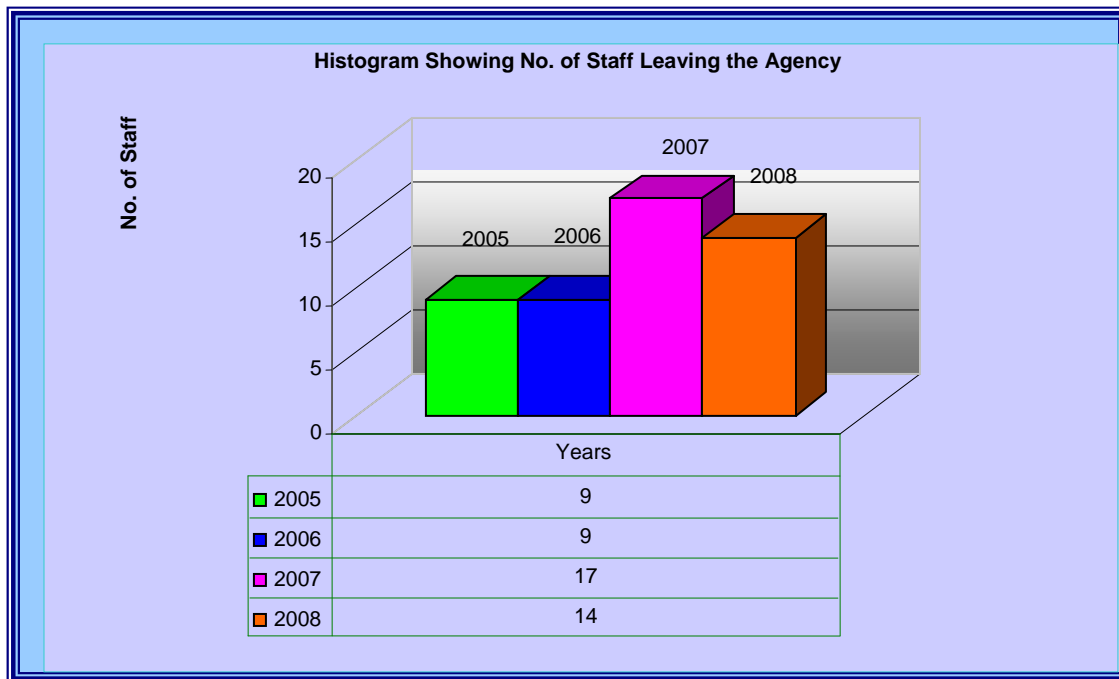


Figure 5: Staff turnover for the period 2005-2008.

Previously, staff resigned to take up appointments overseas or to pursue further studies. However, the recent trend has indicated that more staff members are leaving to take up appointments locally, which may be an indication that the salaries at the Agency are no longer competitive. In this regard, the Agency prepared a salary review which was approved by the Board and forwarded for the consideration of the Office of the President in 2007.

Staff of the Agency benefited from the initial 5% across the Board increase that was paid to employees of the Public Service by the Government of Guyana. However, the Agency did not benefit from the second 5% increase announced for the latter half of the year or from the cost-of-living allowance of \$4000 announced for employees whose monthly salary was below \$50,000.

The Agency benefited from the addition of a new position in its organizational structure. Approval for the new position of a Special Projects Officer was obtained from the Office of the President. This position falls under the Natural Resources Management Division and is expected to enhance the Agency's capacity to implement projects with major focus on the implementation of the KfW Small Grants Component of the GPAS Project.

Training, Workshops, Symposiums, Meetings

Over the year, Officers of the Agency attended a number of seminars, workshops, meetings, and trainings nationally and internationally. These are listed in Table 2 and Table 3 below:

<i>Training Event</i>	<i>Date Held (2008)</i>	<i>Officer (s) attended</i>
Local Training		
Chromatography Training Session	January 23-24	Karen Alleyne & Anzaleen Hoosein
Facilitating Guyana's Rice Trade	March 12	Stacey Phillips
Forest Research Priorities for the Guianas	March 12	Asma Sharief
Workshop on Harmonization of Cash Transfers	March 28	Raywattie Singh & Fiona Marshall
Workshop Good Practices for Tropical Based Tourism	April 7-8	Asma Sharief & Chuvika Harilal
Preliminary results of a study on Primate Ecology in the upper Essequibo Conservation Concession	July 17	Juliana Persaud
Review of the Species Protection Regulation	Nov. 13	Dominique Saheed

Table 2: Participation in Training/Workshop Events in Guyana.

<i>Name of Training</i>	<i>Date Held (2008)</i>	<i>Host Country</i>	<i>Name of Officer(s) in Attendance</i>
Overseas Training			
9 th Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP-9)	Mar 20-31	Brazil	Dr. Indarjit Ramdass
Methodology for Strategic Social & Environmental Assessments	July 8-10	Suriname	Anzaleen Hoosein
Environmental Protection Technology Training	Oct. 10-Nov. 18	China	Asma Sharief & Sonia Gumbs-Luke

Table 3: Participation in Training/Meeting Events Overseas.

Officers of the Agency continued to sit on the various Boards and Committees. In 2008, the Agency was represented on the following Boards and Committees:

- Guyana Geology and Mines Commission;
- Central Housing and Planning Authority;
- National Parks Commission;
- Guyana Forestry Commission;
- Wildlife Management Authority;
- Natural Resources and Environmental Advisory Committee;
- Pesticides and Toxic Chemical Board;
- Guyana National Bureau of Standards;
- National Occupational Safety & Health Council;
- Fire Advisory Committee;
- National Water Council; and
- Guyana Tourism Authority.

Constraints/Limitations

The HR Unit was constrained by resource limitations in pursuing opportunities available for staff training. However, as in the past, staff continued to benefit from relevant sponsored training that became available.

2.4 POLICY AND PLANNING UNIT

The Policy and Planning Unit is responsible for providing advice to management on policy development and on the application of Environmental Economic Instruments, Environmental Evaluation, Capacity Building and Project Development.

For a large part of the year, the Unit's sole position of Environmental Economist was vacant. The position was filled in October 2008, through the placement of a fellow from the Overseas Development Institute; the fellowship is for a two-year period.

The initial work done was aimed at continuing from what was started by the previous Environmental Economists. The following were the major areas of focus.

Monitoring and Evaluation

Monitoring and reporting mechanisms were established for the 'KfW Small Grants Component of the GPAS Project' and initial monitoring was conducted on the 'UNDP funded – Biodiversity Enabling Activity Project'.

Permit Fees

Initial information was gathered on the permit fee structure to determine whether it will need revision and updating.

Solid Waste Management

A draft paper for discussion on the State of PET Recycling in Guyana was produced. Research was conducted on feasible economic instruments and incentive-based systems for solid waste management and recycling in Guyana. In addition, an initial study was carried out to inform discussions for the development of a business plan to enable PET bottle recycling.

Capacity Building

Revision work was conducted on the training material for the Environmental Economics course to be delivered to selected EPA staff in 2009.

Internal Committees

The Environmental Economist participated to the following Committee meetings:

- 'Project Monitoring Committee for the KfW Small Grants Project';
- 'PET Bottle Recycling Committee'; and
- 'PET Bottle Recycling Sub-Committee to develop a business plan'.

2.5 INFORMATION TECHNOLOGY UNIT

The Unit is responsible for the proper functioning of the Local Area Network (LAN), building/maintaining custom databases, and creating/maintaining the internal and external website of the Agency. It also has responsibility

for maintaining all computer equipment in the Agency such as desktops, laptops, servers, hubs, switches, routers and UPS.

The IT Unit comprises an IT Specialist and a Technical Support Officer.

IT support is provided at both of the Agency locations, namely Natural Resources Management Division at 263 Earl's Avenue, Subryanville, and the Main Branch which is located at 7 Broad and Charles Streets, Charlestown.

A general overview of the work done by the IT Department for the year 2008 is as follows.

Information Management

A new database was developed and implemented to manage the fixed assets of the Agency. The data from the old Microsoft excel database was imported into the new database with assistance from the Agency's GIS Officer. The new database would provide for better management of fixed assets as it is able to overcome several limitations experienced with the previous one.

A payroll software package was created and installed in the Finance Unit. This software is currently integrated with that being used for storing HR data.

The memory of the server which hosted the complaints database was upgraded to enhance its performance.

Minor changes were made to existing databases and all databases are currently maintained and functional.

Website Development

During the year, general maintenance was carried out on the internal and external websites through regular uploading of EIAs, public notices, vacancies, and other information.

Network Support

Regular backups were made of all the servers in the Agency.

The IT Department completed the networking of the Agency's Offices at the new Charlestown location. This work included cabling, installation of network drops, and deployment of hubs and switches. A complete backup of network data was carried out at the UG Location to facilitate the relocation process.

Three servers namely the DELL 2800, 6800 and 6850 Servers continued to give multiple hardware problems, once again proving unreliable. The faulty equipment was sent to CCS in November, 2008, for repairs.

In order to ensure network stability, the IT Department separated server roles such DHCP, DNS, SQL Server, DATA, Replication, Exchange Server, and Internet, and placed them amongst four desktop computers obtained under GOG. These computers were upgraded to support these roles.

The Internet Server at NRMD experienced a software crash in March, 2008. It was reloaded with Windows Server 2003 and Microsoft's Internet and Acceleration Server 2006.

User accounts, mapped drives and email accounts were created for all the new staff in the Agency. The networks at both of the Agency's branches were expanded to facilitate new staff.

All network issues which included data, internet access, database and email were resolved in a timely manner.

PC Support

A number of computers (Desktops and Laptops) were diagnosed and repaired or completely replaced. These computers had software problems or defective hardware.

In December, 2008, about 80 percent of the computers within the Agency were upgraded with various forms of hardware to improve speed and stability. Figure 8 shows the distribution of hardware upgrades across the Divisions of the Agency.

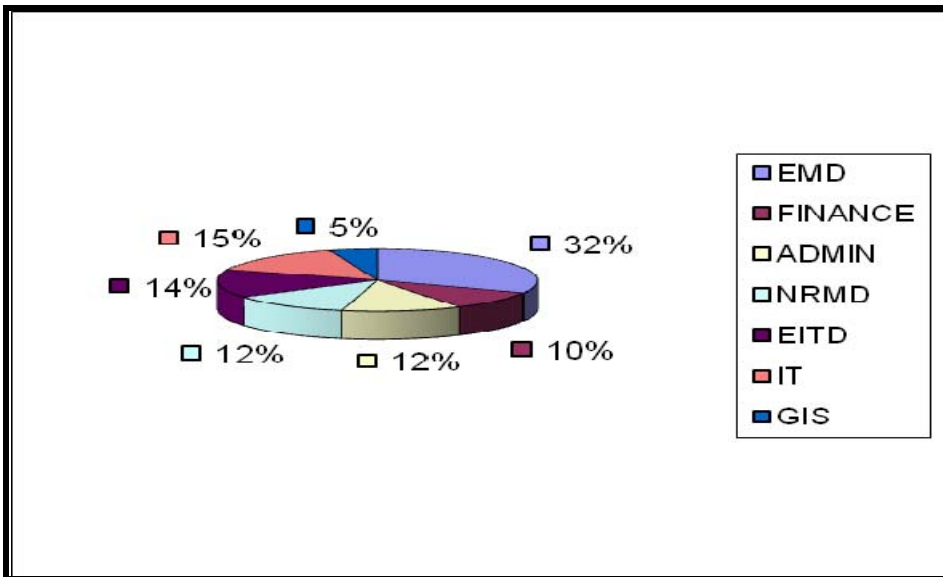


Figure 6: Distribution of hardware upgrades in Divisions.

Equipment received under the BCH Project were tested and deployed at the NRMD.

Printers and Plotters were maintained within the Agency.

Miscellaneous

The IT Department serviced and repaired four (4) UPS acquired under the IDB. Three of these UPS are connected to the servers in the IT Office.

The IT Department provided continuous support for the NBRIS Project during the year.

The Unit assisted on many occasions with the movement of computer and network equipment for all Divisions within the Agency during the year. The IT Office was also rearranged to accommodate the Environmental Economist.

2.6 GEOGRAPHICAL INFORMATION SYSTEM (GIS) UNIT

The GIS Unit has responsibility for the efficient management of all spatial related data and the building of skills of Staff within the Agency to use GIS data as a tool for sound decision-making.

During 2008, activities were carried out as follows.

Preparation of Maps

The following maps were prepared in 2008:

- Map of Biodiversity Research areas for 2008;
- Base Map of Guyana;
- Map of entities targeted for the Hazardous Waste Inventory Study;
- Maps of industries in Regions 1-10; and
- Map of catchment area for the Industry Health Centre.

Data Management

A number of initiatives were taken to update the GIS database and ensure the effective functioning of the GIS Unit of the Agency. These included:

- GIS Technician familiarized herself with the Agency's work and the GIS Database;
- Prepared and completed the GIS Unit's Annual Report for 2007;
- Updated the biodiversity shapefile with 2008 data provided by NRMP;
- Organized the GIS database;
- Converted GPS points from Latitude/Longitude coordinates to UTM coordinates and plotted these points for the National Plan of Action (NPA) project within the EMD; and
- Updated the GIS database with new information (shapefiles and Images) obtained from Guyana Lands & Surveys (GLSC);
- Digitized of 1:50,000 Linden Town map, obtained from GLSC upon the request of the EMD for the (NPA) project;
- Digitized the contours and roads layer of the catchment areas (Kara-Kara, Dakoura, Kadabuli) for the National Plan of Action project;
- Digitized the land use cover for the NPA;

- Provided Roads data to NRMD for the GEO- Amazonia project;
- Assisted with the plotting of Hazardous Waste Inventory Survey GPS data;
- Relevant GIS data was compiled and provided to Mr. DaSilva, to be used at the Caribbean Marine Atlas Workshop in Trinidad. Additionally, a list was prepared describing the data provided to Mr. DaSilva;
- Digitized villages and roads from the IKONOS Satellite Images; and
- Vegetation and soil data were sourced for the Watershed Assessment study of the Highway white sands area undertaken by Dr. Opadeyi and Dr. Paulette Bynoe.

