ENVIRONMENTAL PROTECTION AGENCY

ANNUAL REPORT 2009

Table of Contents

Overview of Achievements 2009 3

1.0 ABOUT THE EPA 13
1.1 Mission 13
1.2 Environmental Protection Act 13
1.3 Functions 13
1.4 Strategic Plan 2006-2010 14
1.5 Organizational Structure 15
1.6 Programme Areas 16

2.0 ADMINISTRATION 20
2.1 Finance 20
2.2 Human Resources 21
2.3 Administrative Services 22
2.4 Policy and Planning 28
2.5 Information and Technology 29
2.6 Geographical Information Systems 31

3.0 NATURAL RESOURCES MANAGEMENT PROGRAMME 34
3.1 Protected Areas 34
3.1.1 Guyana Protected Areas System Project 34
3.1.2 Amazon Cooperation Treaty Organization (ACTO) Collaboration 39
3.2 Biodiversity 40
3.2.1 Biodiversity Research 40
3.2.2 Biodiversity Monitoring 44
3.2.3 Biodiversity Projects 45
3.3 Wildlife 53

4.0 ENVIRONMENTAL MANAGEMENT PROGRAMME 55
4.1 Authorisations 55
4.2 Monitoring and Enforcement 59
4.3 Complaints and Response 60
4.4 Research and Development 63
4.5 Cross- Sectoral Programmes 66

5.0 EDUCATION, AWARENESS AND CAPACITY BUILDING PROGRAMME 68
5.1 Development of Education Materials 68
5.2 Outreach 70
5.3 Media Programmes 73
5.4 Documentation Centre 73

CONCLUSION 75

APPENDICES 76

Overview of Achievements 2009

2009 was a very satisfactory year for the Environmental Protection Agency as it made significant strides in its various programme areas. With financial resources received from the Government of Guyana, the Agency's revenues, and other Miscellaneous Receipts, the Agency was able to forge ahead with its Work Programme for the year. Additionally, resources available from a number of Projects being implemented by the Agency provided considerable support to the Agency in advancing its goals and objectives for2009.

Relocation of the Natural Resources and Education and Information Training Divisions

The Agency successfully moved its Natural Resource Management and Education Information and Training Divisions to what was formerly the Ministry of Public Works Building in Sophia. The requisite rehabilitation works to the building were effectively completed under the management of the EPA Administration.

Administrative Support

During the year, administrative and logistical support was provided to Staff as required to ensure that the work-programme progressed. Also, procurement of materials, equipment and services was efficiently managed with core funding from Government of Guyana and through several donor-funded Projects managed by the Agency.

The year 2009, proved very challenging for the Agency in the area of vehicle management; significant efforts and costs were expended to maintain vehicles in order to ensure that the Agency's transportation needs were adequately met. The difficulty in maintaining a team of suitably experienced and committed drivers and the high level of maintenance required for the older vehicles were major factors contributing to the challenge.

While all efforts were made to ensure that equipment were serviced and maintained in working condition in order to effectively, the Agency was unable to secure much needed services for the maintenance and calibration of equipment such as Noise Level Meters and Global Positioning Systems.

The Agency updated and maintained its Fixed Asset Register and conducted regular physical verification of its fixed assets during the year. This was especially important to account for all the Agency's assets given the movement of the two Divisions to Sophia.

Internet Technology and GIS Support

During the year, the Agency was able to maintain its internet technology and geographical information services for its Staff and to provide an adequate level of equipment as tools necessary to them for working effectively.

Regular maintenance was carried out on computer systems and accessories and the Local Area Network at both of the Agency's locations. Also, general maintenance was carried out on the Agency's Website ensuring that materials relating to development projects as required by the Environmental Protection Act 1996.

Additionally, IT support was provided to the consultant for the National Biodiversity Research Information System, with this System now located on its own server with direct internet connection.

GIS support was provided to Staff to aid in better us and management of spatial data on various development projects and complaints. Maps were prepared as required and existing data were updated using recent data received from various sect oral agencies e.g. the Guyana Forestry Commission and the Guyana Geology and Mines Commission.

Human Resources

Despite the challenge of high staff-turn over, the Agency attempted to fill vacancies as they arose during the year with most of the positions being filled at the end of the year. As a measure to address staff turn-over, the Agency prepared and submitted to the Office of the President a proposal for an incremental increase in salary based on experience and additional qualification. Additionally, the Agency sought to increase its Staff strength by submitting for approval a proposal for the creation of a Hazardous Wastes and Air Quality Unit, and for the filling of positions in the current Organizational structure that were never filled because of lack of resources.

Throughout the year, Officers of the Agency attended a number of seminars, workshops, meetings, and training events, nationally and internationally. Staff received training and attended meetings in several areas

related to the Agency's mandate including Biodiversity Conservation, Protected Areas, Water resources Management, Climate Change, Waste Management, Standards, Guidelines and Codes of Practice, and Multilateral Environmental Agreements. Additionally, staff represented the Agency on several Sectoral Boards and Committees.

Natural Resources Management

Protected Areas

Under its Natural Resources Management Programme, much was achieved. The Agency continued to successfully manage the financial resources of the KfW Small Grants Project and during the year, effectively managed over thirty sub-projects currently being implemented in the identified intervention areas, some of which were brought to a close in 2009.

The Agency also received a visit from the KfW representative, Mr Matthias Bechtolsheim, in February, 2009. During the visit, an *Aide Memoire* was signed between KfW and the Head of the Presidential Secretariat on February 17, 2009. Additionally, a draft Protected Areas Bill, along with the accompanying explanatory notes, was submitted by the EPA to the Office of the President (OP) for consideration. The Bill was developed with funding from the German Bank for Reconstruction (KfW).

Under a WWF-funded Project to strengthen the Agency's capacity for the establishment of a Protected Areas System, two Technical Officers were employed. These Officers provided much needed support to the Protected Areas Unit in managing the various sub-projects being implemented under the KfW Small Grants Project.

Biodiversity

Biodiversity Resources continued to be managed under the Biodiversity Research Application Process with twenty-four Applications being processed during the year generating revenue amounting to United States dollars (US$4,720).

The Agency was able to establish a task force this year as an initial measure in addressing the issue of Invasive Alien Species.

In 2009, under the Biodiversity Enabling Activity Project, funded by the Global Environmental Facility (GEF) and being implemented by UNDP, the EPA as the Executing Agency managed several consultancies to assess National Capacity Building Needs for implementation of the Convention of Biological Diversity (CBD). Under the project, other activities were the preparation of second and third National Reports to the CBD and the establishment of the Clearing House Mechanism for the CBD.

NBAP II

Under the National Biodiversity Action Plan - Programme Area 11: ***Habitat Destruction and Associated Impact,*** and proposed project "Fostering the effective management of Guyana's coastal biodiversity to minimize and prevent the destruction of coastal habitats and to protect Guyana's coastal biological diversity", a Concept paper was developed to source funding for Radar Images of Guyana's coast from the mouth of the Waini River to the Corentyne River. This was submitted to and accepted by the Group on Earth Observations (GEO) which will indicate the due date for the submission of the full proposal in the near future.

Access and Benefit Sharing

Significant progress was made with the draft Access and Benefit Sharing Regulations. The Attorney General Chambers has completed the review of the draft Regulations and the final internal review is being conducted by the EPA so as to finalize the document for Cabinet's consideration. The enactment 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.

NSCA

One of the projects identified for implementation under the NCSA Action Plan is: Action **2.2.1 Institutional Structures and Mandates.** It is intended to: (a) streamline institution structures and mandates to address requirements of the three Conventions; and, (b) integrate the activities of the three Conventions into annual work programmes of Agencies. This implementation of this project was commenced, and the Consultancy has submitted a National Stakeholder Workshop Report and a Final Proposal to the Government on recommendations on the refined institutional structures and mandates of Agencies, specifically the EPA, Guyana Lands and Surveys, and the Climate Change Unit. These reports were reviewed and approved by the EPA.

Two documents that were approved by the GoG in August, 2008, were printed and distributed to relevant stakeholders. There were the National Policy on Access to Genetic Resources and Benefit Sharing and the NCSA Strategy and Action Plan.

Wildlife Regulations

The draft Wildlife Management and Conservation Regulations is intended 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 final draft of the Regulations and its Explanatory Note were finalized and submitted to Office of the President for consideration along with the final draft of the Wildlife Import and Export Regulations that was developed by the Wildlife Division.

Environmental Authorizations

The Agency continued to process and permit new development projects for Environmental Authorization. During the year, a total of four hundred and forty-seven (447) applications were received for environmental authorizations. This included one hundred and twenty-one (121) for new projects, sixty-nine (69) for existing operations, thirty-nine (39) for renewals, five (5) for transfers, and one (1) for variance. In addition, two hundred and twelve (212) noise applications were received during this period. Two hundred and three applications (203) received were for Short-Term Noise Permits, while five (5) were for Long-Term Permits. Four Applications (4) were received for the renewal of Long-Term Noise Permits.

Monitoring and Enforcement

During the year, the Agency pursued the renewal of all operations with Permits that expired in 2009. As a result, thirty nine (39) Applications for Renewal of Environmental Authorization were received, all of which the Agency responded to by conducting Environmental Audits.

Application forms for the various types of Permits were all reviewed as a measure to acquire at this initial stage of application, adequate information to move efficiently to the next stage of the Permitting Process.

Several Compliance Reports, Environmental Management Plans, Annual Reports and Closure Plans were reviewed during the course of the year to ensure that development projects conduct their operations in keeping with the law.

A Memorandum of Understanding between the EPA and the Ministry of Local Government and Regional Development was finalized. This would promote inter-Agency collaboration in a number of areas, including authorisations, complaints and enforcement, and the Agency's Anti-Littering Programme.

A proposal for the delegation of authority under the EP Act and Regulations to the Community Drainage and Irrigation (CDI) Project being implemented by the Ministry of Agriculture was submitted to the Ministry for approval. This proposal was prompted by an indication of its interest by the Ministry in dealing with the issue of litter in canals.

Monitoring Clauses in the EP Act and Regulations were identified and would be included in Environmental Authorisations. Additionally, Enforcement Clauses within the legislation were examined for their potential for implementation both with and without the assistance of an Attorney-at-Law / Legal Officer. Further, a paper on Eco-Police or Environmental Police was prepared to assess the potential implications such a practice would have in Guyana and was submitted to the Head of the Presidential Secretariat for review.

Complaints and Response

The number of complaints received by the Agency continued to steadily increase and a total of four hundred and thirty-nine (439) complaints were received by the Agency. Two hundred and fifteen (215) of these complaints were new to the Agency, while two hundred and twenty-four (224) were recurring complaints.

Subsequent to the investigations of these complaints, a number of defaulters were instructed in writing of mitigation measures to be implemented to ensure that their operations were managed in keeping with appropriate environmental standards

In keeping with the Agency's policy of continuous monitoring, one hundred and forty-four (144) follow-up inspections were conducted. Additionally, thirteen (13) complaints were inspected and subsequently referred to the relevant Agencies. The Agency received several complaints that were not under its the purview and 29 of these complaints were referred to agencies such as an NDC and the CH&PA (based upon the initial information collected from complainants).

The Agency sought to enforce the EP Act 1996, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection Regulations, 2000. However, this became increasingly difficult without Legal Counsel on staff, as well as the loss of assistance from the Attorney General's Chambers. Complaints were investigated or referred to the relevant sectoral agency as appropriate, and work is on-going to bring polluters into compliance.

Despite the challenge of legal support, the Agency was able to serve one (1) Cease Order and six (6) Prohibition Notices during the year to defaulting operations. Also, one (1) Environmental Authorization (Permit) was suspended for a Wood Processing facility.

Awareness and Education

The Agency continued to successfully implement its Awareness and Education Programme in 2009. This Programme ably supported the awareness and education needs of the Marine Litter Project implemented by the Agency as well as the combined National Programme of Action and Water Safety Plan Project implemented by the Ministry of Health.

As part of the Awareness and Education Programme, several booklets, brochures and posters were produced for use at various fora and target audiences. The Agency also produced its annual calendar focusing on the theme "Sustainable Livelihoods to Fight Climate Change".

Both print and electronic media were used throughout the year to disseminate information to members of the public on a range of environmental issues. In coordinating the participation on electronic media, the Agency involved many of its partners in various discussions on television on a regular basis. Also, throughout the year, the Agency contributed weekly articles on environment to two national newspapers.

The Agency planned and implemented a number of activities in observance of the various environmental observances throughout the year. World Wetlands Day, Earth day, World Water day, International day of Biological Diversity, World Environment Day, International Ozone Day and International Coastal Clean-up Day were all observed. World Environment Day being much wider in scope was marked by a wide range of activities including the Green Walk, TV Panel discussions, Environmental Camp, Seminars for Women's Groups, and school talks.

Research and Development

Through collaboration with the GNBS and other relevant sector agencies, the EPA continued to develop Standards, Guidelines and Codes of Practice. During the year, the Technical Committee on Environment revised the Interim Standard for the Emission of Noise into the Environment which would be finalized in early 2010 prior to going to public consultation. The Committee also commenced work towards developing a Code of Practice for the Disposal of Used Tyres in keeping with Guidelines developed by the Basel Convention and completed the Draft Code of Practice for the design and construction of the ventilated improved pit (VIP) latrine.

The Technical Committee on Tourism successfully drafted a Code of Practice for Bed and Breakfast Facilities. Following public consultation, the Draft should be finalized early in the new year.

The Agency continued to support the GNBS with the development of the National Conformity Assessment System through the National Committee on Conformity Assessment. The Agency is working towards the implementation of the ISO 17020 Standard for Inspection bodies and has made significant progress on the Inspection Management System Manual and Procedures for the EPA in accordance with the ISO 17020 Standard for Inspection Bodies.

Projects

The GoG, through Local Stakeholder Agencies, partnered with the Caribbean Environmental Health Institute (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, assisted in facilitating stakeholder workshops in Linden. The Agency also assisted the Water Steering Committee in the development of PA/PE tools for the NPA/WSP and the launch of the initiative in April, 2009.

Through the GoG/UNDP Capacity Building for the Management of Natural Resources and the Environment Project, the Agency contracted the Caribbean Environmental Health Institute (CEHI) to conduct a Hazardous Waste Inventory. This Hazardous Waste Inventory provided necessary information for the completion of the questionnaire on the Transmission of Information to the Basel Secretariat. In addition, a Hazardous Waste Management Strategy was developed and submitted to the Agency in the second quarter of the year.

Phase I, of the Project on the Assessment of Marine Litter in Guyana funded by UNEP Regional Seas/CAR/RCU, was finalized during the year under review. Following the finalization of the Assessment, there was an intensive initiative on implementing the PA/PE Strategy aimed towards informing the public on issues related to Marine Litter. This PA/PE Strategy represented Phase II of the project and reflected recommendations resulting from the study. The UNEP Regional Seas/CAR/RCU project focused on two thematic areas: Education and Awareness, and Institutional, Legislative and Policy Reform.

Multi-Lateral Environmental Agreements

The EPA continued to meet Guyana's obligations under the Basel Convention. The Agency completed and submitted to the Basel Secretariat the Transmission of Information Questionnaire for the year 2008. The Agency commenced managing the transboundary movement of hazardous waste through the processing of notification documents to country of import as well as communicating with countries who wished to use Guyana as a transit point. It was noted that during the year, used lead acid batteries were the major hazardous waste exported. Shipments were generally destined for Korea and Israel for recycling purposes.

Awareness and Education

The Awareness and Education Programme also supported the Anti-littering Programme of the Agency through participation in meetings with several NDCs. Also, discussion fora were organized with some NDCs and school Parent Teacher's Associations on the issue of littering.

In 2009, the Agency participated as part of its Awareness and Education Programme, in the Wildlife Festival for Environmental and Wildlife Clubs in the North Rupununi. As part of its contribution, the Agency supported the transport of the Club members to the Festival and conducted interactive sessions on Waste Management.

Environmental awareness was also brought to the public eye at several fora where there was mass participation. This included the University of Guyana Career Day Fair, the Global Development Village hosted by the Scout Association of Guyana, Open Day Exhibition hosted by the Guyana Red Cross Association, and the Guyana Geology and Mines Exhibition.

Throughout the year, a number of presentations on various environmental issues including Climate Change were prepared and delivered to a range of audiences. Several in-house seminars were also organized for Staff to increase knowledge on a range of topics including Climate Change and Guyana's Low Carbon Development Strategy.

1.0 About the EPA

1.1 Mission

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 Environmental Protection Act

On June 5, 1996, the **Environmental Protection Act (EP Act)** was passed in 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.

In working towards achieving its mandate, the EPA enables Guyana to contribute to global environmental protection and conservation. To achieve its mandate, the Agency implements education, regulation and enforcement programmes and uses partnership and collaborative approaches to strengthen the impact of its interventions.

1.3 Functions

The functions of the EPA are 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) and Environmental Protection Regulations (2000) to ensure that measures for environment protection are integrated in development activities.

The Agency also coordinates the sustainable use and conservation of Guyana's natural resources. This, and

its regulatory function are complex, spanning a range of inter-connected issues and requiring collaboration with private, public sector and non-governmental organizations.

Another major responsibility of the Agency is 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 development projects, issues and problems, and on the Agency's procedures and processes.

1.4 Strategic Plan 2006-2010

The Environmental Protection Agency developed its 2nd Strategic Plan for the period 2006-2010. In the Plan, FOUR Themes are identified and these are linked to two levels of objectives: Outcomes at the first level and Specific Objectives at the second level. The first theme: ***Promoting the Sustainable Use and Conservation of Biodiversity*** is implemented mainly under the Natural Resources Management Programme of the Agency. The second Theme: ***Environmental Protection and Management*** is implemented largely under the Environment Management Programme of the Agency. The third Theme: ***Environmental Information for Decision Making*** is implemented by the Education Information and Training Programme and is cross-cutting. The fourth Theme: ***Strengthening Institutional Capacity*** is also cross-cutting and is implemented under the Capacity Building Programme of the Agency.

1.5 Organizational Structure

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 through the Head of the Presidential Secretariat.

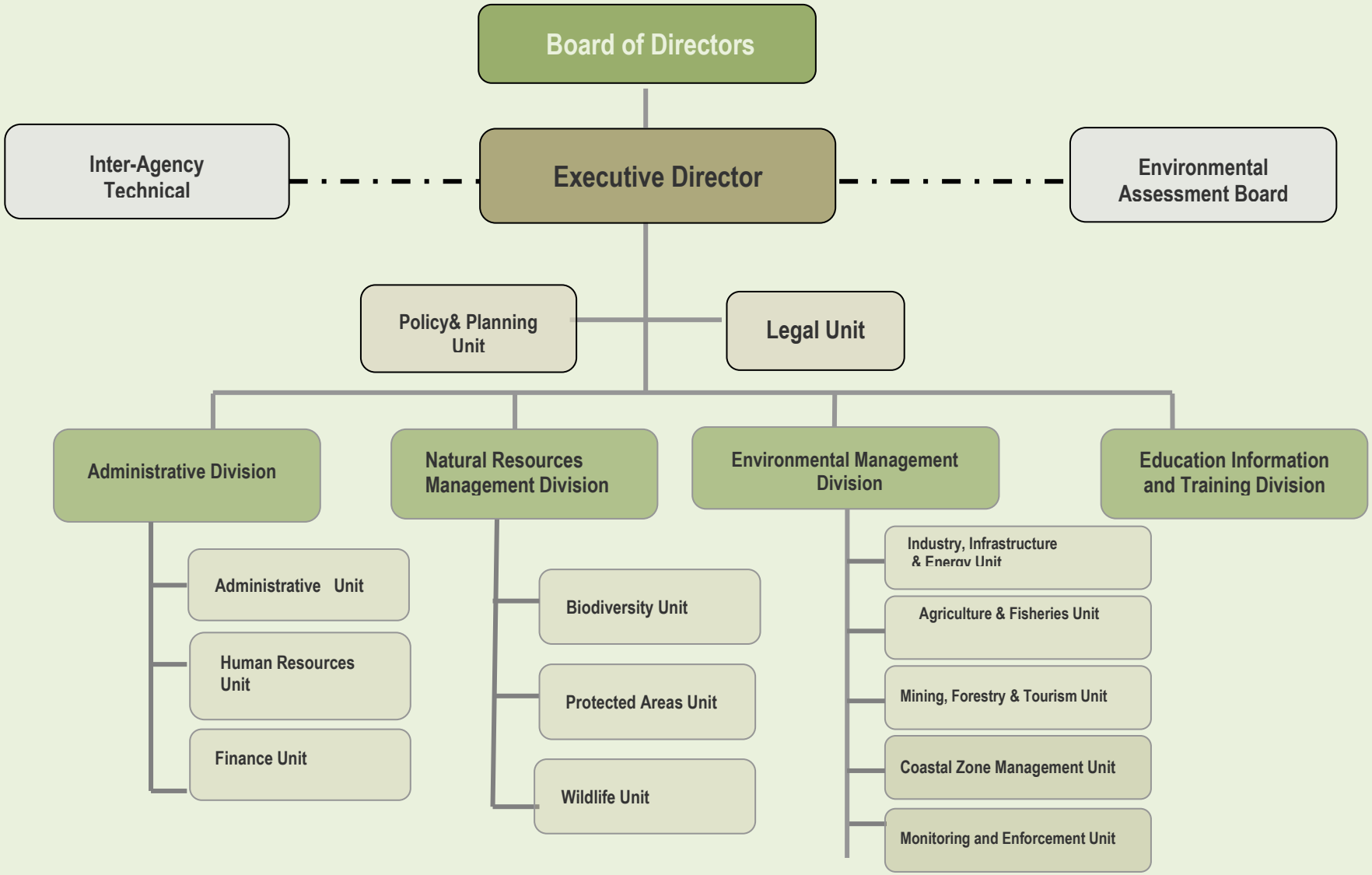


Figure 1: Organizational Structure of EPA

1.6 Programme Areas

The Environmental Protection Agency implements its mandate through four major Programmes: Natural Resources Management (NRM), Environmental Management (EM), Education, Awareness and Capacity Building and Cross-Sectoral Programmes. The NRM Programme has three components: Sustainable Use of Biodiversity, Biodiversity Conservation and Wildlife. The EM programme has four components: Environmental Authorizations, Monitoring and Enforcement, Complaints and Response, and Research and Development. The Education and Capacity Building Programme has two components: Education and Awareness and Training, and Capacity Building.

Natural Resources Management

Having ratified the Convention on Biological Diversity (CBD), 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. Under the EP Act 1996, the Agency is required to coordinate and maintain a programme, for the conservation of biodiversity and its sustainable use in Guyana. These requirements and the responsibilities under the CBD are the primary focus of the NRM Programme.

To achieve the objectives of the NRM Programme, there is collaboration 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, and 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), and the World Wildlife Fund for Nature (WWF), among others, and most importantly with the local communities.

The most important strategy documents guiding the work of the NRM Programme are the National Biodiversity Action Plans (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.

Environmental Management

Through the EM Programme, the Agency works towards achieving its mandate for pollution control and prevention. As such, developmental projects are required to conform to the goal of sustainable development with the Agency overseeing an environmental authorization process and conducting environmental monitoring and enforcement. Some of the strategies of the Agency's EM programme include:

- 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: To ensure that developments mitigate against pollution and remediate as necessary; they are monitored by the Agency. The ambient environment and specific requirements of Environmental Authorizations are also monitored.
- Authorising Existing Developments: Through the EP Regulations (2000), the regularizing of existing industrial activities is being done through a registration process. Existing operations are required to apply to the Agency for an Operations Permit, the granting of which, is dependent on compliance and good environmental management practices.
- Developing Competencies in Environmental Management: The Agency recognizes that its role 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, the Agency pursues the development of regulations.
- Reviewing and Developing Standards, Environmental and Operational Guidelines, Codes of Practice, etc.
- Coordinating Environmental Management through Stakeholder collaboration:
    - EPA-UG on-going environmental management research programme; and
    - Inter-agency collaboration in the area of environmental authorizations and complaints responses.
- Managing Environmental Complaints: the EMD continues to resolve legitimate environmental complaints.
- Preparing for environmental emergencies.

- Enforcement.

Education, Awareness 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).

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 Education Awareness and Capacity Building Programme, the Agency provides information in a range of formats to a wide segment of the population.

The delivery of the 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.

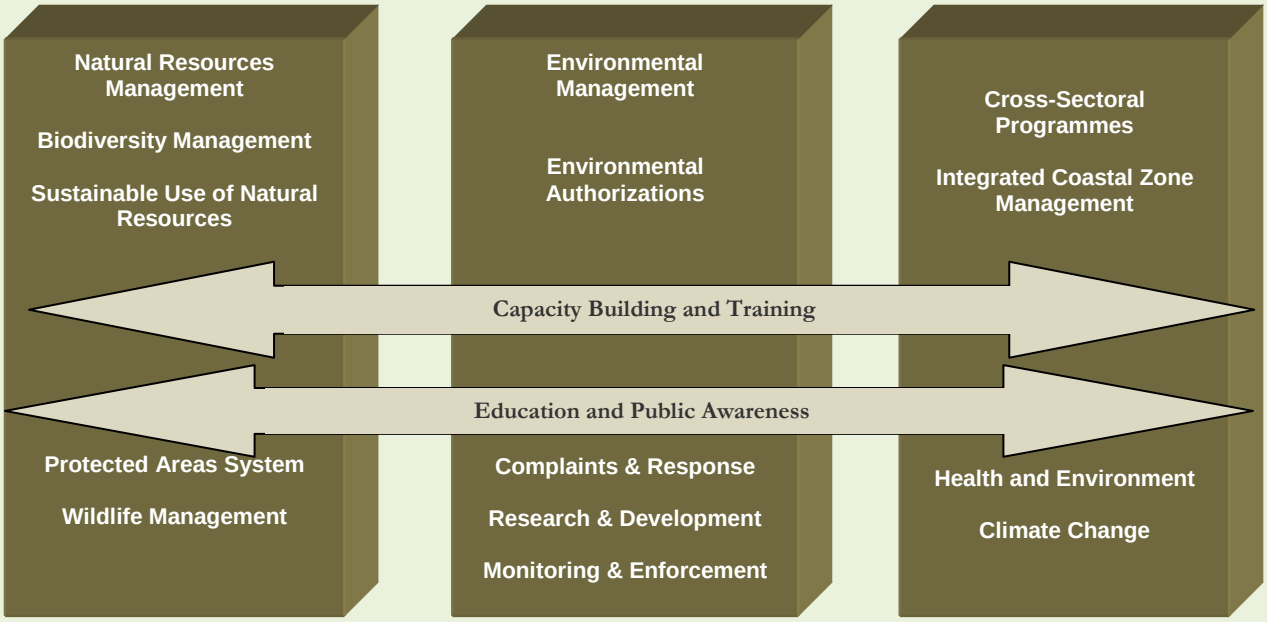
The purpose of the Programme is twofold: it promotes public awareness of and participation in environmental decision-making as well as informs the public of the systems and procedures established by the Agency for environmental management and conservation.