Training

The GIS Officer participated in the following activities in 2008:

- Workshop on Hazardous Waste Inventory that was implemented in Guyana during April 7-10;
- Training session with personnel from CEHI during July 18, on data entry for the National Hazardous Wastes Inventory Survey; and
- Training course in Remote Sensing for Natural Resources Exploration and development during August 26-28, at the Guyana Geology and Mines Commission (GGMC).

Seminars/Presentations

The following meetings were attended in 2008:

- Caribbean Marine Atlas meeting on March 18 to be implemented by the International Oceanographic Data and Information Exchange (IODE), UNESCO; and
- Marine Litter Project on April 16.

The following seminars were attended in 2008:

- Strategic Environmental Assessment on September 12; and
- Deportment and Telephone Etiquette on September, 26.

The following presentation was conducted in 2008:

- Demonstrated the use of the GPS receiver to collect GPS data for the National Hazardous Waste Inventory Database to field workers and UG students.

OTHER ACTIVITIES

The GIS Unit participated in other activities as follows:

- Business cards were designed and prepared for staff of the Agency, including the Executive Director;
- Assets lists for the GIS Unit and the Policy & Planning Division were verified and prepared;
- A review of the GIS Unit's activities was prepared for the 2009 Programme and Budget Document; and the workplan was also reviewed and prepared for 2009;
- Posters for the Carifesta Youth Village event were printed for the EIT;
- Assisted with the Carifesta Youth Village event at the National Park on August 25;
- Assisted with data entry for the Assets Database; and
- Assisted EIT with designing of the Christmas Cards and invitations.

3.0 NATURAL RESOURCES MANAGEMENT PROGRAMME

Under the EP Act (1996), the EPA has a mandate to coordinate and maintain a programme for the conservation and sustainable use of biological diversity in Guyana. Also, the EPA, as the national focal point for the Convention on Biological Diversity (CBD) and the Cartagena Protocol on Biosafety (CPB), is required to design, source funding for, execute, and implement projects that would assist in achieving the general objectives and programmes of the Convention and the Protocol.

The Agency's responsibilities for natural resources management are undertaken by the Natural Resources Management Division (NRMD) which consists of the Protected Areas, Biodiversity, and Wildlife Units. The Division is headed by a Director who is supported by (1) Senior Environmental Officer Acting (SEO ag.), three (3) Environmental Officers II, one (1) Environmental Officer I, one Special Projects Officer, and an Executive Assistant.

The Division continued to achieve its planned activities for 2008 including the successful sourcing of funds for projects, and the execution of several projects on the work programme for the year. Some important achievements in 2008 include: progress with the KfW Small Grants Project with the implementation of several sub-projects, the drafting of the Wildlife Management and Conservation Regulations, the development of the National Biodiversity Research Information System (NBRIS), the completion of the Biosafety Clearing House Project and the Post Darwin Initiative Project, and the commencement of the Biodiversity Enabling Activity project.

3.1. CONSERVATION OF BIODIVERSITY

Conservation of Biodiversity is being addressed mainly through the coordination of the establishment of a Guyana Protected Areas System (GPAS). The primary focus this year continued to be the conservation of biodiversity through sustainable livelihoods, a component of GPAS that is being supported by a Small Grants Project being funded by the German Government.

KFW SMALL GRANTS PROJECT

In July 2004, the Governments of Guyana and Germany, represented by the Kreditanstalt für Wiederaufbau (KfW, or the German Bank for Reconstruction and Development), signed a Financing Agreement for EURO 2.56M (US\$3.1M at the then exchange rate) to support the Small Grants Component of the GPAS Project. The goal of this Component is the conservation of ecosystems through enhancing the livelihoods of the various Amerindian communities living in or in close proximity to protected / proposed protected areas.

The EPA was identified by the Government of Guyana as the Implementing Agency for the Project. On August 22, 2005, the GFA Group, a German consultancy firm, was contracted by KfW to assist the EPA to deliver the following:

- Provision and maintenance of basic infrastructure and equipment for protection, management and environmental communications;
- Measuring and demarcation of borderlines of conservation zones;
- Establishment of management plans or parts thereof;
- Equipment and temporary operations support for administration of conservation areas; and
- Support to ecologically sustainable land use in the surrounding support zones.

The Project provides small grants (maximum of US\$180,000 each) for sub-projects that will benefit Amerindian communities particularly at the two pilot study sites, Shell Beach and the Kanuku Mountains, and the established protected area, Kaieteur National Park.

The KfW project was expected to end in February, 2008. However, the project was extended to October, 2008. A second request to further extend the project to the end of 2009, considering an additional EURO 1.0M has been committed by KfW for project measures, has been approved in principle between the Governments of Guyana and Germany.

The Project requires visits to the communities in the intervention areas to sensitize them on the funding opportunities from KfW for livelihood improvement sub-projects, inform them of the requirements and the procedure for accessing the funds, discuss with them sub-project concepts, gather information, and assist the communities in the preparation of sub-project proposals. For the reporting period, ten field visits were conducted (Table 4).

Date	Location	Team Members
25 – 28 January, 2008	Kanuku Mts.	D. Fernandes & I. Kissoon
12-16 March, 2008	Kanuku Mts.	B. ter Welle & O. Ramcharran
12-17 March, 2008	Shell Beach (Moruca Sub-district)	D. Fernandes & C. Harilal
18-22 June, 2008	Shell Beach (Waini and Moruca Sub-districts)	D. Fernandes & C. Harilal
04-05 August, 2008	Kaieteur (Chenapou)	D. Fernandes & O. Ramcharran
09-11 August, 2008	Kanuku Mts.	D. Fernandes & C. Harilal
10-14 October, 2008	Shell Beach (Mabaruma Sub-district)	O. Ramcharran
10-17 October, 2008	Shell Beach (Moruca Sub-district)	D. Fernandes
17-19 November, 2008	Shell Beach (Moruca Sub-district)	D. Fernandes & O. Ramcharran
28 November – 6 December, 2008	Kanuku Mts.	D. Fernandes & I. Kissoon

Table 4: Field Trips made during the Reporting Period

At the end of the reporting period, for the 28 communities at the 3 sites, eight (8) sub-projects were successfully completed and closed (total KfW cost of US\$308,130); nineteen (19) were being implemented (total KfW cost of US\$941,715); one (1) being prepared for the signing of the Grant Agreement (total KfW cost of US\$265,924); three (3) projects were approved by the Appraisal Committee (total KfW cost of US\$284,870); five (5) proposals were being finalised for submission to the Appraisal Committee (total KfW cost of US\$275,465); and one (1) was being developed. For these thirty-seven (37) projects, the projected expenditure is US\$2,076,105.

Sub-projects Completed

For the reporting period, January – December, 2008, eight (8) sub-projects were successfully completed and closed. These included:

- **Ranger kits** – The sub-project was submitted by the Kaieteur National Park Board and implemented by the National Parks Commission (NPC). The main objective of the sub-project was “To improve the current system of Park Management through monitoring and enforcement” by providing the rangers with

equipment, such as binoculars, CD radios, camping tents, GPS units, digital cameras, first aid kits, flash lights, and safety gear. The total cost amounted to \$1,627,868.

- **Fencing of Farmlands** – The sub-project was submitted by the Maruranau Village Council. The main objectives of the project were “To ensure that the farms are safe for crop cultivation”, “To encourage farmers to cultivate a variety of crops” and “To practise crop rotation”. These were achieved through the construction of 10 miles of fence along the edge of the village farmlands. The total cost amounted to G\$5,460,660.
- **Craft development** – The sub-project was submitted by the Craft Resuscitation Committee of the Chenapou Village Council. The objectives of the sub-project were “To develop craft-making skills among community members in the Chenapou Village” and “To generate income for community members through the sale of craft material”. The total cost of the sub-project was \$1,085,953. Upon completion of the sub-project activities, funds unspent were used to acquire equipment and materials necessary for the trade to continue.
- **Infrastructure Development for Water Coconut Collection at Almond Beach** – The sub-project was submitted by the Almond Beach Community Development Council (CDC). The main objective of the sub-project was “To provide the infrastructure necessary for the transportation and marketing of water coconuts at Almond Beach”. The total cost amounted to G\$4,855,000.
- **Outboard Engine and Aluminium Boat for the Kaieteur National Park** – The sub-project was submitted by the Kaieteur National Park Board and implemented by the National Parks Commission (NPC). The main objective of the sub-project was “To improve the current system of Park Management through monitoring and enforcement”. This was to be achieved through improving the mobility of rangers at the Kaieteur National Park by providing an aluminium boat and outboard engine to better monitor activities within the Park. The total cost amounted to G\$1,233,167.
- **Delineation of the Boundaries of the Proposed Kanuku Mountains Protected Area** – The sub-project was submitted and implemented by Conservation International – Guyana. The objectives of the sub-project were “To facilitate the organisation of the Community Representative Group into an effective collaborative body for the delineation of the boundaries of the proposed KMPA; To delineate the boundaries of the proposed KMPA using appropriate community participatory approaches and GIS tools that incorporate the

knowledge and input of key stakeholders; and To map and describe the boundaries of the proposed KMPA". The total cost of the sub-project amounted to G\$27,708,455.

- **Savannah Agriculture** – The sub-project was submitted by the Moco Moco Village Council. The objectives of the sub-project were "To develop savannah agriculture in Moco Moco village, To increase crop production, and To minimize poverty". The total cost of the sub-project amounted to G\$14,390,654.
- **Development and Marketing of North West Organics Products** – The sub-project was submitted and implemented by the Guyana Marine Turtle Conservation Society (GMTCS). The objective of the sub-project was "To garner greater local market share for the North West Organic harvesters and producers through a sustained and phased marketing campaign and product development, which will target both the local market and the Guyanese Diaspora". The total cost of the sub-project amounted to G\$ 16,144,188.

Sub-projects being Implemented

Nineteen (19) sub-projects were at various stages of implementation. These included:

1. Construction and Furnishing of a Multi-Purpose Centre in St. John's Community (Three Brothers' Village) – submitted by the St. John's Community Development Council (CDC).
2. Construction of Benabs for Accommodation and for Use as a Traditional Skills Centre – submitted by the St. Ignatius Village Council.
3. Fencing of Shea Farmlands – submitted by the Shea Village Council.
4. Construction and Furnishing of a Multi-Purpose Centre in Warapoka – submitted by the Warapoka Village Council.
5. Fencing of Rupunau Farmlands – submitted by the Rupunau Village Council.
6. Participatory Collaborative Management Planning for the Proposed Kanuku Mountains Protected Area – submitted by Conservation International-Guyana.
7. Environmental Education and Awareness Programme for Shell Beach Communities – submitted by the Guyana Marine Turtle Conservation Society.
8. Construction of a Crabwood Seed Drier in Three Brothers Community – submitted by the Three Brothers Village Council.
9. E & A Consultants - for designing and supervision of works for the proposed Visitor Arrival Centre and Rest House/Warden's Building at Kaieteur National Park. The Consultants are expected to prepare architectural drawings for the proposed buildings, bills of quantities, tender documents, and contracts. They are also

expected to supervise the construction works, certify works based on the recommended engineering requirements, and recommend payment to the contractors.

10. Assakata Farming Project – submitted by the Assakata Village Council.
11. Meriwau Livestock Project – submitted by the Shulinab Village Council.
12. Cattle Ranching in the Katoka Community – submitted by the Katoka Village Council.
13. Kwebana Citrus Farming Project – submitted by the Kwebana Village Council.
14. Wallaba Farming Project – submitted by the Santa Rosa Village Council.
15. Irrigation for Kitchen Gardens – submitted by the Yupukari Village Council.
16. Drafting of the Protected Area Legislation – implemented by the EPA.
17. Shulinab Cashew-nut Farming Project - submitted by the Shulinab Village Council.
18. Monitoring station, vehicle and equipment for the Moraballi Forest Reserve - submitted by the Guyana Forestry Commission.
19. Construction of a Rest House/Warden Building at Tukeit, Lower Potaro, Kaieteur National Park - submitted by the Kaieteur National Park Board.

Sub-projects Approved; Agreements to be Signed

One (1) sub-project is ready for the signing of the Grant Agreement, this being, the Construction of a Visitor Arrival Centre for Kaieteur National Park - submitted by the Kaieteur National Park Board.

Sub-projects Approved by the Appraisal Committee

Three (3) sub-projects were approved by the Appraisal Committee towards the end of the reporting period. These included:

- Completion of Chenapou Airstrip;
- Construction and furnishing of the Maruranau Village Guesthouse; and
- Delineation of the Proposed Shell Beach Protected Area Using Community Participatory Approaches and Mapping Tools.

Proposals being Finalised for Submission to the Appraisal Committee

Five (5) proposals were being finalised for submission to the Appraisal Committee (AC). These were:

1. Construction and Furnishing of a Multi-purpose Building and Guesthouse in Kamwatta, Santa Rosa.
2. Construction and Furnishing of a Multipurpose Building and Guesthouse in Kumaka, Santa Rosa.
3. Construction and Furnishing of a Guesthouse and Multipurpose Building in Manawarin.
4. Parikwaranawa Farming Project.
5. Little Kaniballi Farming Project.

Proposals being Developed

One (1) proposal is currently being developed, this being Quiko Cattle Ranching.

Appraisal Mission

Mr. Bechtolsheim of KfW, Germany, conducted an Appraisal Mission in Guyana during February 27 to March 6, 2008. He held discussions with key government officials, including the Office of the President, following which an *Aide Memoire* was signed. During the Mission, it was indicated that Euro 2.5M will be made available for the Protected Area Trust Fund.

Protected Area Legislation

GPAS is also supporting the preparation of the Protected Areas (PA) legislation by providing funds for the consultation process. The project is estimated at G\$4,724,800 (US\$23,624). The consultations were completed during the period February 26 to March 3, 2008. The consultation reports were distributed to all stakeholders. A draft Protected Areas Bill was also submitted by the Consultants, and comments were prepared by the EPA and submitted to the Office of the President.