Cross-Sectoral Programmes

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

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 Administration

The Administrative Division comprises the Administrative, Finance, Geographical Information Systems (GIS), Human Resources and Internet technology (IT) Units. The Division has four (4) main categories of responsibilities: procurement, Information Technology and Geographical Information System Support, and administrative and human resources management. Materials, equipment and services to meet the needs of the Agency are procured through core funding from Government subvention and through several donor-funded Projects managed by the Agency.

2.1 Finance

In 2009, the Agency received subventions totalling G$62,332,000 million from the Government of Guyana, compared to the G$50,405,000 million received in 2008. The difference between the total subventions received and the actual expenses for the year was supported by other miscellaneous funding, including revenues from the Agency which totalled G$29,069,215. Over the years, the Agency has been dependent on Miscellaneous Receipts to support its operational expenses. This has placed constraints on the Agency with regard to filling vacant positions and providing adequate support for field activities.

For the year under review, achievements are as follows:

- Draft Financial Statements for the year ended December 31, 2008 were prepared and submitted to the Audit Office of Guyana in January, 2009.
- The audits for the years 2007 and 2008 were completed and the Agency received the Audited Financial Statements from the Audit Office of Guyana. The audit reports were submitted to the Board of Directors of the Agency and the Office of the President.
- Quarterly Financial Overviews were prepared and submitted to the Ministry of Finance.
- Monthly Financial Reports were submitted on a timely basis to the Board of Directors and Management of the Agency.
- All financial reporting requirements for individual projects were met in accordance with project guidelines. Projects managed were: Biodiversity Enabling Activities Project (BEAP), National Capacity Self Assessment Project (NCSA), WWF Capacity Building Project, and the KfW Small Grants Project (KfW).
- The Unit assisted in closing seven (7) sub-projects under the KfW Small Grants Project.

- Monthly Financial Overviews for the KfW Small Grants Project were prepared and submitted to Head of the Presidential Secretariat.
- An Audit of the KfW Small Grants Project for 2008 was conducted by the Audit Office and the report was submitted to Germany.
- The Agency's Budget for the year 2010 was prepared and submitted to the Office of the President.
- The Agency assumed responsibility for the financial management of the Wildlife Division with effect from July 2009. As a result, all financial reports, payrolls, and bank reconciliation statements were prepared for the period July to December 2009.

2.2 Administrative Services

Administrative and logistical support continued to be provided to all Divisions of the Agency. The evaluation and procurement of materials, equipment and services were efficiently managed with core funding from Government of Guyana and through several donor-funded Projects managed by the Agency. Some of the Donors included KfW, UNDP and WWF.

During the year 2009, the Administrative Unit coordinated the relocation of the Offices of its Natural Resources Management and Education, Information and Training Divisions from Subryanville and Charlestown Offices, respectively, to the Ministry of Public Works Building at Sophia. The Unit received guidance of the Administrative Director, and support from the Human Resources Officer in successfully conducting this task.

The required rehabilitation works to the Upper Flat of the Sophia Building was also procured and managed by the Administrative Division in collaboration with the Ministry of Public works.

The year 2009 proved very challenging for the Agency in the area of vehicle management; significant efforts and costs were expended to maintain vehicles in order to ensure that the Agency's transportation needs were adequately met. The difficulty in maintaining a team of suitably experienced and committed Drivers and the high level of maintenance required for the older vehicles on the fleet were the major factors that contributed to the challenge.

All efforts were made to ensure that equipment were serviced and maintained in working condition in order to effectively meet the needs of the various Divisions within the Agency.

The Administrative Unit was unable to secure a suitable individual or firm to provide much needed services for the maintenance and calibration of equipment such as Noise Level Meters and Global Positioning Systems.

The Unit updated the Fixed Asset Register and conducted physical verification of its fixed assets during the year. This was especially important to ensure that the Agency's assets were recorded given the movement of offices.

The Unit maintained stock records for all items procured by the Agency and facilitated physical checks by the Finance Unit 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, under the supervision of the Administrative Director, is responsible for recruiting a skilled and committed workforce to conduct the work of the Agency. The Unit works towards building a team of professionals who are empowered by knowledge and skills to perform competently and with excellence. The significant achievements of the Unit are highlighted below.

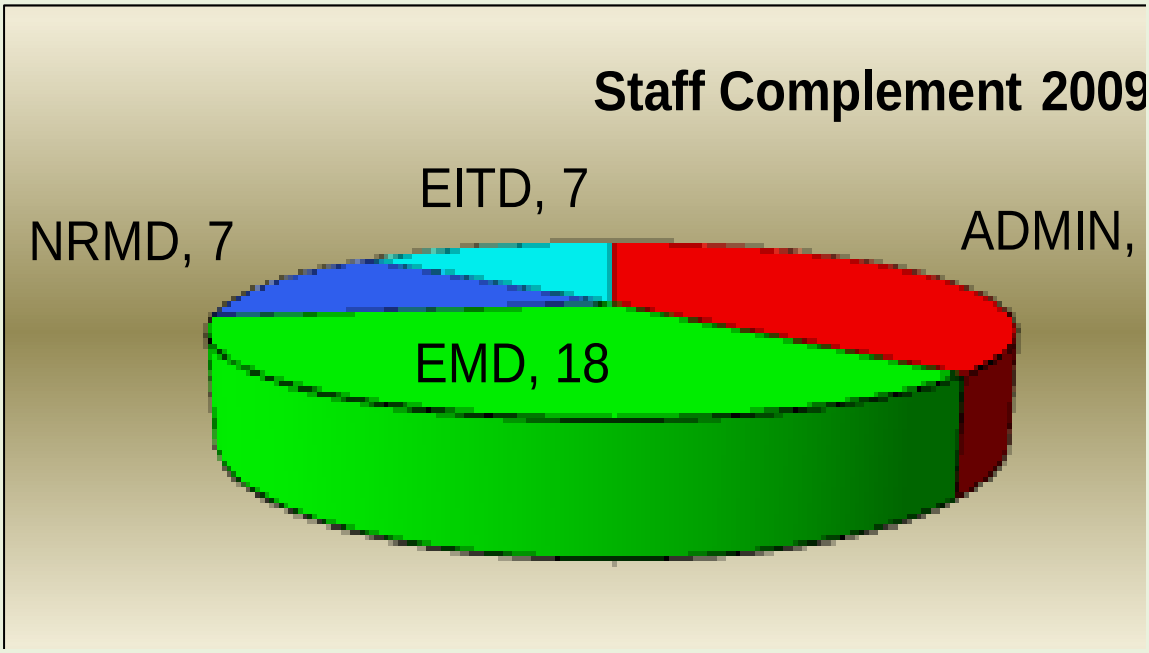
Staffing

A total of twenty-two (22) suitable candidates were recruited to fill vacancies in the various Divisions of the Agency as shown in the Table 1. At the end of 2009, fifty-one (51) members of staff were in the employ of the Agency and were distributed across the four Divisions as shown in the Figure 1.

Table 1. Staff Recruitment in 2009.

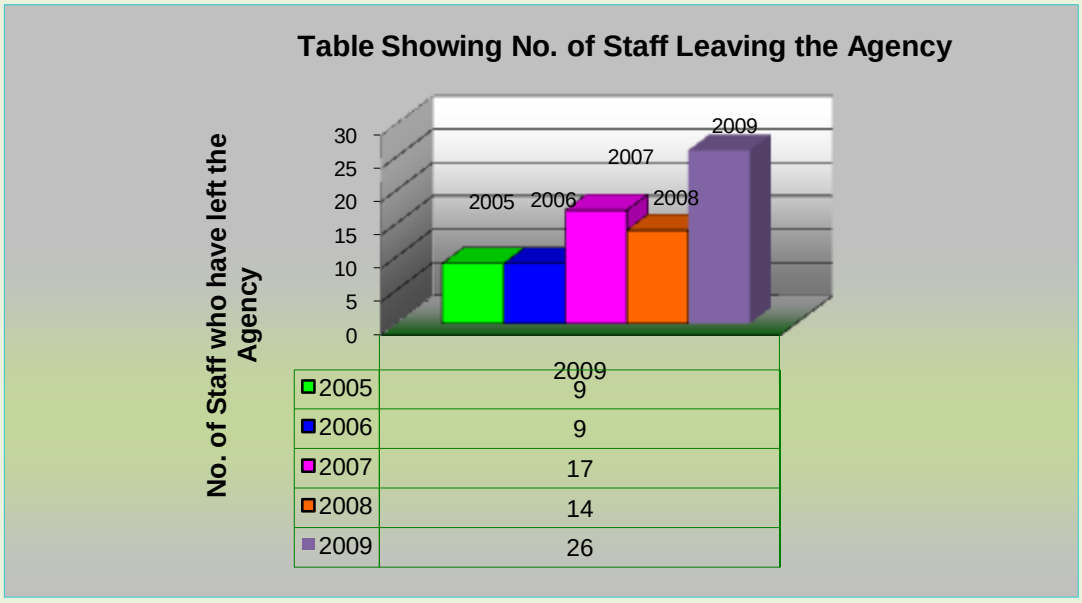
Divisions	*Number of Staff Recruited*	*Designation*
Administration	10	Drivers (5)- New drivers left during the same year, Handyman, GIS Technician, Office Assistant, Handyman, Administrative Assistant, Finance Officer
Education, Information & Training	2	Documentation Assistant, Environmental Officer
Natural Resources Management	2	Environmental Officer, Director
Environmental Management	6	Executive Assistant, Environmental Officers (5), Field Technician, Director, Senior Environmental Officer

Figure 1. Distribution of Staff Complement at end of 2009.



The high rate of staff turnover continues to be a significant challenge to the Agency with the rate in 2009 being the highest in the last five years (Figure 2). Twenty-five (25) staff left the employ of the Agency in 2009 compared to fourteen (14) in 2008.

Figure 2. Staff turnover for the period 2006-2009.



On analysis of the reasons for Staff leaving Agency in 2009, it was observed that these were:

- Resignation to take up other local appointments;
- Resignation to pursue further studies;
- Transfer to another Sector Agency;
    - Termination of services; and
- Reason not stated.

For the period 2004-2005, 63% of the staff who resigned, migrated. The trend changed from 2006 to the present, where 60% of staff who resigned took up other local appointments. This may be an indication that the salaries at the Agency are no longer competitive. To address this possibility, a proposal for incremental increase based on the acquisition of additional relevant qualification was prepared and submitted in 2009 to the Office of the President for approval.

A proposal for additional staffing was also completed and submitted in 2009 to the Office of the President. This proposal included provisions for the filling of vacant positions within the existing organizational structure that were never filled due to a lack of funding and the addition of an Hazardous Wastes and Air Quality Unit to the structure of the Environmental Management Division.

Additionally, the Agency found it very challenging to attract suitable qualified persons for key positions such as Senior Environmental Officers, Special Projects Officer, Network Administrator and GIS Specialist. As a result, many of these positions were vacant for extended periods during the year.

Like other Government agencies, staff of the Agency benefited from a 6% salary increase with effect from January 1, 2009.

Training, Workshops, Symposiums, Meetings

Throughout the year, Officers of the Agency attended a number of seminars, workshops, meetings, and training events nationally and internationally. Staff received training and attended meetings in several areas related to the Agency's mandate as indicated below (See Appendix 1 for more details).

Biodiversity Conservation:

- Traditional Knowledge incorporation into Biodiversity;
- Access and Benefit Sharing; and
- Implementation of Incentive Measures.

Protected Areas:

- Management Planning for Kaieteur National Park and Kanuku Mountains; and
- Resources Valuation.

Water Resources Management:

- Watershed Modelling and Management;
- Hydro-climatic Disasters in Water Resource Management; and
- Contaminated Bays and Regional Verification for GEF CReW Projects.

Climate Change:

The Agency participated in meetings of the National Climate Committee (NCC) and the Low Carbon Development Strategy. The Agency benefited from participation in meetings and workshops on the following topics:

- Technology Trends and Application of Photovoltaic Systems;
- Greenhouse Gas Emission Inventory;
- Vulnerability and Adaptation Assessment;
- Public Education Strategy for Climate Change;
- Monitoring, Reporting and Verification System for the Implementation of the REDD;
- Reduced Emissions from Deforestation and Degradation – plus (REDD+); and
- Mitigation & Abatement Analysis.

Waste Management:

- Solid Waste Management (IDB -6 weeks);
- Enforcement and Hazardous Waste;
- National Chemicals Management;
- Institutional Strengthening in Solid Waste Management; and
- Wastewater Management.

Standards, Guidelines and Codes of Practice:

- ISO 26000 Standard on Social Responsibility;
- Code of Practice Ventilated Improved Pit (VIP) Latrine; and
- Medical Waste Regulations and Guidelines.

Multilateral Environmental Agreements (MEA):

- MEA Implementation Capacity Building Needs in ACP Countries.

Other

- Review of the National Heritage Trust Act;
- Validation Workshop on the Draft 2009 Investor Roadmap;
- Tobacco Industry;
- Remote Sensing;
- Sustainable Manufacturing for the Caribbean;

- Chainsaw Milling the Guiana Shield;
- PAHO Consultation on the Biannual Workplan;
- UNDP Workshop on Results Based Management (RBM);
- Annual NARI Research Conference;
- Environmental Impact Assessment;
- Lands and Territories of Indigenous and other tribal Communities of the Amazon Region; and
- Global Environment Facility Caribbean Constituency.

Boards and Sectoral Committees

Officers of the Agency continued to participate on various Boards and Committees. In 2009, 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 and 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 those sponsored training for which country approval were obtained.

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, due to the secondment of the sole staff member (Environmental Economist) to the Office of Climate Change, Office of the President, with effect from June 08, 2009.

Achievements for the year were as follows:

- 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'.
- Initial information was gathered on the permit fee structure to determine whether it will need revision and updating.
- A draft discussion paper on PET Recycling in Guyana was produced which included an analysis of feasible economic instruments and incentive-based systems for solid waste management in Guyana. An initial study was also carried out to inform discussions for the development of a business plan to enable PET bottle recycling. The Environmental Economist participated on the PET Bottle Committee and contributed to the development of a Draft Business Plan.
- The training material for the Environmental Economics course was revised.
- An article titled: 'Guyana: Opportunities from the Commitment to Reduce Greenhouse Gas Emissions' was prepared for the Agency's Newsletter.
- A series of seminar topics were identified and one presentation titled 'Climate Change and Market Based Mechanisms for Carbon Trading under the Kyoto Protocol – Can Guyana Benefit' was delivered to EPA Staff.
- The Unit participated in the internal Climate Change Committee and provided initial feedback to consultants working on the Readiness Plan for Guyana in collaboration with the GFC.
- In the framework of the KfW Small Grants Project, assistance on the calculation of costs for protected areas was given.
- In relation to biodiversity, a visit was made to Iwokrama to initiate research on payments for ecosystem services, in particular on biodiversity.

- Participated in the following Internal Agency Committees:
    - 'Project Monitoring Committee for the KfW Small Grants Project';
    - 'PET Bottle Recycling Committee'; and
    - 'PET Bottle Recycling Sub-Committee to develop a business plan'.

  Initial planning of an Environmental Emergency response was coordinated, in collaboration with other staff members.
- The revision of the Strategic Plan for 2006-2010 was coordinated.

2.5 Information Technology Unit

The Unit is responsible for maintaining all computer equipment in the Agency such as desktop PCs, laptops, servers, hubs, switches, routers and UPS. The Unit is also 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.

During the period March to December 2009, the Information Technology Unit was staffed by only one person after the resignation of the previous IT Specialist. Despite this constraint, IT support continued to be provided to the Agency's Offices located at Sophia and Charlestown. Achievements for the year 2009 are as follows.

Information Systems Management

- The Complaints and Permits databases were enhanced with additional reporting features and they were maintained.

- The Fixed Asset Register managed in Microsoft Excel was transferred to the Asset Database. Additionally, the IT Unit collaborated with the Administrative Unit to facilitate the verification of IT related equipment.

- The payroll software package that was previously deployed to the Finance Unit had glitches, thus it was removed to be tested and fixed.

- Support was provided to all existing databases and these were all fully operational during the year.

Website Development

- During the year, general maintenance was done to the internal and external websites. Vacancies, EIA's, forms, etc. were uploaded to the external website.

- Internal and External email were maintained throughout the Agency.

- Support was given to the NBRIS consultant. The website was placed on a separate server and given a direct connection to the internet to fix synchronization problems with the NBRIS external website.

- The IT Unit participated in the CHM website demonstration. This was to enable users to understand how the Naaya Architecture works.

Network Support

- The IT Unit with assistance from the Admin Unit was responsible for the complete restructuring of the Local Area Network at the Agency's Offices at Sophia. This included the installation of structured cabling and deployment of network drops. Two twenty-four port switches were also installed for future expansion.

- Three servers namely the DELL 2800, 6800 and 6850 that were acquired from CCS continued to be problematic and this is compounded by the fact that the warranty period has expired for all of them. The Agency had requested a replacement of the servers or an extension of warranty and is currently in negotiations with CCS for a way forward.

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

- The Internet servers at both branches had various software problems, all of which were resolved.

- The Roles server and Data server crashed at the Main Office at Charlestown due to defective hard drives. The data were restored from backup.

- The Dell 2900 server at NRMD had some hardware problems. All problems were sorted out by CCS since the server is under warranty.

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

PC Support

- Computers and Laptops that had either hardware or software problems were diagnosed and repaired throughout the Agency.

- The Agency received two new computer systems from the Government of Guyana. These computers systems were deployed in the EMD to replaced two problematic and outdated computers.

- The IT Unit provided assistance to the Administrative Unit in the procurement of computers under the WWF project and BEAP Projects. The laptops were tested and deployed to the Project staff.

- Printers and Plotters were maintained within the Agency.

- The IT Department serviced and repaired three (3) UPS's acquired under Environmental Management Programme - Phase II.

- The IT Department provided support for the NBRIS and CHM Project.

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 the period March to August, 2009 both positions within the Unit were vacant. In August, 2209 a GIS Technician was employed. The achievements of the Unit for 2009 included the following.

Preparation of Maps

The following maps were prepared in 2009:

- Permitted Tourist Recreational Facility Operator Map of Guyana;
- Map showing Sample Locations for Bosai Mineral Group Incorporated;
- Map showing Complaint fro Starlight Drive-in Cinema;
- Map showing Authorisations for Romanex-Marudi Mountain Mining Project and Alluvial Mining of Marudi Mountain Deposit;
- Map showing Active Environmental and Operation Permits for the projects along the Mazaruni River; and
- Map showing Nursery, Primary and Secondary Schools in Guyana for their respective Regions 1 to 10.

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:

- Setting of data source for 374 map documents and renaming of 132 folders with appropriate names;
- Sorting of tutorials for GIS and Remote Sensing from pervious GIS Training; these were made accessible to staff;
- Plotting of points for and preparation of maps as follows:
    - Permitted Tourist Recreational Facility Operator Map from 2006 project; three maps were prepared at three different scales: 1:500,000; 1:900,000 and 1:3,500,000.
    - Distribution of Nursery, Primary and Secondary Schools by Region including Georgetown.
    - Sample Locations for Bosai Mineral Group Incorporated;
    - Projects:
        - Starlight Drive-in-Cinema;
        - Romanex-Marudi Mountain Mining Project; and
        - Alluvial Mining of Marudi Mountain Deposit.
    - Active Environmental and Operation Permits for the projects along the Mazaruni River;
    - 50 % of the Authorizations for January to June, 2009;

- Updated the GIS database with new information digital data (shape files) obtained from the following agencies: Guyana Lands & Surveys (GLSC), Guyana Forestry Commission (GFC), and Guyana Geology & Mining Commission (GGMC);
    - Road Network of Guyana;
    - Mineral Properties;
    - 1:50,000 Titled Amerindian Lands geo-database and;
    - 1:1,000,000 Titled Amerindian Lands geodatabase;
    - 1:500,000 Base Map of Guyana;
    - 1;1,000,000 Base Map of Guyana;
    - 1:1,000,000 Administrative Map of Guyana from GL&SC;
    - Letter Size Map (suitable for use in printed documents, e.g., reports, etc.); and
    - Forest Concessions (WCLs, SFPs, SFEPs & TSAs).

- Preparation of data required for mapping the locations of complaints and authorization matters within the EM Division. The GPS points were converted from Latitude/Longitude to UTM coordinates to be mapped; and

- Sharing of digital data of Mangrove (shape file) area along the Guyana Coastal Plain with Mr. Vijay Datadin, Consultant, Ministry of Public Works and Communications.

Training

The GIS Officer participated in a training course titled: *"Introduction to Remote Sensing - Module 1"* during October 19-November 06, 2009, at the Guyana Lands and Surveys Commission (GL&SC).

Other Activities

The GIS Unit participated in other activities as follows:

- Business cards were designed and prepared for staff of the Agency;
- Assisted in designing the Programme for Environmental Camp 2009;
- Prepared and printed Participation Certificates for the Environmental Camp 2009;
- Printed poster for the Medium Scale Mining Operations; and
- Assisted in printing the poster for the Photo Exhibition Volunteer Day.

3.0 Natural Resources Management Programme

Under the EP Act (1996), the EPA is mandated to coordinate and maintain a programme for the conservation and sustainable use of biological diversity in Guyana. Additionally, the EPA, as the national focal point for the CBD, is required to design, source funding, execute and implement projects that would assist in achieving the general objectives and programmes of the Convention.

The Natural Resources Management Division (NRMD) implements the Natural Resources Management Programme by distributing its responsibilities across three technical units each of which has a dedicated focus, namely Protected Areas, Biodiversity, and Wildlife.

During 2009, the Division has worked towards achieving its planned activities by successfully sourcing funds, and executing several projects on its work programme. Additionally, considerable progress has been achieved with the KfW Small Grants Component of the Guyana Protected Areas System (GPAS) Project and the implementation of several other projects including the Biodiversity Enabling Activity Project (BEAP) and the National Capacity Self Assessment (NCSA) Project.

The Division was headed by a Director who was supported by one (1) Senior Environmental Officer (SEO), two (2) Environmental Officers II, two (2) Environmental Officers I, two (2) Technical Officers, and an Executive Assistant.

3.1 Protected Areas

3.1.1 Guyana Protected Areas System (GPAS) Project

KfW Small Grants Component

In July 2004, the Governments of Guyana and Germany, represented by the Kreditanstalt fur 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 Guyana Protected Areas System (GPAS) Project. The goal of this Component is the conservation of ecosystems and enhancing the livelihoods of the various Amerindian communities living in or in close proximity to protected / proposed protected areas.

The Environmental Protection Agency (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 accomplish the following:

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

The Project provides small grants (maximum of US$180,000 per project) for 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 Upper Mazaruni Region and the Moraballi Reserve were recently included additional areas for intervention due to their high conservation value.

The Project requires visits to the communities in the intervention areas to sensitize the communities of the funding opportunities from KfW for livelihood improvement sub-projects, to inform of the requirements and the procedure for accessing the funds, discuss sub-project concepts, gather information, and assist the communities in the preparation of sub-project proposals. Visits are also conducted to the various communities in order to monitor progress of sub-projects and provide guidance on implementation activities as necessary. For the reporting period, fourteen (14) field visits were conducted (Table 2).

Additionally, the sub-project for the drafting of the PA Legislation has been successfully completed and closed.

(A) Sub-projects Completed

For the reporting period, four (4) sub-projects were successfully completed and closed:

1. Rupunau Fencing of Farmlands – submitted by the Rupunau Village Council.
2. Environmental Education and Awareness – submitted by the Guyana Marine Turtle Conservation Society (GMTCS).
3. Construction of a Crabwood Seed Drier – submitted by the Three Brothers Village Council.

4. Drafting of Protected Area Legislation.

Table 2. Field Trips undertaken to Intervention Areas in 2009.

Date	Location	EPA Officer
30 January – 1 February, 2009	Shell Beach	D. Fernandes
28-31 March, 2009	Shell Beach	C. Harilal & J. Persaud
31 March - 02 April, 2009	Kanuku Mts	D. Fernandes
14-21 April, 2009	Upper Mazaruni	D. Fernandes & C. Harilal
06-11 May, 2009	Kanuku Mts	C. Harilal, J. Persaud & S. Clarke
08-10 May, 2009	Kaieteur	O. Sears
08-11 May, 2009	Shell Beach	D. Fernandes & A. Dhanraj
26-26 June, 2009	Shell Beach	C. Harilal, A. Dhanraj & S. Clarke
11-17 July, 2009	Kanuku Mts	C. Harilal and J. Persaud
18-21 September, 2009	Shell Beach	J. Persaud & A. Dhanraj
26 September – 05 October, 2009	Kanuku Mts	C. Harilal, J. Persaud & S. Clarke
28-30 November, 2009	Shell Beach	J. Persaud & S. Singh
04-08 December, 2009	Kanuku Mts	J. Persaud & S. Clarke
29 December, 2009	Kaieteur	D. Fernandes

At the end of the reporting period, thirty-nine (39) sub-projects were developed under the KfW SGC of GPAS.

Table 3. Number of Closed and On-going Sub-Projects in Intervention Areas.