KfW Training Component

Apart from the Small Grants Component, KfW is also funding training in Participatory Natural Resource Management valued at EURO 370,000. The training is being delivered by the Iwokrama International Centre. For the reporting period, two training courses on Collaborative Management were successfully delivered to participants from the proposed Kanuku Mountains Protected Areas, proposed Shell Beach Protected Area,

Kaieteur National Park, and from a number of government and non-government organisations. In total, 8 courses were delivered to 111 trainees. The graduation ceremony for 107 graduands was held on October 31, 2008.

SITUATION ANALYSIS AND RAPID BIODIVERSITY ASSESSMENT (SARBA) OF MOUNT RORAIMA

In October, 2006, World Wildlife Fund (WWF) Guianas and the Environmental Protection Agency (EPA) of Guyana signed a Grant Agreement for a six-month project to commence preparatory work for the establishment of Mount Roraima as a Protected Area. This is one of the first initiatives towards establishing Mt. Roraima as a Protected Area. The output of the project was a document which captured the stakeholders' vision, provided socio-economic, cultural and political background information on the area, and which identified the main issues and challenges for the legal establishment of Mt. Roraima as a Protected Area. The Biodiversity Assessment was designed to gather background information available from literature, identify data gaps, determine possible alterations to the environment due to anthropogenic activities, and act as a basis for the future studies leading to the establishment of Mt. Roraima as a Protected Area.

The final document was printed and distributed to all the relevant stakeholders including the communities in the Mt. Roraima Area. The technical and financial reports were prepared and submitted to WWF. The project was prepared for auditing.

AMAZON COOPERATION TREATY ORGANIZATION (ACTO) COLLABORATION

Guyana is a member of the Amazon Cooperation Treaty Organization (ACTO) and has been participating in programme areas relating to protected areas. Guyana is working towards developing programmes in conjunction with other member countries, to strengthen collaboration for sustainable management of Amazon protected areas through information-sharing and trans-boundary conservation initiatives.

The NRMD has received a proposal from ACTO regarding a project for Science and Technology Strategy for the Conservation and Sustainable Use of Amazon Biodiversity for examination and endorsement. A document circulated by the Permanent Secretariat of the Amazon Cooperation Treaty Organisation on the subject of a 'Draft Cooperation Mechanism for the Monitoring and Control of Wild Fauna and Flora Trafficking in the Amazon' and a correspondence regarding the Regional Bio-trade Programme and the ACTO proposal document were also received.

3.2 SUSTAINABLE USE OF BIODIVERSITY

Biodiversity Research

The Biodiversity Unit (BU) is responsible for the processing of Biodiversity Research (BR) Applications and the issuance of Permits to conduct BR in Guyana. Generally, applications were received from students, professionals and institutions worldwide. These included the Royal Ontario Museum, Canada; the Smithsonian Institution, USA; the McGill University, Canada; and the University of Minnesota, USA. Filming companies also applied to film Guyana's rich biodiversity. Research and filming were concentrated primarily in the interior locations of Guyana such as Kaieteur National Park, Region 8, and the Rewa and Essequibo Rivers, Region 9. For this year, sixteen (16) Research Applications were received by the NRMD (Figure 7).

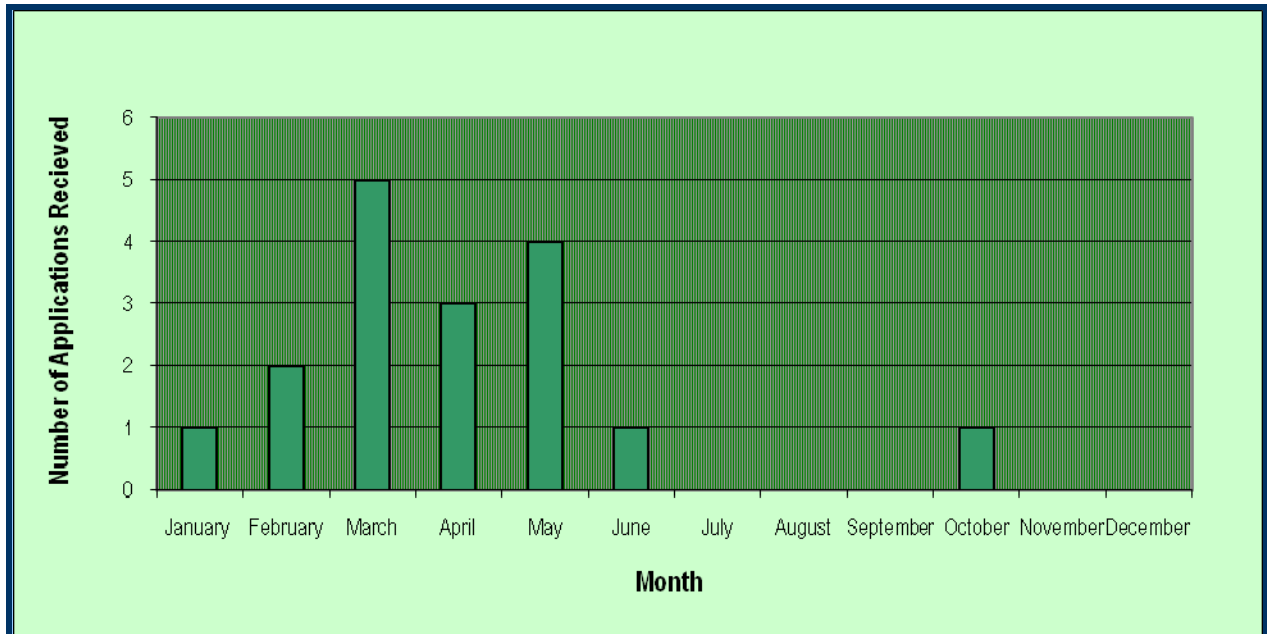


Figure 7: Biodiversity Research Applications received in 2008.

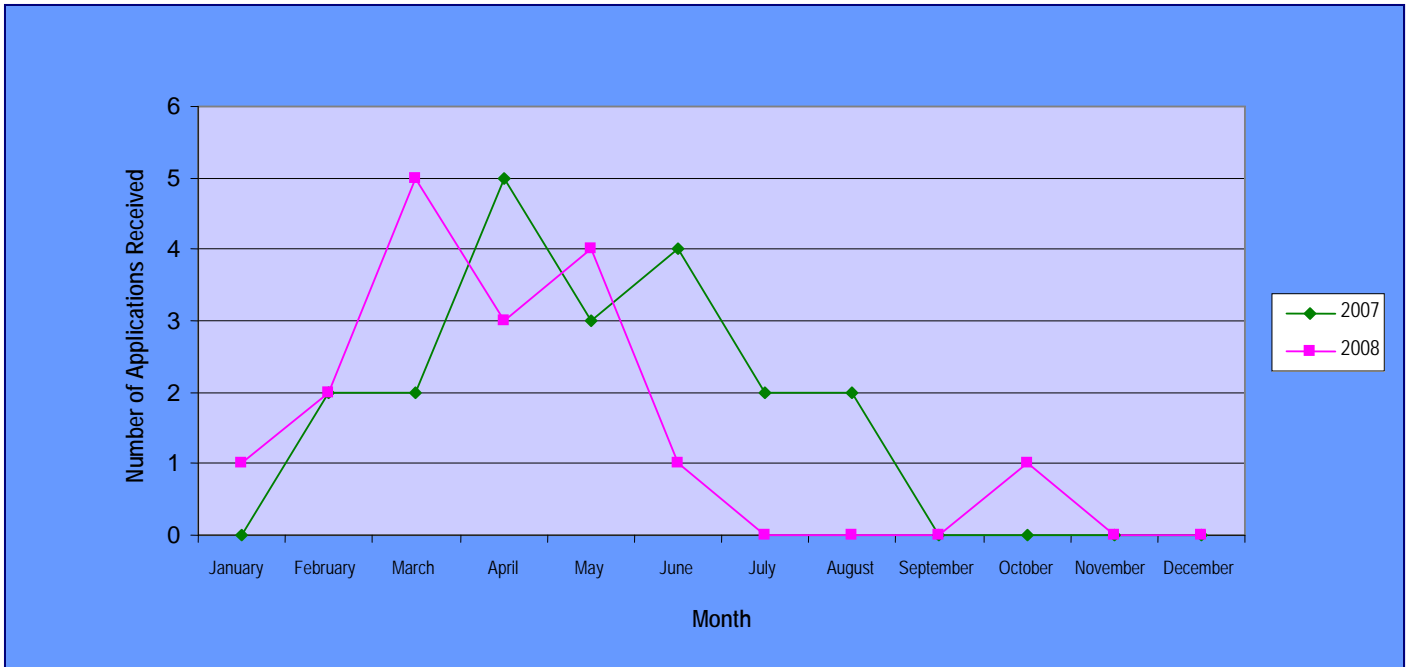


Figure 8: Comparison of Research Applications received in 2007 and 2008.

Compared with 2007, the number of Biodiversity Research Applications received in 2008 declined, particularly in the latter part of the second quarter and throughout the third quarter (Figure 8).

Fifteen (15) Research Permits were issued in 2008 in categories as shown in Figure 9. The majority of the applications were for floral and other (in particular, anthropological) studies. Nine (9) Specimen Export Permits were issued, mainly for the exportation of fish, mammals, birds and several specimens of flora.

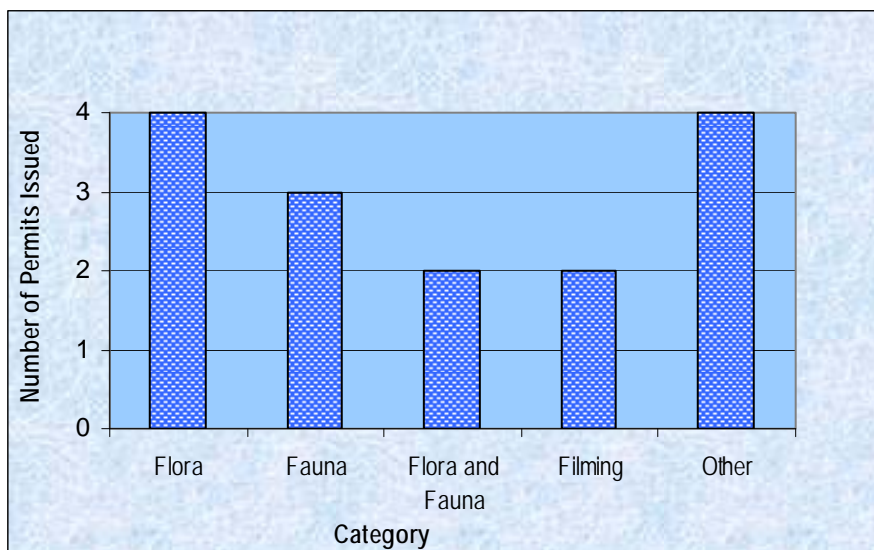


Figure 9: Categories of Research Applications permitted by the Agency, in 2008.

Eighty-eight percent of all applications submitted were approved and issued with permits to conduct Biodiversity Research. The remaining applications were in various stages of processing. Table 5 provides a summary of the activities regarding Biodiversity Research Applications.

No. of Applications Received	No. of Applications Approved	No. of Research Permits Issued	No. of Specimen Export Permits Issued
17	17	15	9

Table 5: Summary of Applications Received, Approved, and Export Permits issued in 2008.

The monitoring and enforcement aspect of the Biodiversity Research process has been maintained over the period. The Agency continued to maintain its linkages with other relevant sector agencies and organisations such as the Ministry of Amerindian Affairs, the University of Guyana, and Iwokrama in order to ensure researchers' adherence to the National Research Guidelines and the Terms and Conditions of their respective Research Permits. With regards to the submission of preliminary field reports and final research reports, the Biodiversity Unit continued to ensure the researchers' compliance.

Locations of Biodiversity Research

Generally, research activities for the period were concentrated in Regions 7, 8 and 9, in areas such as Iwokrama forest, Kaieteur National Park, Surama and the Mazaruni/Cuyuni area.

Projects

A number of projects were executed to support the conservation and sustainable use of biodiversity in Guyana. These are presented below.

National Biodiversity Action Plan II (NBAP II), 2007-2011

The National Biodiversity Action Plan (NBAP) II (2007-2011) is a continuation of the planning process from NBAP I (1999-2004) which focuses on four main thematic areas: forests, agriculture, coastal resources, and marine and freshwater resources. This document was prepared with an elaboration of 12 Priority Programme Areas into Project Concepts and Log Frames, which are to be implemented within a five-year period.

The Guyana Forestry Commission (GFC) and the Ministry of Agriculture were identified as Lead Agencies for some projects in the NBAP II for implementation during the period 2007-2009. The NBAP II was approved by the EPA Board earlier in the year and was approved by the Government of Guyana during the month of August, 2008. The NBAP II and the four Situation Analysis documents have been printed by F and H Printing Establishment and 100 copies were burnt on compact discs, for distribution.

The EPA has also begun developing priority projects for funding. A concept paper was prepared for a project identified for implementation. The NBAP II Project was funded by the World Wildlife Fund (WWF).

BIOSAFETY

National Biosafety Framework (NBF)

The National Biosafety Framework (NBF) was developed to ensure adequate level of protection in the field of the safe transfer, handling and use of living modified organisms (LMOs) resulting from modern biotechnology in Guyana. This document would aim to control and monitor the use of Genetically Modified Organisms (GMOs)

and LMOs while preventing adverse effects on the conservation and sustainable use of biological diversity in Guyana. This project was conducted over an eighteen-month period with support from UNEP/GEF.

The NBF was approved by the Government of Guyana during the month of August, 2008. This project has been audited and financial resources under the budget line of the project will be utilized for the printing of the NBF and materials pertaining to outreach and public education / awareness activities for distribution to relevant stakeholder Agencies. The relevant printers have been contacted for quotations for printing of the NBF document.