Intervention Area	No. of Closed Sub-projects	No. of On-going Sub-projects	TOTAL
Kaieteur National Park	3	4	7
Kanuku Mountains	4	12	16
Shell Beach	5	9	14
Moraballi Reserve	0	1	1
Upper Mazaruni Region	0	1	1
TOTAL	**12**	**27**	**39**

(B) Sub-projects being implemented

Twenty-seven (27) sub-projects were at various stages of implementation. These included:

1. Construction 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. E & A Consultants - for designing and supervision of works for the Visitor Arrival Centre and Rest House/Warden's Building at Kaieteur National Park.
5. Participatory Collaborative Management Planning for the Proposed Kanuku Mountains Protected Area – submitted by Conservation International-Guyana.
6. Meriwau Livestock Project – submitted by the Shulinab Village Council.
7. Irrigation for Kitchen Gardens – submitted by the Yupukari Village Council.
8. Wallaba Farming Project – submitted by the Santa Rosa Village Council.
9. Kwebana Citrus Farming Project – submitted by the Kwebana Village Council.
10. Construction of a Visitor Arrival Centre for Kaieteur National Park - submitted by the Kaieteur National Park Board.
11. Construction of a Rest House/Warden Building at Tukeit, Lower Potaro, Kaieteur National Park - submitted by the Kaieteur National Park Board.
12. Cashew Farming Project – submitted by the Shulinab Village Council.
13. Enhancing Forest Conservation and Monitoring for the Moraballi Forest Reserve – submitted by the Guyana Forestry Commission.
14. Construction and furnishing of the Maruranau Village Guesthouse –submitted by the Maruranau Village Council.
15. Equipment and Materials for Farms – submitted by the Little Kaniballi Village Council.
16. Equipment and Materials for Farms – submitted by the Parikwaranau Village Council.
17. Delineation of the Proposed Shell Beach Protected Area using Community Participatory Approaches and Mapping Tools – submitted by the Guyana Marine Turtle Conservation Society.
18. Construction and Furnishing of a Multipurpose Building and Guesthouse in Kumaka –submitted by the Santa Rosa Village Council.
19. Construction and Furnishing of a Multipurpose Building and Guesthouse in Kamwatta - submitted by the Santa Rosa Village Council.
20. Construction and Furnishing of a Multipurpose Building and Guesthouse in Manawarin –submitted by the Manawarin Village Council.
21. Construction of a Multi-purpose Center in Warapoka – submitted by the Warapoka Village Council.
22. Beekeeping in the Upper Mazaruni Area – submitted by the Office of the Prime Minister.

23. Parishara Farming Project – submitted by the Nappi Village Council.
24. Cattle Ranching in the Katoka Community – submitted by the Katoka Village Council.
25. Fencing of Sand Creek Farmlands – submitted by the Sand Creek Village Council.
26. Nappi Poultry Farming Project - submitted by the Nappi Village Council.
27. Completion of Chenapau Airstrip – submitted by the Chenapau Village Council.

(C) Sub-projects approved; Agreements to be signed

1. Furnishings for the Visitor Arrival Center (Kaieteur)
2. Furnishings for the Rest House/Warden Building at Tukeit (Kaieteur)
3. Furnishings for Multi-purpose Building (Three Brothers)
4. Furnishings for Multi-purpose Building (Kumaka, Santa Rosa)
5. Furnishings for Multi-purpose Building (Kamwatta)
6. Furnishings for Multi-purpose Building (Manawarin)
7. Furnishings for Multi-purpose Building (Warapoka)

(D) Appraisal Mission and Aide Memoire

Mr. Matthias von Bechtolsheim and Mr. Peter Hilliges visited Guyana during February 12-18, 2009. Meetings were held with the President, the Head of the Presidential Secretariat, and the EPA. An *Aide Memoire* was signed between KfW and the HPS on February 17, 2009.

In accordance with the *Aide Memoire*, it was requested that a revised budget and expenditure forecast, taking into account VAT reimbursements to the Project, be prepared by the EPA and submitted to KfW, Germany, by March 31, 2009. The report was prepared by the EPA/GFA and approved by the HPS and KfW, Germany.

A report on the final package of grant projects under the Small Grants Programme was completed and agreed with KfW, Germany. This was also in accordance with the *Aide Memoire* of February 17, 2009.

(E) Protected Areas Legislation

A draft Protected Areas (PA) Bill was developed with funding provided by KfW. This involved a consultative process with hinterland communities at Chenapau, Mabaruma, Lethem, and Georgetown. A consolidated

report of these consultations was distributed to these communities and other stakeholders. The draft Protected Areas Bill, along with the accompanying explanatory notes, was submitted by the EPA to the Office of the President (OP) for consideration.

(F) **WWF Project:** Capacity Building within the EPA to Support PA Development and Management and Promote Sustainable Livelihoods in Amerindian Communities in Guyana

WWF–Guianas, through its 'Guianas Sustainable Natural Resources Management Project', has provided financial support for the implementation of a capacity building project which will contribute to strengthening of the Agency for the establishment and management of protected areas systems and the development of sustainable livelihood initiatives in Amerindian communities adjacent to and within Protected Areas.

Following the commencement of activities in January 2009, two Technical Officers were recruited and integrated into the work programme of the Protected Areas Unit of the Natural Resources Management Division. However, following the resignation of one of the Officers, the Agency, in consultation with WWF, had successfully recruited a replacement. Both Officers have been actively involved in the monitoring and implementation of on-going sub-projects under the KfW Small-Grants Component of the GPAS Project, particularly in the Kanuku Mountains and Shell Beach Intervention Areas. They have contributed significantly to the review and preparation of various Technical and Financial Reports for the sub-projects. Over the period, the Officers have also been involved in the Management Planning Project for the Kaieteur National Park and the Delineation Project for the proposed Shell Beach Protected Area.

3.1.2 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 biodiversity and 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 EPA has provided feedback to the Ministry of Foreign Affairs on proposals developed by ACTO that were forwarded to the EPA for consideration and endorsement. These included the Science and Technology Strategy for the Conservation and Sustainable Use of Amazon Biodiversity, the Draft Cooperation Mechanism for the Monitoring and Control of Wild Fauna and Flora Trafficking in the Amazon, the Regional Amazon Bio-

trade Programme and the Regional Plan of Acton for Amazonian Biodiversity 2008-2013. The Director of the NRMD has been appointed as Guyana's Focal Point for both the Conservation Priorities Group and the Management Effectiveness Group under the ACTO supported Regional Conservation for the Amazon Biome Initiative.

3.2 Biodiversity

3.2.1 Biodiversity Research

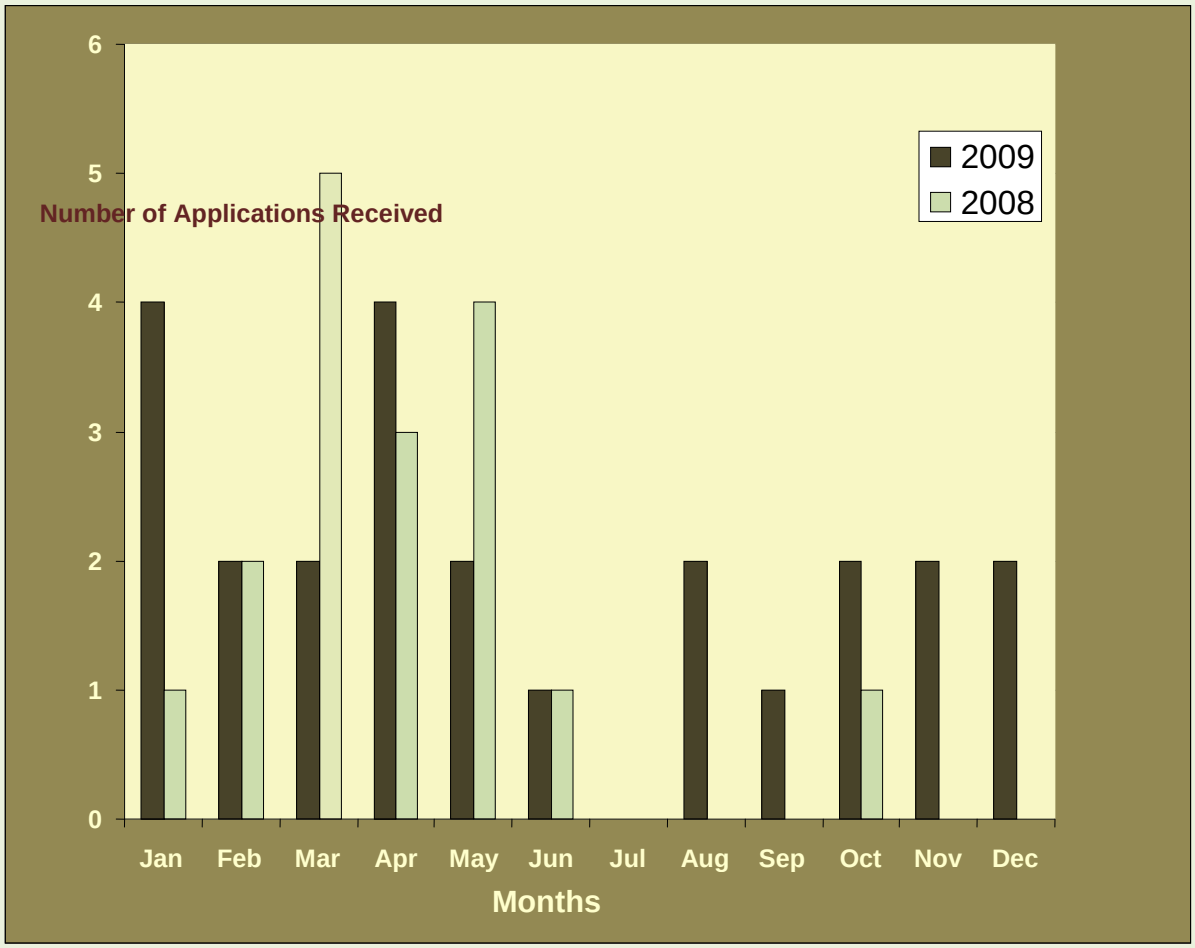
The Biodiversity Unit (BU) is responsible for the processing of Research Applications and the issuance of Permits to conduct Research in Guyana. For the period, January to December, 2009, applications were received from students, professionals, and institutions worldwide. These included York University, **Canada**; The Royal Ontario Museum, Canada; University of Newcastle, **U.K.**; University of East Anglia, U.K.; University of Berlin, **Germany**; Kanazawa University, **Japan**; The Royal Belgian Institute of Natural Sciences, **Belgium**; Smithsonian Tropical Research Institute, **Panama**; University of Minnesota, **U.S.A.**; Humboldt State University, USA.; Boise State University, USA.; University of Florida, USA.; University of Massachusetts, USA.; University of Wisconsin, U.S.A.; Columbia University, U.S.A., Texas A&M University, U.S.A.; Syracuse University, U.S.A.; The Smithsonian Institution, U.S.A.; U.S Department of Agriculture, U.S.A.; and the University of Guyana, **Guyana**.

The majority of the Research were concentrated primarily in the interior locations of Guyana, such as, Kaieteur National Park, Region 8; the Iwokrama Rainforest, Region 8; the Rupununi, Region 9; the Pakaraima Mountain Range; the Upper Mazaruni District, Region 7; and the North West District, Region 1.

Research Applications

For the reporting period, twenty-four (24) Research Applications were received by the Natural Resources Management Division (See Figure 3a).

Figure 3a. Number of Research Applications received in 2009.



Processing of Research Applications and Issuing of Export Permits

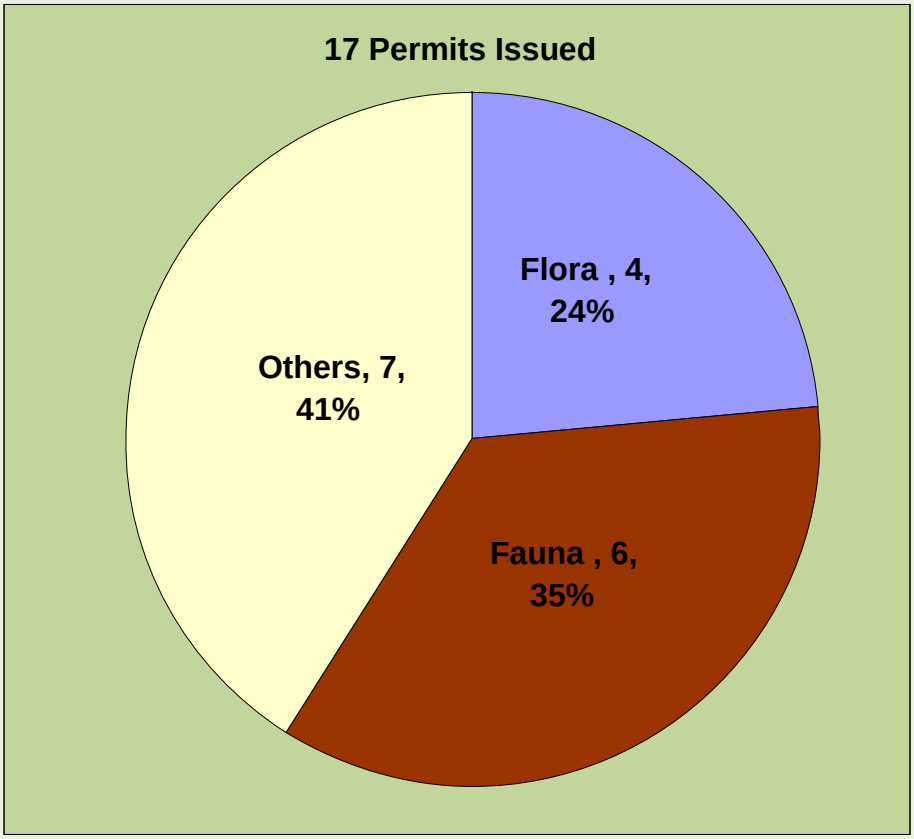
Applications Processed

A total of seventeen (17) Research Applications were processed and approved. One (1) Research Application was approved but no Permit was issued because the Research Team was not successful in acquiring funding. Two (2) Research Applications were not processed at the request of the Researchers who have deferred their research for a later period that is to be confirmed. Four (4) Research Applications are at various stages of processing.

Research Permits Issued

Seventeen (17) Research Permits were issued for the year covering the seventeen (17) Research Applications that were approved. These Permits were for flora, fauna and other (in particular, social-environmental) studies. Also, two (2) extensions of previous Permits were granted. Figure 3b shows the categories of Applications permitted by the EPA during the reporting period.

Figure 3b. Categories of Research Applications Permitted by the Agency in 2009.



Export Permits Issued

Six (6) Export Permits were issued for specimens collected under Research Permits issued for the reporting period. Also, two (2) Export Permits were granted, one to specimens that were collected under Research Permits during the period 2000-2008 (Dr. G. Bourne) and another to the Walter Roth Museum for specimens collected under a Research Project that was spearheaded by the institution. The specimens exported included icthyofauna (museum and tissue samples), flora from different plant families (herbarium and tissue

samples), amphibians and reptiles (herbarium and tissue samples), fungi (herbarium specimens), insects and arachnids (museum specimens), and bone fragments. All specimens will be used in accordance with the Guidelines for Biodiversity Research in Guyana and are to be returned as specified by the University of Guyana, Centre for the Study of Biological Diversity (verification body acting on behalf of the EPA).

Analysis

70.8% of all Applications received were completely processed, approved, and issued with Permits to conduct Research (representing 17 of 24 applications); 16.7% are at various stages of processing (representing 4 of 24 applications); and 12.5% were placed on the backburner for the reasons mentioned above (representing 3 of 24 applications). During the period, of the Applications that were completely processed, none were denied approval. Figure 4 provides a summary of the activities regarding Research Applications.

Comparative Analysis (2008 vs. 2009): Figure 3a above shows a comparative analysis of Research Applications received for the respective months during 2008 and 2009. The highest number of applications was recorded (5) in March in 2008 and there was a gradual drop throughout the rest of the year with no Applications being received in July, August, September, November, and December. In 2009, January and April both recorded the highest number of applications (4), a gradual drop was experienced until July (0), and for the rest of the year, Applications were received at a relatively constant rate of 2 per month.

Monitoring and Enforcement

The monitoring and enforcement aspect of the Research process has been maintained over the period by local counterparts from the University of Guyana, when possible. The Agency continued to preserve its linkages with other relevant sector agencies and organizations such as the Ministry of Amerindian Affairs, the University of Guyana, Iwokrama International Centre, the Kaieteur National Park, National Parks Commission, and Local Communities in order to ensure researchers' adherence to the National Research Guidelines and the Terms and Conditions of their respective Research Permits. The Biodiversity Unit continued to ensure that researchers fulfil their reporting obligations as stipulated by their Research Permits.

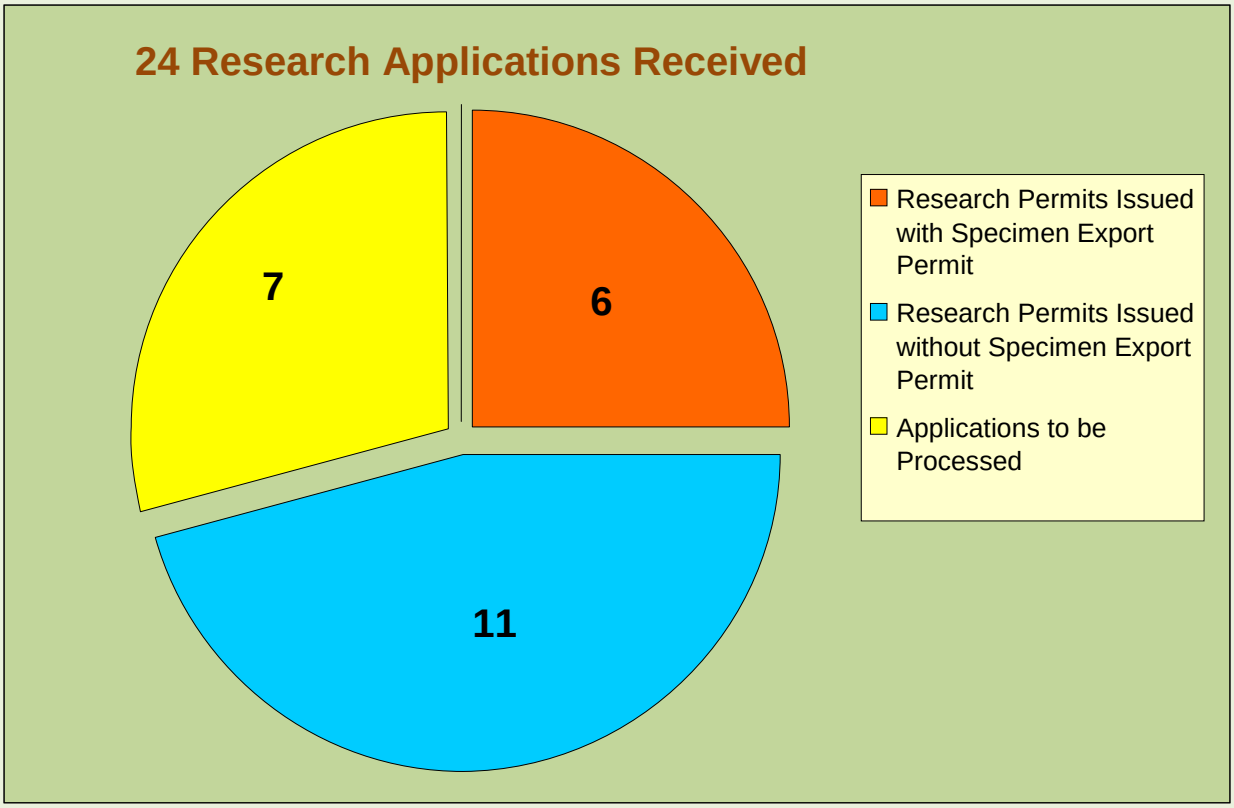


Figure 4. Summary of Research Application Activities in 2009.

Revenue Generation, 2009

A total of four thousand, seven hundred and twenty United States dollars (US$4,720) was generated for the period from application, late application, and permit fees. This amount excluded fees collected for applications currently being processed.

3.2.2 Biodiversity Monitoring (including Invasive Species)

The CBD has several cross-cutting issues. One such cross-cutting issue is Invasive Alien Species (IAS). At the ninth Conference of Parties (COP) meeting, it was requested that countries develop an inventory of invasive species.

The EPA has established an Invasive Alien Species (IAS) Task Force. This Task Force is involved in addressing issues relating to Invasive Species under the CBD. The first IAS Task Force meeting was held during the month of April, 2009. Task Force members have indicated their willingness to make data available to develop an

inventory of invasive alien species. Members of the Task Force have also participated in a panel discussion to commemorate International Biodiversity Day, 2009, under the theme, “Invasive Alien Species”.

3.2.3 Biodiversity 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 (NBAP), 2007-2011

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

The NBAP II and the four Situation Analysis documents were approved by the Government of Guyana in June, 2008, and were distributed to relevant stakeholders. The Project was funded by the World Wildlife Fund (WWF) and was audited in 2009. An Audit Report was submitted by the Auditors to the EPA.

The EPA has prepared a Concept paper under Programme area 11- Habitat Destruction and Associated Impacts, for the proposed project entitled “Fostering the effective management of Guyana’s coastal biodiversity to minimize and prevent the destruction of coastal habitats and to protect Guyana’s coastal biological diversity”, to source funding for Radar Images of Guyana’s Coast from the mouth of the Waini River to the Corentyne River. This concept paper was submitted to and accepted by the Group on Earth Observations (GEO). GEO will indicate the due date for the submission of the full proposal in the near future.

Sector Agencies were asked to identify at least one representative to work with the EPA in developing project proposals for which the respective organizations were recognized as the Lead Agency. To date, the EPA has not received any feedback from these Agencies.

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 provides a framework for the control and monitoring of Genetically Modified Organisms (GMOs) and LMOs, in order to prevent adverse effects on Guyana's biological diversity. This project was conducted over an eighteen-month period with support from UNEP/GEF. The NBF document was approved by the Government of Guyana in June, 2008. One hundred copies of the NBF were printed and distributed to relevant stakeholders in 2009.

The EPA has prepared and submitted a proposal to UNEP for the utilization of the remaining funds under the National Biosafety Framework which aims to promote public awareness in the field of Biosafety. This proposal included the procurement of a projector and a digital Camera that would assist in Education/Public Awareness, and the printing of posters related to Biodiversity and bio-safety.

The EPA has also submitted detailed expenditure reports, audited statements and Quarterly financial Reports to UNEP under this project. Auditing of the project is expected to take place in 2010 along with the completion of Progress Report No. 6.

Regional Project on Biosafety

Guyana has endorsed the project proposal entitled "Implementation of a National Biosafety Frameworks in the Caribbean Sub-Region countries of Bahamas, Belize, Grenada, Guyana, Jamaica and Suriname" with the support of UNEP. A draft Log Frame, including a budgeted outline of activities for Implementation of this Regional Project for Guyana, was prepared and submitted to the National Biosafety Framework Project, Regional Coordinator of the UNEP.

A draft summary of the Regional Consultative Meeting on the Implementation of the National Biosafety Frameworks, and a workplan were submitted to the EPA for review.

Access and Benefit Sharing of Genetic Resources Regulations

The Division made significant progress with the draft Access and Benefit Sharing Regulations. The Attorney General Chambers have completed the review of the draft Regulations. The final internal review is being conducted by the EPA so as to finalize the document 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 Access and Benefit Sharing Policy was approved by the Government of Guyana in August, 2008. Copies of the National Policy were printed and distributed to relevant stakeholders in 2009.

ABS Regional Project

The EPA submitted Guyana's comments on the ABS regional proposed modules, for the "Strengthening the Implementation of Access to Genetic Resources and Fair and Equitable Sharing of Benefits in Latin America and the Caribbean" Project.

National Biodiversity Research Information System (NBRIS)

The National Biodiversity Research Information System 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. The Consultant is in the process of making modifications to the system.

The consultant, Mr. Clarence Garraway, advised that both the domain and web hosting package would need to be reactivated. Invoices were received and payments were made to Server Intellect and Centre for Information Technology, UG, which covered the costs for maintaining the NBRIS Website and the domain name.

Once the domain and host were reactivated the consultant addressed issues associated with synchronization. The NBRIS is now located on its own server. There is a direct connection to the internet. The next steps include NRMD testing the website to verify that the system is operational and to remove all existing test pages within the database.

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 biodiversity-related 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 were approved by the Government of Guyana in August, 2008. This document was printed and distributed to relevant stakeholders in 2009.

One of the projects identified for implementation under the NCSA Action Plan is: Action 2.2.1 Institutional Structures and Mandates. It is intended to: (a) streamline institution structures and mandates to address requirements of the three Conventions; and, (b) integrate the activities of the three Conventions into annual work programmes of Agencies.

The Consultancy on *Streamlining of Institutions Structures and mandates to Address Conventions Objectives* has submitted a National Stakeholder Workshop Report and a Final Proposal to the Government on recommendations on the refined institutional structures and mandates of Agencies, specifically the EPA, Guyana Lands and Surveys, and the Climate Change Unit. These reports were reviewed and approved by the EPA.

The Consultancy on Integration of Convention Activities into Annual Work programmes of Agencies submitted the final report with recommendations for suggested Convention activities to be included in the annual Work-plans of the Agencies. This report was reviewed and approved by the EPA.

The EPA requested an extension to the project until December 31, 2009, to facilitate the need to complete the Consultancy on the Evaluation Mechanism. This extension was approved by the UNDP.

The Advertisement for the procurement of the Evaluation Consultancy was published in the local Newspapers. However, due to the limited responses received, sole sourcing was done. A draft report on the Evaluation Mechanism was submitted by the consultant to the EPA. The draft is now being evaluated.

Biodiversity Enabling Activity Project

The EPA has received funding from GEF-UNDP for the Biodiversity Enabling Activity Project which would assess Capacity Building Needs, and result in the preparation of second and third National Reports (CBD), and the establishment of the Clearing House Mechanism for the CBD.

Contracts were prepared and signed and work commenced for the following consultancies:

1. Traditional knowledge incorporation into biodiversity management.
2. Stocktaking of existing capacity and mechanisms.
3. Initial Assessment and Monitoring, including Taxonomy.
4. Access to Genetic Resources and Benefit Sharing.
5. Implementation of Incentive Measures.