Biosafety Clearing House

The Biosafety Clearing House (BCH) will foster and formalize the facilitation of the exchange of scientific, technical, environmental and legal information on Biosafety and Living Modified Organisms (LMOs) among sector Agencies in Guyana.

Subsequent to the training workshop held in September, 2007, a second workshop was held during the month of February, 2008. Participants were introduced to the BCH and staff members of the EPA were also trained in the HERMES programme which was used in development of the National BCH Website. This workshop was facilitated by an IT Regional Advisor, UNEP-GEF Biosafety Unit (Figure 10).

Forms required for closure of the UNEP-GEF BCH project were prepared and submitted to the UNEP-GEF Regional Advisor. These forms act as a final report of the BCH Project for Guyana and outline the activities implemented, equipment and services procured successes and lessons learnt, operational testing, and financial statements of expenditures.



Figure 10: Regional Advisor at the BCH National Training Workshop.

The National Focal Point has been registered for the BCH and is able to log onto the account through the Management Centre in order to manage Guyana's records in the BCH. The EPA has received three additional pieces of equipment from the relevant suppliers: scanner, printer and a camera under the BCH project.

An article entitled "EPA takes the lead in Biosafety Clearing House (BCH) Implementation" was prepared and submitted to the Education, Information and Training Division for review and publishing.

The EPA has received a correspondence from the Regional Advisor, Ms. Vasquez, indicating that the BCH project has been officially closed.

Regional Project on Biosafety

Guyana has endorsed the preparation of the project proposal entitled "Implementation of a National Biosafety Frameworks in the Caribbean Sub-Region countries of Bahamas, Belize, Grenada, Guyana, Jamaica and Suriname." This project would be funded by GEF and implemented by UNEP. In November, 2008, the PIF for the project was approved by the GEF Secretariat.

Public Awareness

The EPA prepared an article entitled, "The Cartagena Protocol: 'Five years of global cooperation towards sustainable development'", and a brochure on this Protocol for distribution. The same were intended to commemorate the fifth anniversary of the Protocol which was observed on September 11, 2008.

ACCESS AND BENEFIT SHARING OF GENETIC RESOURCES REGULATIONS

The Division made significant progress with the draft Access and Benefit Sharing Regulations. Several meetings were held with the Attorney General's Chambers in collaboration with the technical officers of the Agency to review the conformity to the legal language for Cabinet's consideration.

The implementation of these Regulations will strengthen the permitting process and the local institutional capacity to facilitate research which requires access to Guyana's genetic resources. It will also further assist Guyana in achieving the objectives of the CBD.

The National Policy on Access and Benefit Sharing was approved by the Government during the month of August, 2008.

NATIONAL BIODIVERSITY RESEARCH INFORMATION SYSTEM (NBRIS)

The National Biodiversity Research Information System (NBRIS) is in its final stages of becoming fully operational. It will enable better management of data arising out of research on biological diversity, by placing data in a format that could be analyzed, so as to develop useful reports. More importantly, the NBRIS will facilitate on-line registration and application by researchers. Other components of the system include on-line evaluation of applications, a Document Management System, a General Information Component, and a Specimens Tracking and Inventory System.

During the first quarter, through a request from the Resident Representative of the UNDP, NBRIS was presented to a gathering which included Ms. Grynspan, the Assistant Secretary General and Director for the Regional Bureau for Latin America and the Caribbean.

Earlier issues regarding the synchronization of the web-based module and the LAN have been addressed by the Consultant. Other concerns have arisen from tests and these have been forwarded to the Consultant for rectification. Two meetings which involved a demonstration of NBRIS was also held with the NRMD, Project Manager, UNDP, and Mr. Lance Hinds, to highlight these issues.

BIODIVERSITY ENABLING ACTIVITIES PROJECT

The Biodiversity Enabling Activity Project which is funded by the GEF and implemented by the UNDP is an add-on project which aims to assist the Government of Guyana in addressing its priorities relating to the CBD. The project addresses Capacity Building Needs, the preparation of second and third National Reports (CBD), and the establishment of the Clearing House Mechanism.

The Project Coordinator commenced duties on July 21, 2008, and has prepared and submitted the workplan and budget for the first two quarters of this project to the UNDP. The Project account has been opened and the first disbursement was transferred into same. An Inception Workshop and the first Project Steering Committee were held during the month of October. The TORs and advertisements were prepared and approved for Assessing Capacity Building Needs Consultancies: these are being advertised. The first Access and Benefit Sharing Working Group meeting was held in December, 2008. Correspondence was also sent to members of the remaining three Working Groups requesting meetings. The 2009 workplan was prepared and submitted to UNDP. The Project Coordinator has submitted the relevant Progress Reports to UNDP.

NATIONAL CAPACITY SELF-ASSESSMENT (NCSA)

The key objective of this project was to develop a National Strategy and Action Plan for the improved implementation of three United Nations Conventions to which Guyana is Party. This project was funded by the GEF through the United Nations Development Programme (UNDP).

The NCSA Strategy and Action Plan was approved by the EPA Board, NREAC, and the Government in August, 2008.

A Standard Progress Report for the period from project inception to June, 2008, was prepared and submitted to the UNDP. A Project Implementation Report was prepared and submitted to the UNDP for the period July, 2007 – June, 2008.

A Concept Paper was prepared and submitted to UNDP for the implementation of the NCSA Action Plan.

A Terms of Reference was prepared for a consultant, which is intended to: (a) streamline institution structures and mandates to address the Conventions; and (b) integrate Convention activities into annual work programmes of Agencies. A detailed annual workplan for 2008 and 2009 was prepared and submitted to UNDP.

A contract was prepared and signed between EPA and F and H Printing Establishment for the printing of the NCSA document.

MICRO-LEVEL FOREST BIOLOGICAL DIVERSITY INDICATORS

This Project was funded by the WWF, and was a collaborative effort between the EPA and the GFC. The outputs were a system of indicators to monitor forest biological diversity and a National Plan of Action to monitor impacts on forest biodiversity.

The project output was printed and distributed to relevant stakeholders.

The Project was prepared for auditing.

POST-DARWIN INITIATIVE PROJECT ON WETLANDS CONSERVATION AND MONITORING

The North Rupununi Adaptive Management Plan (Assessing the Impacts and Building Capacity) is a post project of a previous Darwin Initiative project. The purpose of this project is to build capacity of stakeholders at both local and national levels in implementing the Adaptive Management Plan. This project has significantly expanded the number of trained individuals in the fields of biodiversity monitoring and management, and will also build capacity within the EPA by training Environmental Officers of the Agency.

The Project Officer appeared on the Guyana Today Show and prepared an article which was published in the Guyana Chronicle for World Wetlands Day. An End-of-Project Event was also held Georgetown and North Rupununi.

The Ranger/Environmental Officer Training course was conducted during the months of September to October by Mr. Calvin Bernard, In-Country Project Manager, and Certificates of Participation were distributed to the participants.

INTERNATIONAL BIODIVERSITY DAY, 2008

The Division, in collaboration with the Education, Information and Training (EIT) Division, organized activities in observance of International Biodiversity Day, 2008, celebrated under the theme "Biodiversity and Agriculture".

Several activities including primary and secondary school talks, a presentation for CPCE students, a mini exhibition on the lawns of Ministry of Agriculture, and a trip to NARI's Kairuni Nursery – Soesdyke, were held to commemorate International Biodiversity Day. An Essay Competition for Guyana School of Agriculture Students was launched and essays that were submitted were evaluated. A brochure on 'Agricultural Biodiversity' was also prepared and distributed during the events. Additionally, there was an appearance on the morning show, "Guyana Today", which apprised the public of all activities. A report of these events was prepared and sent to the Secretariat of the CBD.

3.3 CONSERVATION AND SUSTAINABLE USE OF WILDLIFE

The Wildlife Unit continued to make significant progress in 2008, with finalising of the draft Wildlife Management and Conservation Regulations. The Unit also continued to collaborate with sector Agencies to achieve the sustainable use and conservation of wildlife in Guyana.

Wildlife Management and Conservation Regulations

The Wildlife Management and Conservation Regulations were developed to establish a legal framework for the conservation and sustainable use of Guyana's wildlife. This project was implemented by the Ministry of Foreign Affairs with financial support from the United Nations Development Programme (UNDP). The EPA has received the final comments from the Guyana Geology and Mines Commission (GGMC) and has submitted the same to the Legal and Technical Consultants for review.

Collaboration

The activities pursued under this area included strengthening collaboration with the local and regional institutions for wildlife conservation. The EPA participated in a National Stakeholder Consultation facilitated by the Wildlife Division, to highlight and address issues identified in the first draft of the amended Species Protection Regulations (SPR), 1999.

3.4 INTRA- AND INTER-AGENCY COLLABORATION

The NRMD continued to collaborate with the other Divisions of the Agency. The Division assisted the EITD with the coordination of activities for International Day for Biological Diversity, 2008, submission of articles for the EPA quarterly Greenleaf, and appeared on the television programmes such as Guyana Today Show and Close Up. The NRMD also collaborated with the EMD in the review of Environmental Impact Assessments (EIAs).

The EPA in collaboration with the Ministry of Foreign Affairs also prepared and conducted presentations on UNDP/GEF funded projects in the area of environment and sustainable development.

Carifesta Youth Village

The Officers of the Division participated in the Mining Exhibition and the Carifesta Youth Village held during the period August 25 to August 29, 2008.

3.5 CONSTRAINTS

The split locations of the EPA continue to present some logistical and administrative difficulties.

Limited financing for field work has impacted on the development of field skills for natural resource management.

3.6 MEETINGS, WORKSHOPS AND TRAINING

Every member of staff participated in workshops and formal training programmes which have contributed to capacity building of the Division, some of which are given in Table 6.

No.	Meetings	Date	Representative
1.	Wildlife Management Authority.	Continuous	Dr. Indarjit Ramdass
2.	The Expert Meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean, in the Dominican Republic.	January 28-30, 2008	Dr. Indarjit Ramdass
3.	Meeting on the GENCAPD Phase II Project, the Ministry of Finance.	February 22, 2008	Ms. Dominique Saheed
4.	Meeting of the National Trust of Guyana	January 30 and February, 2008	Mr. Omar Ramcharran
5.	National Biodiversity Committee (NBC) Meetings, Boardroom of the Guyana Forestry Commission.	April 7, 2008 July 17, 2008 October 15, 2008	Dr. Indarjit Ramdass, Ms. Dominique Saheed and Mr. Ian Kissoon
6.	Meeting at the Ministry of Legal Affairs to discuss and review the conformity to the legal language of the draft ABS Regulations.	Continuous	Dr. Indarjit Ramdass, Ms. Gargi Roy, Ms. Dominique Saheed, Ms. Clydecia McClure, Ms. Juliana Persaud
7.	WWF National Coordination Committee Meeting, the WWF Office in Georgetown.	May 23, 2008	Mr. Ian Kissoon
8.	Meeting of the Kaieteur National Park Board.	May 28, July 16 and September 24, 2008	Mr. Ian Kissoon
9.	The Ministry of Finance Bilateral Portfolio meetings.	May 29, 2008	Mr. Ian Kissoon
10.	The Conference of Parties Ninth Meeting, Bonn, Germany.	May 19-30, 2008	Dr. Indarjit Ramdass
11.	GEF Working Group Meetings to update the stakeholders on the status of Biodiversity Projects and to present and discuss Climate Change Project Concepts for submission to GEF for consideration.	December 5, 2008	Dr. Indarjit Ramdass, Ms. Dominique Saheed, Ms. Juliana Persaud
12.	Meeting with UNDP to discuss UNDP procedures and clarification of roles and responsibilities of all parties involved in the Enabling Activity Project.	July 28, 2008	Ms. Clydecia McClure
13.	Monthly Occupation Safety Health Committee Meeting.	January, 2008	Ms. Clydecia McClure
14.	National Avian Influenza Planning Committee.	July 11, 2008	Ms. Dominique Saheed
15.	Regional Meeting of ACTO and Government Authorities Responsible for Indigenous Policy in the Amazon Basin.	September 24-26, 2008	Dr. Indarjit Ramdass
16.	Annual Project Advisory Committee meeting for the Chainsaw Milling Project.	December, 2008	Ms. Clydecia McClure
17.	A meeting was held with the IDB Representative, Ms. Sybille Nuenninghoff, Natural Resources Specialist, EPA, Subryanville.	December 11, 2008	Dr. Indarjit Ramdass and Ms. Juliana Persaud
18.	Meeting with Ministry of Amerindian Affairs to discuss the Yupukari Kitchen-garden Project, the Chenapou Airstrip and the list of communities to be consulted in the Shell Beach Delineation Process.	June 23, 2008	Dr. Indarjit Ramdass