Traditional Knowledge incorporation into biodiversity management

This Consultancy commenced on April 1, 2009. The Consultancy team developed a Community Assessment Tool (CAT) which was distributed to stakeholders. The purpose of this capacity assessment was to examine the preservation and maintenance of biodiversity-related indigenous knowledge in Guyana. The assessment aimed to contribute to the preparation of the second and third National reports to the CBD.

The Team conducted consultations and meetings within Amerindian communities of Regions 1, 2 and 9 for the purpose of administering this tool. The team also submitted final copies of the following reports which were reviewed and approved by the EPA: Inception Report, Thematic Report; Strategy & Action Plan: *Preserving Traditions, Driving Innovation & Growth, 2009-2012*; Inventory Report: *Traditional Knowledge of Sustainable Conservation and Use of Biodiversity among Amerindian Populations and Other Stakeholders, 2009; Traditional Knowledge Incorporation into Biodiversity Assessment Report, 2009;* Progress Report; and Field Reports based on consultations from Regions 1, 2 and 9.

A meeting of the Special Working Group was held in June, 2009. The purpose of this meeting was to present the findings of this consultancy which included: (a) an assessment of traditional knowledge incorporation into biodiversity (b) a review of the current legislation aimed at promoting and protecting traditional knowledge and (c) an inventory on traditional knowledge and sustainable conservation. TCG has also submitted the End note which concluded all contractual services under this sub-project.

Following an extension to the contract, the Consultancy was concluded on September 30, 2009.

Stocktaking of Existing Capacity and Mechanism

This Consultancy commenced May 4, 2009. The Consultancy team submitted a Progress report which consisted of the work-plan and questionnaire. This report is necessary to support sub-projects related to the CBD priority areas, through identification, evaluation and prioritization of the capacity building needs. The team in collaboration with the EPA convened a workshop which solicited comments and suggestions from key stakeholders on the report. The final Assessment and Stocktaking Report were submitted to the EPA. The EPA has reviewed and approved these deliverables.

All contractual services under this sub-project were completed and following an extension to the contract, the Consultancy was concluded on October 31, 2009.

Initial Assessment and monitoring including Taxonomy

This consultancy also commenced May 4, 2009. The Consultancy Team submitted a report which consisted of the work plan and questionnaire. This report is necessary to identify the priorities for assessment and monitoring, and understanding the human resource capacity needs. The Consultancy Team worked in collaboration with the EPA to convene a workshop to solicit comments and suggestions from key stakeholders on the draft documents. The Environmental Management Consultants submitted the final draft of the Assessment and Thematic Reports, and Strategy and Action Plan. These documents were reviewed and approved by the EPA. Payments for submission of the reports were processed by the UNDP and payments were made to the Consultancy. The Consultancy was concluded on December 11, 2009.

Access to Genetic Resources and Benefit Sharing

The Consultancy Team submitted a work plan of the Assessment of Capacity Building needs and three progress reports. This consultancy commenced June 2, 2009. The Consultancy also submitted a proposed stakeholder list and a questionnaire for administering questions to key stakeholders. The Trinidadian team arrived in Guyana on Monday, August 3, 2009, and has conducted consultations with key stakeholders during the period August 4 to 14, 2009. The Team also prepared and submitted final drafts of the Assessment Report, Thematic Report and a Strategy and Action Plan which were reviewed and approved by the EPA. A workshop was conducted to solicit comments and suggestions from key stakeholders on the documents. Following an extension to the contract, the Consultancy was concluded on December 18, 2009.

Implementation of Incentive Measures

This Consultancy commenced on June 10, 2009. A work-plan on the implementation of incentives measures for biodiversity management and conservation was submitted by the Consultancy Team. The Consultancy also submitted a Questionnaire which was administered to the key stakeholders. The Team prepared final drafts of the Assessment and Thematic Reports which were reviewed and approved by the EPA. The Team, in collaboration with the EPA, convened a workshop which solicited comments and suggestions from key stakeholders on the reports. Following an extension to the contract, the Consultancy was concluded December 11, 2009.

Clearing House Mechanism (CHM)

The Project Coordinator prepared a structure for the categorization and presentation of data and information for the CHM. The Project Coordinator also developed a Proposal for Implementation of the CHM which was submitted to the CHM Specialist, Ms. Miruna Basdecu.

A meeting of potential contributors to the CHM was held on November 23, 2009, to provide an overview of the CHM and how it will be implemented. The meeting was also used to gather feedback from stakeholders.

Second National Report to the CBD

A matrix and questionnaire were developed, which were used to gather information from relevant stakeholders for the preparation of the Second National Report. The Project Coordinator submitted the first draft of the Report to the EPA.

Third National and Fourth National Report to the CBD

The Third National Report to the CBD is a component of the Biodiversity Enabling Activity Project which is funded by the GEF though the UNDP. The Fourth National Report, however is funded by UNEP- GEF through the *UNEP-GEF Project for Support to GEF eligible CBD parties for carrying out the 2010 Biodiversity targets National Assessments – Phase III*.

It was decided that activities related to the preparation of the Third and Fourth National Reports to the CBD be integrated, where possible, to maximize time and resources. As such, the Terms of References and a letter of Offer and Agreement that outlines the responsibilities of both parties and terms of agreement with reference to the preparation of the National Reports were signed by the EPA and the Environmental Management Consultants (EMD) on December 23, 2009. As such, the Consultancy has commenced the process of gathering data for the preparation of the reports from stakeholder Agencies.

The EPA also requested an extension to the project until March, 2010, to facilitate completion of the Consultancies. This request was approved by the UNDP.

Special Service Agreement

The Special Service Agreement for the Project Coordinator concluded on September 30, 2009, as such NRMD submitted a request for extension to the contractual services until December 31, 2009. This request was approved by UNDP and the Administrative Division of the EPA. The Project Coordinator subsequently completed his contractual period.

International Biodiversity Day, 2009

The Division, in collaboration with the EIT Division, organized activities in observance of International Biodiversity Day, celebrated under the theme “Invasive Alien Species”.

A brochure on Invasive Alien Species was prepared and distributed to relevant agencies and the general public to commemorate International Biodiversity Day, 2009.

3.3 Wildlife

The Wildlife Unit continued to make significant progress in 2009 to achieve the sustainable use and conservation of wildlife in Guyana.

Wildlife Conservation and Management Regulations

The draft Wildlife Management and Conservation Regulations will 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 Legal Consultant provided the EPA with the final draft of the Regulations. The Consultant also prepared and submitted an Explanatory Note for the Regulations. A summary of the Consultation process was also prepared by the EPA.

The final draft of the Regulations and its Explanatory Note were finalized and submitted to Office of the President for consideration along with the final draft of the Wildlife Import and Export Regulations prepared by the Wildlife Division.

The Wildlife Unit of the EPA continued to investigate Wildlife complaints and continued to collaborate with other stakeholders. The Unit also continued to provide technical assistance to the Wildlife Management Authorit

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, 2009, and provided information to the EITD for the preparation of articles for the EPA quarterly Greenleaf. The Division collaborated with the EMD in reviewing Environmental Impact Assessments such as the EIA submitted by the Guyana Goldfields Inc. for the Aurora Gold Mine and Memoranda of Understanding between the EPA and other institutions. The Division also participated at the University of Guyana Career Day held in February, 2009, and Coastal Clean up Exercise in October, 2009, at the Kingston Seawall.

Constraints

The separate locations of the EPA presented some logistical and administrative difficulties. Also, the Division experienced a staff shortage due to three existing vacancies of: Senior Environmental Officer, Special Projects Officer and Environmental Officer.

Meetings, Workshops and Training

Members of Staff participated in meetings and workshops which have contributed to capacity building in the Division. See Appendix 1 for details.

Other

The Division continued to participate on various Sectoral Boards and Committees, such as the Wildlife Management Authority Board, National Biodiversity Committee (NBC), National Coordination Committee (NCC), Natural Resource and Environment Advisory Committee (NREAC), Advisory Committee Meetings of the UNDP Capacity Building Project, National Climate Committee (NCC), Steering Committee Meeting of the Sustainable Land Management Project, Project Steering Committee Meeting for the Kaieteur National Park Management Planning Process, and the EPA Occupational Health and Safety Committee.

4.0 Environmental Management Programme

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

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). In addition, the Monitoring and Enforcement (M&E) Unit is tasked with monitoring permitted operations and enforcing the EP Act No 11 (1996), EP Regulations (2000), and the EP Amendment (2005), 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 other Units in the EMD. These reports are required under an Environmental Authorisation or in pursuance of an Environmental Authorisation.

The Division also has an Integrated Coastal Zone Management (ICZM) Unit. The ICZM Unit worked during the year to resuscitate the Integrated Coastal Zone Management Committee. A sector policy support programme addressing sustainable coastal zone protection through mangrove management was drafted in pursuit of EU funding.

4.1 Authorisations

The Environmental Permitting Process as prescribed in the EP Act (1996), the EP Regulations (2000) and the EP Amendment (2005), continued to function efficiently. The EPA continued to utilize a comprehensive approach to environmental management based on existing Regulations and Standards. In addition, the Agency has collaborated with several Sectoral Agencies to identify environmental quality objectives and develop synergistic processes to achieve them.

The Agency continued to support the work of the Environmental Assessment Board (EAB). The EAB met six times during the period April to December, 2009. The Board provided comments and recommendations on the following projects: Durban Quarries and the Amaila Falls Transmission Lines. Seventeen professionals

with varying expertise in environmental management registered with the Agency to provide a range of services to developers applying to the Agency for Environmental Authorisation.

During the year under review, the Division revised all five existing Application forms (Environmental, Operation, Noise, Renewal and Consultant's Registration) and created a new form for the Transfer of Environmental Authorisation. In addition, a Checklist stating all the information required (Proof of Land Ownership, NDC Approval, CHPA Approval) when applying for Environmental Authorisation was also created. The Division commenced distribution of the Revised Application Forms as well as the Checklist to developers.

The Permitting Process

The Agency continued to process and permit new development projects for Environmental Authorization. During the year, a total of four hundred and forty-seven (447) applications were received for Environmental Authorizations. This included one hundred and twenty-one (121) for new projects, sixty-nine (69) for existing operations, thirty-nine (39) for renewals, five (5) for transfers, and one (1) for variance. In addition, two hundred and twelve (212) noise applications were received during this period. Two hundred and three applications (203) received were for Short-Term Noise Permits, while five (5) were for Long-Term Permits. Four Applications (4) were received for the renewal of Long-Term Noise Permits.

Figure 5. Applications received in 2009.

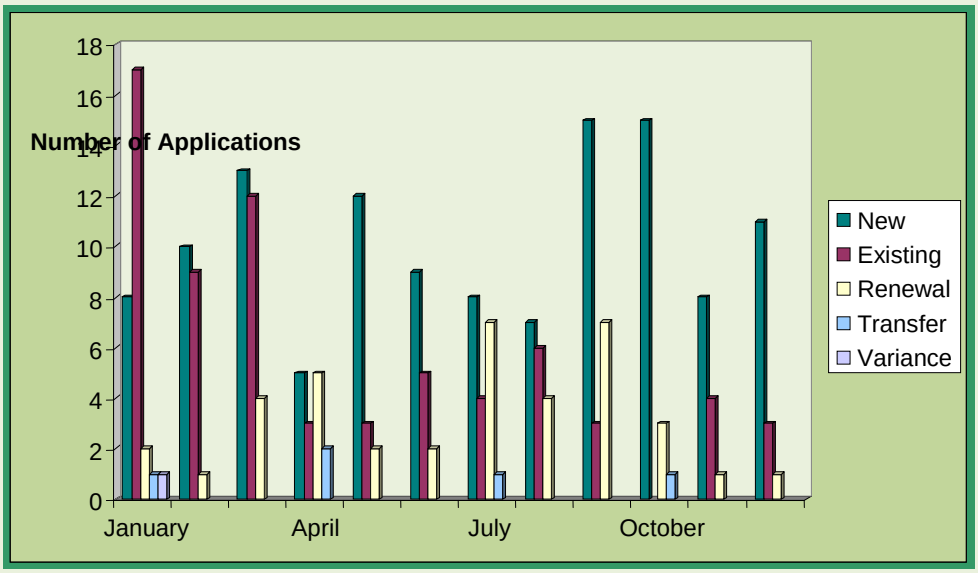


Table 4. Distribution of Applications received in 2009 by Sector.

Sector of Development	No. of Applications
Alcohol Distillery	1
Alluvial Mining	1
Bauxite Mining	2
Broadband Satellites	1
Charcoal (Buying and Selling)	1
Fertilizer Storage & Blending	1
Funeral Parlour	1
Gold Mining/Exploration	2
Gold Smelting and Resale Office	1
GPL - Development and Expansion Projects	1
Infectious Waste Sterilization Project	1
Infrastructure Projects – construction of drainage canals and support structures rehabilitation of roadway structures community roads improvement	3
Liquefied Petroleum Gas	1
Logging and Sawmilling	5
Lumber Yard (with & without processing & storage facilities)	21
Manufacturing (nut butter) & Packaging (peas, rice sugar, etc.)	1
Offices/Accommodations etc.	3
Petroleum Drilling/Exploration	3
Portable Sawmill	10
Poultry and Lam Processing Facility	1
Poultry Processing Facility	1
Power Generation	1
Quarry	2
Ready-Mixed Concrete Batching Plant	1
Removal and Disposal of Asbestos Waste	1
Resort/Retirement Community	2
Rice Mill	1
Sand Mining	4
Sawmill	14
Sawmill and Wood Processing	3
Scrap Metal & ULAB	1
Seafood Processing Plant	1
Service Station/Fuel Storage	14
Storage Bond for Petroleum-Based Products	1
Submarine Fiber Optic Cable	1
Sugar Packaging Facility	1
Telecommunication	3
Training Centre	1
Wastewater Treatment and Bio-methanisation Plant	1
Wharf and Storage Facilities	2
Wood Processing Facilities	4
Total	***121***

The Mining and Forestry (M&F) Unit received the highest number of applications 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 2009. Industry, Infrastructure and Energy Unit received a significant amount of applications for the development of Service Stations and Fuel Storage Facilities.