No.	Workshops/ Seminars	Date	Representative
1.	The Kanuku Mountains delineation workshop held in Lethem.	January 24-25, 2008	Mr. Ian Kissoon
2.	The PA Legislation Consultation held in Chenapou; Mabaruma; Georgetown; and Lethem.	February 25, 26, 28 and 29, and March 3, 2008	Dr. Indarjit Ramdass, Mr. Ian Kissoon, and Mr. Omar Ramcharran
3.	Two-day Tropical Forest-Based Tourism Good Practices Workshop held at the British High Commissioner's residence, Bel Air Park.	April 7-8, 2008	Ms. Chuvika Harilal
4.	General Meeting and International Conference entitled "Museums and Diversity", Umana Yana.	April 18-22, 2008	Ms. Gargi Roy and Ms. Dominique Saheed
5.	Stakeholder Consultation in which the Fisheries Department collaborated with the Caribbean Regional Fisheries Mechanism (CRFM) to discuss the benefits and implications of Guyana becoming a Party to the International Commission for the Conservation of Atlantic Tunas (ICCAT), Grand Coastal Inn.	April 24, 2008	Ms. Dominique Saheed
6.	Initial stakeholder workshop for the co-management planning of the proposed Kanuku Mountains Protected Area, Lethem.	April 21-24, 2008	Mr. Ian Kissoon
7.	Symposium on Climate Change and Flood Management on the Coast of Guyana, the Regency Suites, Conference Hall.	May 8, 2008	Ms. Gargi Roy
8.	Presentation on the role of EPA in GPAS to the students of the Co-management for Graduates Course.	August 19, 2008	Mr. Ian Kissoon
9.	National Consultation on a Regional Climate Change Strategy for the Caribbean, Regency Suites.	August 15, 2008	Ms. Dominique Saheed
10.	Second stakeholder workshop for the development of the proposed Kanuku Mountains Protected Area Co-management Plan.	May 19-23 and September 8-11, 2008	Ms. Chuvika Harilal
11.	UNDP Mid-term Review, Grand Coastal Inn.	October 1, 2008	Dr. Indarjit Ramdass
12.	National Stakeholders' Consultation Workshop on the "Development of the National Agriculture Sector Adaptation Strategy to Address Climate Change in Guyana", Regency Suites.	December 4, 2008	Ms. Dominique Saheed
13.	Inception Workshop for the Biodiversity Enabling Activity Project; Regency Suites.	October 9, 2008	Dr. Indarjit Ramdass, Ms. Dominique Saheed and Ms. Clydecia McClure
14.	Workshop on National Biodiversity Strategies and Action Plans, mainstreaming of Biodiversity and Integration of Climate Change, Trinidad.	November 2-8, 2008	Ms. Dominique Saheed
15.	GFC workshop on "Biodiversity Mainstreaming through Avoided deforestation – Guyana Case Study".	November 12, 2008	Ms. Dominique Saheed
16.	Workshop for the review of the Species Protection Regulations on Regency Suites.	June 11 and November 13, 2008	Dr. Indarjit Ramdass and Ms. Dominique Saheed
17.	Conservation International's Mobile Seminar on Protected Areas Planning and Management.	June 9-20, 2008	Mr. Ian Kissoon
18.	National Workshop "To review the draft Agriculture Sector Adaptation Strategy to address Climate Change in Guyana, Guyana Forestry Commission.	October 7, 2008	Ms. Dominique Saheed
No.	Training	Date	Representative

1.	Biosafety Clearing House Training, University of Guyana.	February, 2008	Ms. Gargi Roy, Ms. Dominique Saheed and Ms. Chuvika Harilal
2.	Land Degradation Assessment Training Workshop, Guyana Lands and Surveys Commission Training Room.	September 11, 2008	Ms. Dominique Saheed
3.	Environmental Officer Training Course "Problem-solving for Natural Resource Management" EPA Boardroom, Charlestown.	September 15-October 27, 2008	Ms. Dominique Saheed, Ms. Clydecia McClure and Ms. Juliana Persaud
4.	Co-management Course for Graduates, Iwokrama.	November-December, 2008	Ms. Clydecia McClure
5.	Caribbean Biodiversity Indicators Partnership Workshop, Trinidad.	December 9-11, 2008	Ms. Clydecia McClure

Table 6: NRMD staff participating in Meetings, Workshops/Seminars and Training which have contributed to building capacity of the NRMD.

3.7 OTHER

The Division continued to participate on various Sectoral Boards and Committees, such as the Wildlife Management Authority Board, the Kaieteur National Park Board, the Guyana National Trust Board, Natural Resource and Environment Advisory Committee, and the EPA Occupational Health and Safety Committee.

4.0 ENVIRONMENTAL MANAGEMENT PROGRAMME

The Environmental Management Division (EMD) manages the Environmental Authorization process, Complaints and Response process, Monitoring and Enforcement, and conducts Research for Development in terms of its processes, practices, procedures, etc.

In order to effectively process applications, development projects are placed into one of three categories, namely Agriculture, Fisheries and Tourism (AFT); Industry, Infrastructure and Energy (IIE); and, Mining and Forestry (M&F). As part of the Environmental Management Programme, the Agency also conducts work related to Integrated Coastal Zone Management (ICZM).

4.1 ENVIRONMENTAL AUTHORISATIONS PROCESS

Under the EP Act, 1996, EP (Amendment) Act, 2005, and the EP Regulations, 2000, the Agency is responsible for the management, protection and improvement of the environment, the prevention of pollution and the assessment of the impact of economic development activities on the environment. To this end, the Agency has established an Environmental Authorization process for existing and new developments within both the public and private sectors. This process requires that the EPA grants the first development consent to ensure that projects incorporate environmental management in their project design and operation.

The implementation of the Environmental Authorization process, as prescribed in the EP Act, 1996, EP (Amendment) Act, 2005, and the EP Regulations, 2000, continues to enable the efficient functioning of the Environmental Management Programme. In this light, the Agency continued to implement and administer various strategies to address the authorizing of operations and to ensure their compliance with the requirements of good environmental practices. These included the authorising of new developments, monitoring of authorised facilities, monitoring and regularising unauthorised activities, and authorizing of existing developments.

The EPA continued to utilize a comprehensive approach to environmental management, based on regulations, standards and guidelines which were developed by the Agency in collaboration with other sector agencies. In addition, the Agency worked in partnership with several sectoral agencies, particularly those in the planning sector, to identify environmental quality objectives and develop synergistic processes to achieve them.

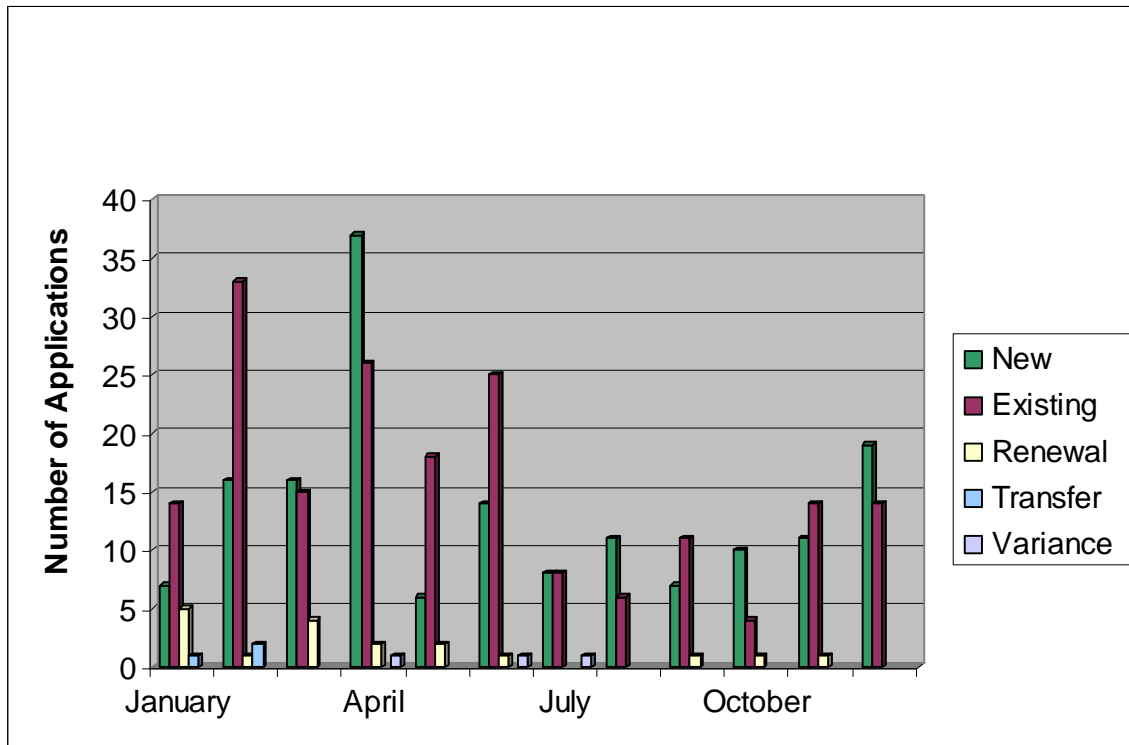


Figure 11: Applications for Environmental Authorization in 2008.

The Environmental Management Division received a total of 507 applications during 2008 of which 162 were for new projects (Table 7), 188 for existing projects, 18 for renewal of environmental authorization, three (3) for variance of environmental authorization, and three (3) for transfer of environmental authorization. In addition, 133 applications were received for noise permits in 2008; five (5) of these were for long-term noise permits. This represents an increase of 121 applications compared with 2007. The highest number of applications for environmental authorization for existing developments was received in February while the highest number of applications for new development projects was received in April (Figure 11). However, there was a significant decrease in the number of applications received by the Agency in July but a gradual increase was experienced in the last quarter.

Sector of Development	No. of Applications
Agro Food Processing	1
Aquaculture Farm	3
Asbestos Removal and Mitigation	1
Asphalt Plant	1
Blending and Bottling of Rum	1
Charcoal Operation / Export	2
Concrete Products	1
Copper and Gold Mine	1
Foam/Mattresses Manufacturing	1
Furniture Manufacturing	1
Guyana Alumina Inc.	1
Hospital	3
Hotel/Hostel & Resort	5
Integrated Farming	2
Logging and Sawmilling	6
Lumber Storage	9
Lumber Yard - with processing	5
Lumber Yard - without processing	9
Machining Workshop	1
Mall	2
Paddy Storage Facility	1
Portable Sawmills	14
Poultry Processing	1
Pre-Fab Homes Storage	1
Recyclers Plant	1
Sand/Loam Mining	4
Sawmill	24
Seafood Processing	3
Service Centre & Wash Bay	1
Service Station/Fuel Storage	9
Telecommunication Towers	44
Well	1
Wood Processing	2
TOTAL	162

Table 7: Summary of the New Projects in 2008.

The communication sector, which falls under the Industry, Infrastructure and Energy Unit (IIE), received the largest number of applications for the establishing of new telecommunications towers (Table 8). Also of significance is the number of applications received by the Mining and Forestry (M&F) sector for the development

of sawmills both portable and stationary. Generally, lumber and lumber processing facilities accounted for a large number of applications received for new development during the year 2008 (Table 8).

Sector	No. of Applications (New, Existing, Renewal, Transfer & Variance)	Environmental Authorization	EIA Required	EMP Required	ERP
Agriculture Fisheries and Tourism	38	10	2	5	
Industry, Infrastructure and Energy	148	47	1	9	1
Mining and Forestry	188	90	1	2	
Noise	133	133			
Total	507	280	4	16	1

Table 8: Distribution of Authorization Applications across EMD'S Sectoral Units.

The Mining and Forestry (M&F) Unit received the highest number of applications during 2008 as was the case in 2007 with applications for sawmills and lumber yards constituting the majority of the applications within the sector (Figure 12). The Industry Infrastructure Energy (IIE) Unit received the second largest number of applications for the operation of service stations, infrastructure works and power generation projects. The high number of applications received from developers in the forestry and energy sectors can be attributed to greater enforcement by the relevant sector agencies for developers to comply with their regulations which identify the EPA as responsible for issuing first developer consent. Noise permits accounted for a significant portion of the applications received and processed during the year.

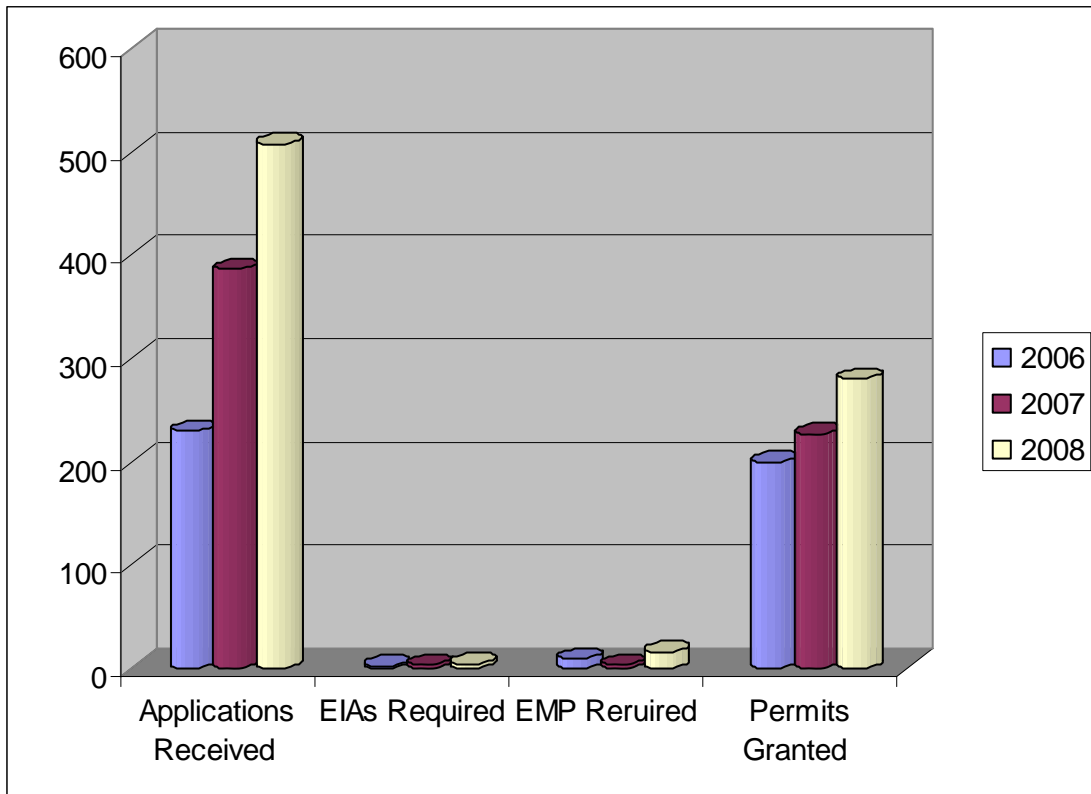


Figure 12: A Comparison of the Authorization Process, 2006 - 2008.

When compared with the total number of applications received, the number of projects requiring Environmental Impacts Assessments (EIA) increased by 1 when compared with 2007 (Figure 12). However, the number of projects requiring Environmental Management Plans (EMP) increased substantially from three (3) in 2007 to sixteen (16), i.e. 3 percent of the number of applications received in 2008. The number of projects granted environmental authorizations continued to increase in 2008 with a 23 percent increase recorded compared with 2007 (Figure 12). Of the 507 applications received in 2008, 211 or 42 percent were granted Environmental Authorization which included Environmental Permits, Construction Permits, Operation Permits, No-Objections Letters and Noise Permits. In addition to the Environmental Authorisations granted from applications received in 2008, 69 Environmental Authorisations were also granted from applications received during the 2002-2007 period, bringing the total number of Environmental Authorisations granted in 2008 to 280.

At the end of the year, ten (10) of the authorizations finalized were yet to be uplifted. Out of the 507 applications received, 3 were for renewal of Environmental Authorisations. However, the granting of the renewed Authorisation was subjected to compliance with the Terms and Conditions of the standing authorization. Of the 507 applications received, 258 were at various stages of the authorization process. A total of 37 developers needed to submit outstanding information or obtain approval from the relevant sector agency in order to

complete the application process. The remaining projects were at the following stages in the authorization process:

- 2 were in the 30 day public notification period;
- 73 required site and/or verification visits as well as environmental audits to be conducted;
- 9 projects were required to implement mitigation measures before the issuance of the Authorisation;
- 46 site visits were conducted and were at the stage of review to determine the next steps in the Authorisation process;
- 88 Applications were drafted and awaited finalization pending the review and endorsement of the draft Authorisation by the developer;
- 1 application was in the process of a transfer of environmental authorization; and
- 1 application for renewal was received before the required time for Permit renewal.

<i>Developer</i>	<i>Project</i>	<i>Location</i>
<i>Bauxite Company of Guyana Inc.</i>	<i>Bauxite Mining</i>	<i>East Bank of Berbice in the vicinity of Hururu Village.</i>
<i>Linden Quarries Inc.</i>	<i>Stone Quarry Operation</i>	<i>In the vicinity of Arimai along the Right Bank of the Mazaruni River.</i>
<i>Mrs. Beverly Arthur and Mr. George Smith</i>	<i>Casique Palace and Banquet Hall</i>	<i>Tract '5A' - Block 2 Plantation, Providence, East Bank Demerara.</i>
<i>Ryan and Ankama Anamayah</i>	<i>Anamayah Medical Centre</i>	<i>Parcel 208, 210 and 212 Portion of Belvedere, Corentyne, Berbice</i>

Table 9: Major development projects granted Environmental Authorizations in 2008.

Compliance Monitoring

The Division continued to monitor compliance of operations. However, this activity, which is extremely important to achieve compliance of operations to proper environmental management practices, has been severely affected by limited resources including staff shortage, availability of equipment and budgetary constraints.

Although faced with these limitations, compliance monitoring was done for priority areas. Below are some of the compliance monitoring activities that were conducted:

- Review of progress reports and compliance with Environmental Management Plans; and
- Correspondence to permit holders and polluters reminding them of their compliance obligations.

Environmental Assessment Board (EAB)

The Environmental Assessment Board (EAB) continued to perform its functions in 2008. The Board reviewed several EIAs this year and was engaged in reviewing an appeal from a resident in Sarah Johanna against a sawmill/lumber yard, and the C&R Investment project at No. 66 Village, Corentyne.

EIA Consultants

A total of 18 environmental consultants capable of preparing EIAs and EMPs registered with the Agency during the year 2008.

Legal Issues

1. The Attorney General's Chambers continued to provide support with regard to management of court proceedings on environmental matters in the civil jurisdiction to be resolved by the Agency.

4.2 RESEARCH AND DEVELOPMENT

The EPA is mandated by the EP Act, 1996, EP (Amendment) Act, 2005, and the EP Regulations, 2000, to continuously develop, over time, a number of regulations, standards and guidelines and to engage in research to gather baseline data on the state of our environment. Research and Development continued and the following activities were undertaken in 2008.

Standards, Guidelines and Legislations

- Procedures and manuals were drafted for the implementation of the ISO 17020 Standard for Inspection bodies. Work continued on the revision of the draft procedures based on feedback provided by GNBS.
- Development of environmental standards continued with the GNBS. Interim standards for noise and air quality were developed, and a review of the industrial effluent discharge standard was conducted.

- The EPA is represented on several technical committees for standards development at the GNBS. Through collaboration with the GNBS and other agencies, the EPA developed guidelines and codes of practice.
- The Agency also supported the GNBS on National Conformity Assessment activities through the National Committee on Conformity Assessment.

PROJECTS

Hazardous Wastes Inventory and Management Strategy

The Caribbean Environmental Health Institute (CEHI) was contracted to conduct a National Hazardous Waste Inventory and develop a Management Strategy. Officers of the EMD collaborated with CEHI to complete the Hazardous Waste Inventory. Under this project, CEHI facilitated the training of faculty and staff of the University of Guyana, School of Earth and Environmental Sciences (SEES), EPA and the Solid Waste Management Department of the Mayor and City Council of Georgetown.

SEES was contracted to carry out the hazardous waste inventory survey, and faculty members and students of SEES administered 755 questionnaires; in addition, they were provided with additional training on the use of ISIC codes for data entry. Staff of the EITD also received training related to a public awareness strategy for hazardous waste.

The last quarter of the year saw the development of the hazardous waste strategy and management plan. Following the development of the strategy and management plan, CEHI submitted to the Agency a draft of the Hazardous Waste Inventory Survey Report and Draft Final Hazardous Waste Strategy and Management Plan for review and feedback.

National Programme of Action and Water Safety Plan for the Demerara Watershed

The GoG through Local Stakeholder Agencies partnered with the CEHI and the US Government in the execution of a Joint Demonstration Project Linking National Programmes of Action (NPA) and Water Safety Plans (WSP) in the Demerara Watershed and the Community of Linden. The EPA as the Focal Point for the NPA aspect and a Task Force member for the WSP provided technical support and information for the execution of the project. The GIS Unit digitized a map of the project. Officers were instrumental in the development and release of information regarding the NPA through brochures and press releases to the media.

In addition, officers assisted in facilitating stakeholder workshops in Linden. In collaboration with EITD, the Division assisted the Water Steering Committee in the development of PA/PE tools for the NPA/WSP.

Marine Litter Assessment

The EPA and the UNEP Regional Seas/CAR/RCU signed a MOU for a project to develop a national strategy for the assessment of marine litter in Guyana. The project focused on two thematic areas: Education and Awareness, and Institutional, Legislative and Policy Reform. Through stakeholder meetings with key players, e.g. Guybernet, the Integrated Coastal Management Zone Committee and the Maritime Administration Department (MARAD), the EPA developed the Terms of Reference for the consultancy. The consultant developed a questionnaire and conducted meetings with stakeholder agencies to acquire necessary information. The consultant submitted a draft of the Marine Litter Assessment to be reviewed by the Agency. The EPA is to develop a PA/PE Strategy to address marine litter management issues emanating from the Draft report.

TRAINING

Municipal Waste Water

CEHI, in collaboration with PAHO, conducted a training workshop to “Improve Municipal Wastewater Management in the Caribbean”. Officers of the Agency assisted in preparations as well as received training through this exercise.

OTHER

The Division participated in the Agency’s booths at the Youth Village hosted for Carifesta X at the National Park, and the Mining Exhibition organized by GGMC.

4.3. CROSS-SECTORAL PROGRAMMES

Conventions and Multi-Lateral Environmental Agreements

- The EPA continued to meet Guyana's obligations under the Basel Convention. In this regard, a Hazardous Waste Inventory and a Management Strategy were prepared.
- The Agency continued to support and to participate in the negotiation and preparation for accession/ratification of new conventions. In this regard, the Agency prepared recommendations for the Office of the President and the Ministry of Foreign Affairs supporting Guyana's ratification of the Cartagena Convention. In addition, the Agency participated in programmes related to the Cartagena Convention in the review of the Project Identification Form (PIF) document for the Caribbean Regional Fund for Wastewater Management (CReW).
- Collaboration with other agencies to meet the requirements of various conventions, e.g. the Pesticide and Toxic Chemical Control Board regarding the Rotterdam Convention continued in 2008.

Integrated Coastal Zone Management (ICZM)

The ICZM Unit remained dormant at the time of this report. However, the Officer in the Unit continued to provide support to the other units in the EMP.

The Chairman of the ICZM attended the Caribbean Marine Atlas (CMA) Training Programme facilitated by the Intergovernmental Oceanographic Commission (IOC) of UNESCO in February, 2008, in Belgium, and in April, 2008, in Trinidad. He also assisted the ICZM Unit in planning for the year.

A Coastal Zone Management Systems Project was developed but unfortunately funding opportunity for this Project was lost as a result of the reallocation of funds by the Caribbean Development Bank (CDB). This reallocation was due in great part to changes in the scope of work by the consultants.

During the period under review, the Officer attached to the ICZM Unit assisted the Research and Development Officer with several projects including the Marine Litter Assessment project.

Climate Change

The EPA continued to provide support to and is supported by the Hydrometeorological Department, of the Ministry of Agriculture, on Climate Change issues.

4.4 MONITORING AND ENFORCEMENT

The Monitoring and Enforcement Unit was established in October, 2007. The Unit is tasked with Monitoring permitted operations and enforcing penalties against individuals posing a threat to the environment or in breach of an Environmental Authorisation. The Unit is also primarily responsible for, and has embarked on, reviewing compliance and monitoring reports in collaboration with the other Units in the EMD. These reports are required under an Environmental Authorisation or in pursuance of an Environmental Authorisation.

During 2008, the main focus of the Unit was directed towards the implementation of the Anti-Littering Programme which started in 2007 in response to potential littering issues faced by the hosting of Cricket World Cup and in accordance with Littering provisions in the EP Act.

Anti-Littering Programme

In this, the formative year for the Anti-Littering Programme, much research on existing initiatives and reviews of legislation was conducted to determine the status of solid waste management in Guyana. The Programme was designed to focus on three main components: Monitoring, Enforcement, and Public Awareness.

The Pilot area chosen for this Programme was Region 4. All NDCs along East Bank Demerara and East Coast Demerara, the Region 4 RDC, Ministry of Home Affairs, Ministry of Local Government and Regional Development, and the Attorney General's Chambers were informed about the Anti-Littering Programme while other Local government bodies were informed on a case-by-case basis.

A Littering Report Form was developed by the Unit and was distributed to the NDC, Town Council, or other relevant authority. These forms are to be filled out and returned to the EPA before action could be taken.

Under the Programme, 32 complaints dealing with indiscriminate dumping of solid waste and sewage, improper waste disposal, dumping by NDCs or Town Councils, and scrap metal storage were received for the year. During this time, the Unit conducted site visits to all areas.

The Unit worked with NDCs and Town Councils to identify appropriate landfill sites and regularize existing sites as well as to improve overall waste management system under the Programme. The Unit will embark more intensely on Enforcement Action when recommendations and collaboration have failed.

In collaboration with the EITD, a Public Awareness Component was created for implementation throughout the NDCs. The Strategy identified the use of Public Service Announcements (PSAs), Newspaper Articles, School competitions, etc. for the dissemination of messages and information. The Unit held various meetings with NDCs and site visits were conducted to several areas. In addition, the Unit worked with the PTA bodies of schools, women's groups, and religious groups to encourage participation in the Programme.

PET Disposal Committee

A Committee was established in July, 2008, with the Guyana Manufacturing and Services Association (GSMA) to discuss management of PET bottle waste in Guyana. The Committee comprised several key stakeholders such as Representatives from GMSA, EPA, GTA, MoLGRD, M&CC & Consumer Affairs Bureau & Chamber of Commerce. During this time, the Committee made much progress and worked towards data collection with regard to current practices in Guyana and throughout the world. Mechanisms within which PET waste can be reduced and appropriately managed were explored. Under this Committee, a Sub-Committee was established to work on a proposal for funding for a Business Plan to deal with the feasibility of recycling in Guyana along with a plan that developers can use to establish such a facility.

Scrap Metal

Recognizing that scrap metal constitutes litter in certain circumstances, advice was sought from the Prime Minister's Office in relation to the conditions of the Scrap Metal Trade. Scrap metal complaints in the system were given timelines for the implementation of appropriate actions.

The Office of the Prime Minister approved the inclusion of scrap metal operations in the Agency's Environmental Authorisation Process and with the approval of the Prime Minister's Office, the Unit undertook the preparation of a Code of Practice for Scrap Metal Storage and Management. Research and compilation of information was also conducted.

Memoranda of Understanding

The Unit undertook the revision of existing Memoranda of Understanding (MoU) with Sector Agencies as well as created new MoUs. The first MoU to be reviewed was the MoU between the EPA and the Ministry of Local

Government and Regional Development, signed in 1999. The Unit revised this MoU to incorporate specifically the Anti-Littering Programme, complaints and various authorisation matters. A draft revised MoU will be sent to the Ministry in January, 2009, for review and input after which it will be signed. Other MoUs are also being assessed.

4.5 COMPLAINTS AND RESPONSE

The Agency has the mandate to resolve environmental concerns expressed by the public through specific and strategic interventions at various levels of decision-making. This mandate includes the facilitation and coordination of emergency response and disaster management actions in the event of an environmental emergency or disaster and response to nuisance complaints that are made by the members of the public.

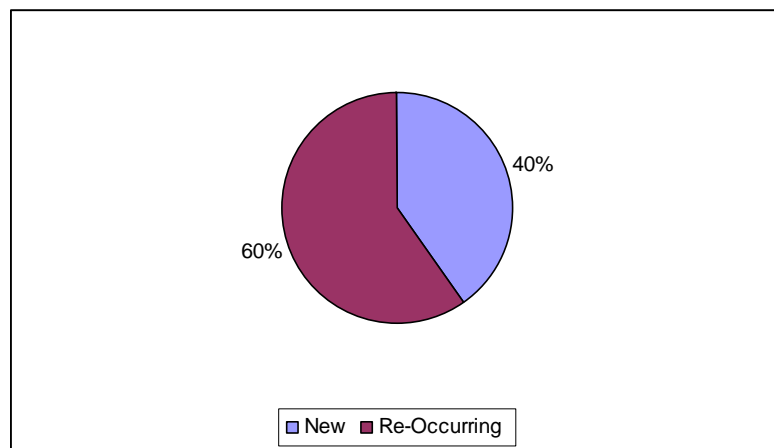


Figure 13: Distribution of Complaints in 2008.

For the year under review, there was a wide range of complaints received by the Agency. Of the 279 complaints received, 96 were new and 183 were recurring (Figure 13). Based upon the high level of recurring complaints, the Division will explore new methods for complaints reconciliation in 2009.

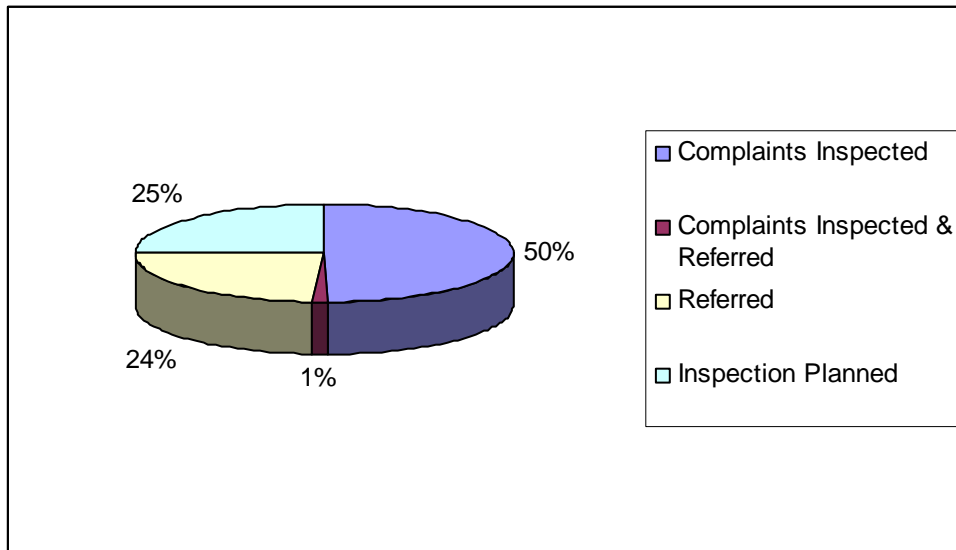


Figure 14: Response to Complaints in 2008.

The Agency was able to investigate 151 of the complaints (Figure 14). Based on field inspection, four were referred to other agencies, while 73 were referred, based on the nature of the complaint, to other agencies such as an NDC and the CH&PA.

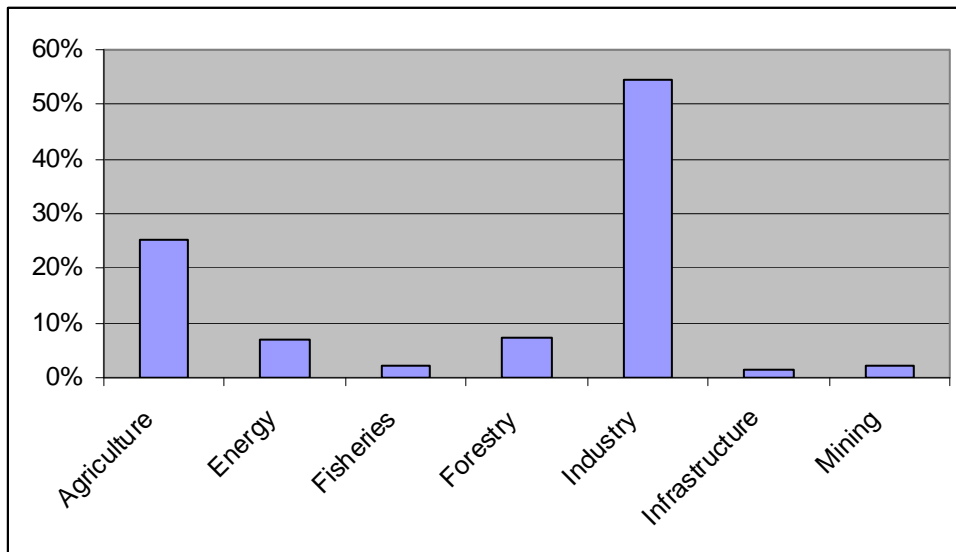


Figure 15: Distribution of Complaints by Sector in 2008.

The highest number of complaints received in 2008 came from the industrial sector (Figure 15). Complaints were made with regards to dust, noise, and odour nuisance associated with furniture/wood working operations. The agricultural sector was the source of the second highest number of complaints. Offensive animal odour,

flies, improper waste disposal from livestock and rearing operations, and burning of paddy husk for gardening were among the complaints received from the agricultural sector.

A total of 30 complaints listed as 'Other' were received for a range of issues, including, dust and noise from block-making, odour from storage of dry goods as well as from the transfer of cooking gas, and fumes from smelting and spray painting. Other complaints included dust from roads, noise from air conditioning units, and destruction of fences.

Mining activities were among the lowest percentage of sectoral complaints. Improper methods of waste disposal such as dumping and burning of garbage comprised a significant number of complaints received. Also of significance were the complaints received related to noise nuisances from music, liquor restaurants and recording studios.

4.6 COLLABORATION

Field and Laboratory Support

Procurement of field and laboratory equipment was done under the IDB Phase II Programme and handed over to the Institute of Applied Science and Technology (IAST) through a Memorandum of Understanding for installation and management. Some additional field equipment was procured with funds remaining from the IDB Phase 11 Programme.

The Government Analyst Department of the Ministry of Health and IAST provided the Agency with analytical laboratory services.

Inter-Agency Collaboration and Sectoral Agencies Support

Some examples of inter-agency collaboration and sectoral agencies support are presented below.

- A MoU was signed with the GNBS for collaboration in the implementation of ISO 14001 Standard for Environmental Management in some pilot industries.
- Four (4) project proposals for funding under the GoG/UNDP Capacity Building for the Management of Natural Resources and the Environment Project through the Ministry of Foreign Affairs were prepared. These proposals addressed Hazardous Waste Management, Air Quality Monitoring, Water Quality

Monitoring and a Revision of the Environmental Legislations. Of these, the Hazardous Waste Project was identified for funding.

- The EPA collaborated with other stakeholders to develop a National Programme for the Prevention of Pollution to the Demerara Watershed from Land-Based Activities and the preparation of a Water Safety Plan for Linden with the support of the US Government and CEHI.
- The EPA participated in the development of a Code of Practice for lumber yards and sawmills. This activity was coordinated by the GFC.
- The Agency contributed to the development of the GENCAPD Phase II project.
- Representatives of the Agency continued to actively support national statutory Boards and technical committees at the CHPA, GGMC, GFC, GNBS, Cricket World Cup Local Organizing Committee, and Sea and River Defence.

Inter-Divisional Collaboration

The Division collaborated with other Divisions in the Agency as follows.

- The Division worked with the Environmental Economist on several activities including a screening criterion to determine the scale of projects, etc.
- The EMD provided technical assistance on environmental management issues to the EIT, i.e. television appearances, brochures, workshops, annual reports, newsletters, calendars and World Environment Day activities.
- EMD continued to involve the NRMD in review of EIA project which affected the programme areas of that Division.
- The EMD participated in workshops hosted or arranged by the other Divisions.
- Officers of the EMD benefited from training activities organized by the other Divisions.

Constraints

The Division experienced the following constraints.

1. Legal Support remained a challenge over the last five (5) years at the Agency. This considerably affected progress with compliance and enforcement, especially in resolving complaints and for legal advice on matters relating to the authorization process.
2. Staff turnover continued to affect the Division especially with the loss of senior personnel.
3. Inadequate field staff, scarcity of financial resources, transportation, and equipment to undertake monitoring and inspections continued to be major limitations.

4. An Environmental Appeals Tribunal (EAT) was not in place to resolve objections and EIA matters in the permitting process.

5.0 EDUCATION, INFORMATION & TRAINING DIVISION

The Education, Information and Training Division (EITD) was largely successful in achieving its objectives in 2008. Through innovative and novel ways, increased collaborations and partnerships, teamwork and maximum utilisation of resources, the Division fulfilled its mandate of promoting and encouraging better understanding and appreciation of the natural environment, in fostering social and economic development as well as public education and promoting partnerships in integrating environmental concerns in developmental planning.

New Realms

During the year, there was increased inter-divisional collaboration with the formation of committees to focus on PET Bottle, Climate, Marine Litter, Water Safety Change, and Anti-Littering. These internal partnerships were complemented by greater external collaboration with organisations/agencies including NCC, PAHO, Ministry of Local Government, University of Guyana, GSA, and CPCE.

New and creative interactive methods were used to target people from the grass-root level in implementing the various activities of the Education, Information and Training Programme. Public Awareness on Anti-Litter was a new focus and was conducted with much success achieved at locations in Berbice and Canal No. 2 Polder Region 3.

The Division forged a vibrant partnership with the Cyril Potter College of Education (CPCE) for the implementation of School Yard Ecology (SYE), the Pan-American Health Organization/World Health Organization (PAHO/WHO) in the execution of a national poster competition and provision of materials for the Calendar, and the Parent Teachers Bodies of Schools on the West Bank Demerara and in Berbice.

A greatly enhanced media programme (98 percent contribution) was a source of great satisfaction in 2008. In addition, a Jeopardy Competition, the first of its kind done by the Agency, reaped much rewards among schools in Georgetown and in Essequibo, while an interactive Water Forum incorporating puppetry, was another novel implementation which was greatly enjoyed by students of schools on the west Bank and West Coast Demerara.

The EIT Division also spearheaded the coordination and participation of sector agencies in the Environmental Component of the national Youth Village hosted by the Ministry of Youth, Sport and Culture in observance of Carifesta X. This five-day event was well attended and highly lauded.

Generally, the Division's achievements were accomplished through the following means.

5.1 DEVELOPMENT OF EDUCATION MATERIALS

Progress was made in all areas and the public benefited from the development of comprehensive and reader-friendly information in formats to meet different needs in the areas of Wetlands, Water and Sanitation, Solid Waste Management, and all Environmental Observances.

Current information materials were reviewed and upgraded for greater impact in the areas of Biodiversity, Protected Areas, Environmental Protection Regulations, and concepts were developed for creation of materials related to Complaints, Solid Waste Management and Siting of Developments, and Water Pollution. Lack of funds prevented the production of these materials which currently exist in digital format only.

The Agency's Calendar, focusing on community involvement for a clean and healthy environment, was conceptualised and produced for 2009. Calendars are one of the well received educational and informational tools created by the Agency.

Additionally, the Division created public awareness strategies for Solid Waste Management, PET and Anti-Littering. The Anti-Littering Strategy is currently being implemented.

Brochures and Posters

Brochures and Posters are key communication tools utilised in Environmental Education and several of these were created during the years in the area of Environmental Protection (Noise Management) Regulations 2000, Protected Areas, and Environmental Complaints.

Several Posters were also created to advertise Environmental observances and a participatory role for the public was conceived through a national poster competition to increase awareness on Climate Change for the observation of World Environment Day.

Type	No.	Title
Information packages	8	Prepared to meet different needs in the areas of Wetlands, Water and Sanitation, Solid Waste Management, and all Environmental Observances.
Reviewed materials	7	In areas of Biodiversity, Protected Areas, Environmental Protection Regulations, Complaint process, Solid Waste Management and Siting of Developments, and Water Pollution.
Posters	2	Created for World Environment Day.
Brochures	3	Prepared for Environmental Protection (Noise Management) Regulations 2000, Protected Areas, and Environmental Complaints.
Bookmarks	2	Produced for distribution at Carifesta X and Mining Exhibitions.
Calendar	1	A 2009 Calendar was produced under the theme "Get Involved for a Clean and Healthy Environment".
Articles	69	Prepared for awareness of Environmental Days covering subject matters such as Wetlands, Going Green, Sanitation, Health and the Environment, Plastics, Hazardous Waste, Biodiversity, Agriculture, Waste Management, Pollution, Global Warming, Climate Change, Noise, among others.
News Letters	4	The EPA Newsletter, Green Leaf, distributed and posted on the EPA Webpage.
Reports	1	The Environmental Protection Agency's 2007 Annual Report.

Table 10: Summary of Materials prepared in 2008.

5.2 OUTREACH

The outreach programme of the EITD was significantly challenged in 2008 as a result of limited financial resources. However, three Proposal Writing Workshops were conducted at the Mahaicony Secondary School, Tagore Memorial High School, and the Cove and John Secondary School.

Exhibitions

Participation in Exhibitions was fully undertaken in creative and attractively stimulating styles at the University of Guyana (Career Day); the Guyana Geology and Mines Commission (Mining Exhibition); Mackenzie High School, Linden (Science Fair); Rose Hall, Berbice (Career Fair organised by the Rose Hall Town Youth and Sports Club); and, Youth Village (organised for CARIFESTA X in partnership with Conservation International Guyana, Iwokrama, Guyana Amazon Tropical Birds Society, World Wildlife Fund and Guyana Marine Turtles Conservation Society).

A one-week Exhibition of printed materials was also co-ordinated at the National Library for International Ozone Day Mini Exhibition, while for the observation of International day of Biodiversity, the Division partnered with the Ministry of Agriculture, Guyana Marketing Corporation, and the Inter-American Institute for Cooperation on Agriculture (IICA) for an Exhibition.

Presentations

The Division prepared and delivered a number of presentations at different fora in interactive and informative formats. Issues dealt with include Climate Change, Environmental Enhancement, Water and the Environment, Ozone, different areas of operation of the EPA, Benefits of Planting Trees, Bio-diversity and Agriculture, Community participation in enhancement Activities, Solid Waste Management, the three Rs of Waste Management, Getting Involved in Environmental Activities, the Earth, Water Pollution and Conservation, the Environmental Protection Act & Regulations, Hazardous Waste, among others.

A total of twenty one (21) presentations were conducted in 2008 compared to nineteen (19) presentations in 2007. Six of the presentations were conducted for students from various schools in 2008 which indicate a decline of two from 2007. There was, however, an increase in the number of presentations done for other youth groups and clubs. Approximately twenty six (26) schools were involved in projects and activities undertaken in 2008.

The presentations done were all focused on empowerment and attitudinal change and were crafted to meet the needs of the different target audiences.

Topic	Target Audience
Role of Youths and Young Adults in Protection and Enhancement of the	Youths - Cavalier's Youth and Sports Club.

Environment. Youth Participation in Environmental Issues.	
Operations of the EPA.	Students - Bina Hill Institute, Region 9.
Collaboration for Environmental Management for Regional Development.	Officers - Ministry of Local Government.
Ozone.	Students from 9 schools conducted at Dolphin Secondary School.
Planting Trees for Peace.	Coordinated by Marian Academy.
Water and the environment.	Youths - Church of the Nazarene.
Climate Change.	Students - 14 Schools on East Bank and West Bank Demerara.
Hazardous Waste Management Strategy.	Georgetown Chambers of Commerce.
Water, Sanitation and the Environment.	Symposium at UG.
Biodiversity and Agriculture.	Students - 14 Schools on East Coast Demerara and Georgetown and the Cyril Potter College of Education.
The Role of the Church in Climate Change.	Conference for the Guyana Congregational Union.
Community Participation in Enhancement Activities.	Youths - Green Path Foundation.
Solid Waste Management.	Ogle - Plaisance Teacher's Group.
Getting Involved in Environmental Activities.	Students - St. Stanislaus College.
Climate Change.	Youths - International Youth Day Conference.
Meet the Earth: Water Pollution and Conservation.	Children - Taxidermy Camp.
Benefits of Planting Trees and EPA's Involvement in such Activities.	Tree planting Exercise co-ordinated by the National Enhancement Committee.
The Environmental Protection Act & Regulations.	Junior Officers - Guyana Police Force.
Solid Waste Management.	Staff - Guyana Rice Development Board.

Table 11: Summary of Presentations delivered in 2008.

Community Partnership

Partnerships were forged during the year with several organisations and committees including the Eccles/Ramsburg Community, the Diamond/Grove Community, the Pan American Health Organisation, the Ministry of Local Government, and the National Enhancement Committee,

Divisional cooperation were also enhanced as the EIT coordinated activities and nurtured the working relationship existing with the Divisions within the Agency in the areas of the public consultations for Proposed Protected Areas, drafting of the Strategy for Hazardous Waste, and compilation of Press Releases and Media Advisories.

Media Programmes

The maintenance of a dynamic media programme was the source of satisfaction for the Division. A constant presence was maintained on the Guyana Today Show (Figure 16) revolving around discussions on current environmental concerns and issues.

Several high calibre Panel Discussions were also coordinated to enhance awareness of Environmental issues.

Inroads were made in the promotion of featured articles in the national Newspapers as the Division managed to secure a weekly column with the country's newest daily newspaper – Guyana Times. Weekly articles (Figure 17) in the Guyana Chronicle and the Guyana Times, therefore, were successfully increased during the year.

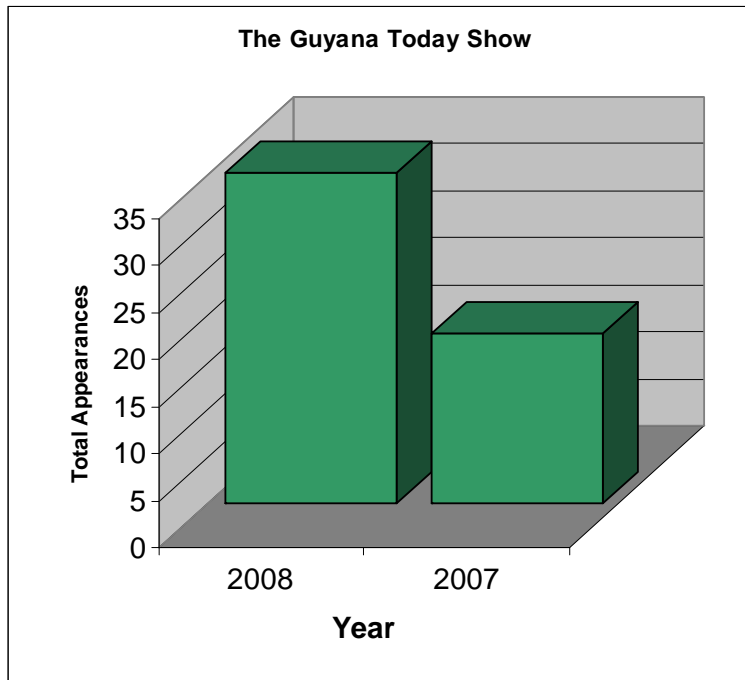


Figure 16: Appearances on the Guyana Today Show in 2007 and 2008.

Newspaper Articles

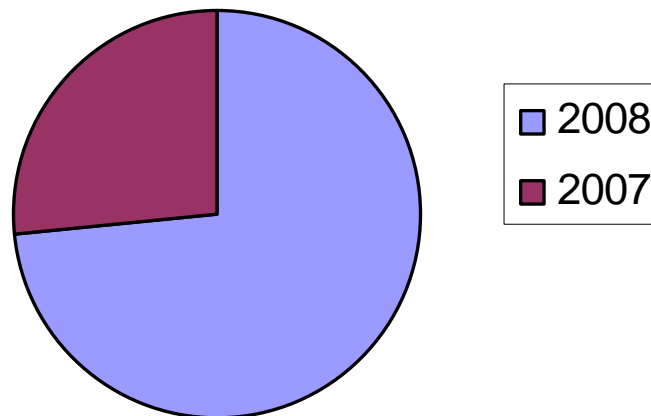


Figure 17: Newspaper Articles compiled in 2007 and 2008.

Four issues of the Agency's in-House-organ, the Greenleaf were compiled and distributed electronically. This reflects an improvement over the previous year's production.

Environmental Clubs

The EIT Division currently coordinates activities among more than one hundred Environmental Clubs. In 2008, two new Environmental Clubs were affiliated at the School of the Nations Environmental Club, and the Dolphin Secondary School.

The Annual Environmental Camp for representatives of Environmental Clubs came off successfully at the Nature School, Zoological Park. Over 50 youths participated at the three-day event.

Collaboration was also achieved with the Ministry of Culture, Youth and Sport for an Environmental Camp held at Agatash, Bartica.

Environmental Observances

The major Environmental observances provided scope for enhanced activities and focus on environmental issues. The EITD successfully utilised a multi-media approach to enhance awareness and forge partnerships and collaboration for these observances as follows.

- **World Wetlands Day**

Children of Primary Schools on the East Bank, Demerara, were the selected target group for the distribution of Information Packages comprising brochures, activity sheets, project outlines and posters.

This dissemination of information was complemented with television appearances on the Guyana Today Show and featured articles in the Guyana Chronicle.

- **World Water Day**

An Interactive Water Forum was the source of much satisfaction during World Water Day observances. This activity was conducted in collaboration with the Pan-American Health Organisation (PAHO) and the Guyana Sugar Corporation Incorporated (GuySuCo) at the Uitvlugt Community Centre.

A multi-media approach comprising mini-exhibition, puppet show, video presentation, quizzes, and water testing experiments contributed to making the Water Forum uniquely interactive, informative and enjoyable. This was complemented with television appearances on the Guyana Today Show and a Panel Discussion with resource personnel drawn from key stakeholder Agencies.

- **International Day of Biodiversity**

This was an opportunity to bring awareness of this observance through collaboration with tertiary institutions – The Guyana School of Agriculture and the Cyril Potter College of Education. Presentations were also done within selected schools on the East Coast Demerara and Georgetown.

The Division also partnered with the NRMD and the Ministry of Agriculture for an Exhibition. These activities were complemented with a televised Panel Discussion, discussion on the Guyana Today Show, and featured Articles in the national newspapers.

- **Coastal Clean-Up**

The Division coordinated participation of Environmental Clubs and EPA staff in ICC. Television appearance, featured articles and a Presentation on Marine Litter were maximally utilised to highlight this observance.

- **World Environment Day**

Activities for the observation of World Environment Day were by far the most high-profiled of those coordinated for other environmental observances. The Annual Greenwalk attracted the participation of over 25 organisations and approximately 700 individuals. High level delegations of government representatives, members of the diplomatic corps and representatives of international and local groups and agencies, including non-governmental organisations and environmental clubs, supported activities held for this observance.

A Jeopardy Competition was one of the novel activities executed for this occasion. Students of both primary and secondary schools in Georgetown and Essequibo were selected for participation. There were presentations, the opportunity to win prizes and certificates while learning in a fun and innovative way.

A national Poster Competition and an Essay Writing Competition for students of the Guyana School of Agriculture were innovative means utilised to enhance awareness of this observance. In addition, a Panel Discussion on the Guyana Today Show as well as written features for the printed press were other activities executed.

Anti-Littering

Inroads were made in the Agency's Anti-Littering Campaign as the Division collaborated with the Monitoring and Enforcement Unit of the EMD and the NDCs to lay the foundation for the execution of an interactive, dynamic, and collaborative, cohesive national campaign.

Schools were also targeted in this campaign and a clean Classroom Competition was launched at the Charlestown Secondary School.

Capacity Building

The staff members of the Agency are considered the most important assets and all efforts were made to equip them with the necessary skills and attitudes integral for the moulding of professional. The Division successfully coordinated several Staff Development Sessions during the year to meet the needs of all levels of staff. These covered a range of technical, professional, and social issues.

The opportunity for Capacity Building among Stakeholders was also maximised as the Division boosted its public awareness thrust in Environmental Management among stakeholders in Ministries and Sector Agencies.

Capacity for the expansion of Environmental Education was also enhanced through the execution of a comprehensive programme in School Yard Ecology (SYE) and the use of the Environment Education (EE) supplement with trainees of the Cyril Potter College of Education.

5.3. LIBRARY MANAGEMENT

The EIT Division successfully fulfilled its mandate of information dissemination and the provision of services to environmental clubs, university students, teachers (CPCE), members of the public, and EPA staff through the Documentation Centre. This was achieved through reference material, provision of information material, referrals and recommendations, and the provision of collaborative arrangements with desired resource personnel.

The challenges to successful public awareness are diverse. The EIT Division, through collaborative effort, teamwork and innovation was able to successfully implement activities on its planned programme in 2008.

6.0 CONCLUSION

The Environmental Protection Agency (EPA) continued to fulfil its mandate with the highest degree of professionalism and ethics making maximum use of the available resources. The achievements during the year reflect the teamwork and collaborative effort of all stakeholders and symbolize commitment to the cause of a better environment for all.

As the Agency charts the course for the future, current successes will be built upon and the partnerships forged will be nurtured. The challenges encountered during the implementation of its planned programme in 2008 would serve as "lessons learnt" in strengthening a cohesive and proactive approach for the achievement of future objectives.

The Agency is committed to its role as warden of the environment and will endeavour to accomplish this through a holistic, legislative and scientifically and sound approach to ensure a safe and healthy environment in the face of serious global challenges.

ENVIRONMENTAL PROTECTION AGENCY
STAFF LIST -2008 (September)

	Name of Officer	Designation
	Office of the Executive Director	
1	Doorga Persaud	Executive Director
2	Vannie Rooplall	Executive Assistant
3	Yadavsharran Tularam	Driver
	<i>ADMINISTRATIVE DIVISION</i>	
4	Dhanrajie Madray	Director - Admin
5	Nervanie Samsoundar	Executive Assistant
	<i>Policy, Planning & Research Unit</i>	
6	Federica Chappie	Natural Resource Economist
	<i>GIS Unit</i>	
7	Malini Jaikarran	Gis Technician
	<i>IT Unit</i>	
8	Ryan Tiwari	Technical Support Officer
9	Carlos De Cunha	Network Administrator
	<i>Human Resources Unit</i>	
10	Seema Greene	Human Resources Officer
11	Bibi Ali	Office Attendant
12	Laverne Rampersaud	Office Attendant
	<i>Finance Unit</i>	
13	Punraj Naraine	Finance Officer
14	Raywatti Singh	Accounts Clerk
15	Fiona Marshall	Accounts Clerk
16	Hollee Ragnauth	Accounts Clerk
	<i>Administrative Unit</i>	
17	Jermaine Agard	Administrative Officer (ag)
18	Tanisha Romain	Administrative Assistant
19	Paul Sukhu	Office Assistant
20	Orlando kirton	Office Assistant
21	Asrath Ali	Driver
22	Ramsarran Etwaroo	Driver
23	Andrew Adams	Driver
24	Dharampaul Singh	Handyman

	<i>Environmental Management Division</i>	
25	Indira Mattai	Senior Environmental Officer
26	Hance Thompson	Senior Environmental Officer
27	Khalid Alladin	Dire(ag)
28	Sharmattie Ramnath	Executive Assistant
29	Teijvartie Persaud	Environmental Officer II
30	Karen Alleyne	Environmental Officer I
31	Samantha Heyligar	Field Technician
32	Cleavon Cameron	Environmental Officer I
33	Asma Sharief	Environmental Officer I
34	Colis Primo	Environmental Officer II
35	Anzaleen Hoosein	Environmental Officer I
36	Yasmin Farouk	Environmental Officer I
37	Felicia Adams	Environmental Officer I
38	Shinella Johnson	Environmental Officer I
	<i>Education Information & Training Division</i>	
39	Sharifah Razack	Director
40	Padmini Persaud	Senior Environmental Officer
41	Candacie Brower	Environmental Officer II
42	Sonia Gumbs	Environmental Officer II
43	Renwick English	Environmental Officer II
44	Sherl Daniels	Doc Assistant
	<i>Natural Resources Management Division</i>	
45	Indarjit Ramdass	Director - NRMD
46	Ian Kissoon	SEO
47	Chuvika Harilall	Environmental Officer II
48	Oumardatt Ramcharran	Environmental Officer II
49	Juliana Persaud	Environmental Officer I
50	Dominique Saheed	Environmental Officer II
51	Cyldecia Mc Clure	Environmental Officer II
52	Ashiana Persaud	Executive Assistant