Table 5. Distribution of Authorization Applications across EMD'S Sectoral Units.

Sector	No. of Applications	No. of Permits Issued	EIA	EMP
Agriculture Fisheries and Tourism (AFT)	14	1	0	0
Industry, Infrastructure and Energy (IIE)	69	11	0	8
Mining and Forestry (M&F)	108	15	5	2
Monitoring and Enforcement (M&E)	44	8	0	0
Noise	212	206	0	0
Total	***447***	***241***	***5***	***10***

The Mining and Forestry Unit received one hundred and eight (108) applications, the highest amount of applications during the year under review. Also of significance is the amount of applications received by the Industry, Infrastructure and Energy Unit which totalled sixty-nine (69) in number. The Agency continued to work on improving its monitoring and enforcement capabilities. In all instances, except in the case of noise permits, the number of permits issued is considerably less when compared with the number of applications received. The year saw the Monitoring and Enforcement Unit receiving forty-four (44) applications for renewals, transfers and variance of environmental authorization.

Table 6. Distribution of Permits Granted in 2009.

Type of Authorization	No. of Permits Issued	%
Construction	5	4.95
Environmental	46	45.55
Operational	45	44.55
Letter of Authorization	5	4.95
Total	***101***	***100***

One hundred and one (101) Environmental Authorizations were issued during the year. The highest percentages of permits issued were the Environmental (46%) and Operational Permits (45%), while Construction Permits and the Letters of Authorization ranked lowest (5%).

During the year, ten (10) projects that applied for Environmental Authorization were required to develop EMPs. A total of ten (10) EMPs were submitted to the Agency for review and approval. Three (3) of these EMPs were received from this year's applicants. Five (5) Projects that applied for Environmental Authorization this year were required to conduct an EIA. During the year, the Agency received three (3) EIAs for review and approval. Two (2) of the EIAs received were from this year's applicants.

4.2 Monitoring and Enforcement

In January 2009, the Monitoring and Enforcement Unit was tasked with renewals of environmental authorisation. As such, the Unit followed up with this renewal drive. All operations with permits that expired in 2009 were reminded of the need to apply for Renewal of their Environmental Authorisations. During the year under review, the Agency received thirty-nine (39) applications for Renewal of Environmental Authorisation.

The Agency responded to all renewal applications received and conducted thirty-nine (39) Environmental Audits. The Environmental Audits entailed the verification of compliance by companies with their existing Environmental Authorisations. In addition, to renewal of Environmental Authorisations and Environmental Audits, the Unit worked along with the Complaints and Response Unit to investigate complaints and recommend enforcement action to be taken. Additionally, the Unit also managed the Transfer of Environmental Authorisation, e.g. Iwokrama Sustainable Timber Harvesting and Variance of Environmental Authorisation; and, Amaila Falls Hydropower Project. The Unit also reviewed numerous Monitoring & Compliance Reports / Environmental Management Plans (EMPs) / Annual Reports and Closure Plans during the year and made recommendations.

The Anti-Littering Work Programme continued to be maintained as a Programme under the Monitoring and Enforcement Unit Work Programme. The Unit continued its follow-up work with NDCs from various Regions and additional meetings were held during year. 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 systems via the Anti-Littering Programme.

Additionally, the Unit prepared and finalized the Memorandum of Understanding between the EPA and the Ministry of Local Government and Regional Development which promotes inter-Agency collaboration in a number of areas, including authorisations, complaints and enforcement. The MOU also promotes collaboration with regard to the Anti-Littering Programme and the Unit has worked throughout the year to disseminate this information to NDCs / RDCs by way of site visits, meetings, presentations, correspondences, etc.

The Ministry of Agriculture (MoA) requested the assistance of the EPA in dealing with the issue of littering in the drainage and irrigation system. The MoA indicated its interest in having delegated power under the Environmental Protection Act and Regulations to assist in dealing with this issue. As such, the Agency prepared and finalized proposal for the delegation of authority to the Community Drainage and Irrigation (CDI) Project, MoA.

In an effort to improve the enforcement of the EP Act (1996) and the EP Regulations of 2000, the Unit worked continuously during the year to strengthen the existing monitoring and enforcement capabilities of the Agency. To this end, the EP Act and Regulations were reviewed and additional Monitoring Clauses extracted for inclusion in Environmental Authorisations. Additionally, Enforcement Clauses within the legislation were extracted and the potential for implementation of such provisions both with and without the assistance of an Attorney-at-Law / Legal Officer were examined. Further, the Unit prepared a paper on Eco-Police or Environmental Police throughout the world to assess the potential implications such a practice would have in Guyana. The paper was submitted to the Head of the Presidential Secretariat for review.

The Unit also provided informal Legal Advice to sector agencies. In this regard, several pieces of legislation (Maritime Zones Bill, 2005; Consumer Protection Bill, 2006; National Trust Act) were reviewed and comments provided to the necessary agencies.

4.3 Complaints and Response

The Division continued to respond to environmental complaints and emergencies from the public. The number of complaints received by the Agency continued to steadily increase. During the year 2009, a total of four hundred and thirty-nine (439) complaints were received by the Agency of which, two hundred and fifteen (215) complaints were new to the Agency, while two hundred and twenty-four (224) were previously received by the Agency. These are referred to as recurring complaints.

Figure 6. Complaints Received in 2009.

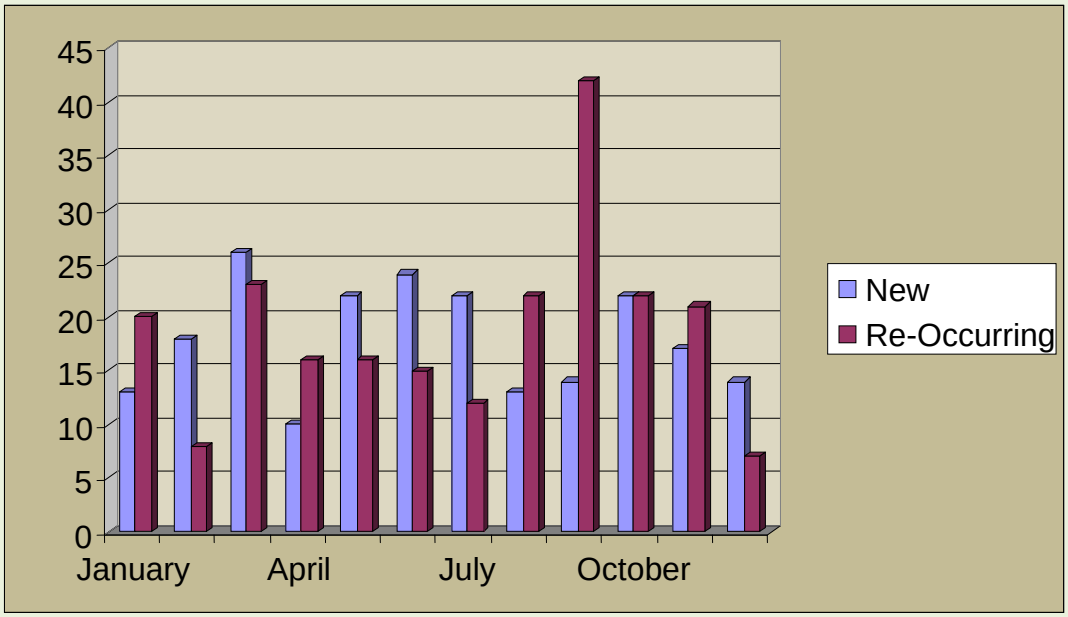
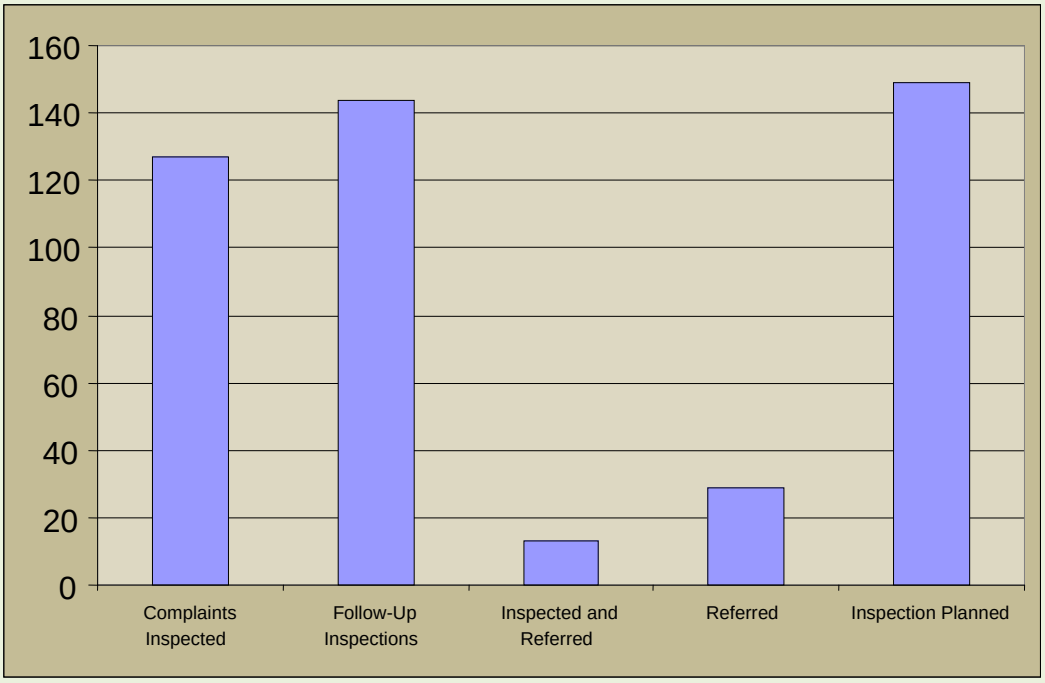


Figure 7. Complaint Activities for 2009.



Management of Complaints

During the year under review, the Agency inspected two hundred and eighty-four (284) complaints. Subsequent to the investigations of these complaints, a number of defaulters were instructed in writing of mitigation measures to be implemented to ensure that their operations are managed in keeping with appropriate environmental standards. In keeping with the Agency's policy of continuous monitoring, one hundred and forty-four (144) follow-up inspections were conducted. Additionally, thirteen (13) complaints were inspected and subsequently referred to the relevant Agencies. Follow-up inspections allowed the Agency to monitor the implementation of mitigation measures as well as address non-compliance with measures prescribed. With the large number of recurring complaints received by the Agency, these visits are essential to resolve the complaint issues. The Agency received several complaints that were not under the purview of the Agency. In these instances, the complaints were referred to the relevant Agency. During the year, the Agency referred 29 complaints to Agencies such as an NDC and the CH&PA (based upon the initial information collected from complainants).

The Agency also made use of other strategic interventions in an effort to arrive at solutions to environmental problems and to ensure compliance with good environmental practices. The Division sought to enforce the EP Act (1996), the EP (Amendment) Act (2005), and the EP Regulations (2000), when defaulters continued to contravene these Laws. During the year, this became increasingly difficult without Legal Counsel on staff, as well as the loss of assistance from the Attorney General's Chambers. Complaints were investigated or referred to the relevant sectoral agency as appropriate, and work is on-going to bring polluters into compliance and to achieve satisfaction for all stakeholders through analysis of historic actions on similarly scaled complaints.

Strong collaboration between Complaints and Response and the Monitoring and Enforcement Units led to greater enforcement actions during 2009.The Agency carried out enforcement action when defaulters are in direct contravention of the EP legislation. As a result, one (1) Cease Order and six (6) Prohibition Notices were served from January to September 2009. Also during this period, one (1) Environmental Authorization (Permit) was suspended for a Wood Processing facility.

Generators, poultry rearing operations, and furniture and woodworking operations were the source of the greatest number of complaints. Swine rearing and waste disposal were also significant causes of complaint. The Industry, Infrastructure and Energy Unit along with the Agriculture, Fisheries and Tourism Unit received the largest amount of complaints in 2009. These complaints were made with regards to fume and noise pollution associated with the operation of generators whereas offensive animal odour, insect infestation, and

improper waste disposal from livestock rearing operations were among the complaints received for the agricultural sector. While in the instance of furniture/wood working operations, dust, noise, and odour nuisances were often the case, improper methods of waste disposal such as dumping and burning of garbage comprised a considerable number of complaints received. Also of note were the complaints received related to noise nuisances from music, liquor restaurants and recording studios.

4.4 Research and Development

Research and Development remains a key area within the EM Division, providing necessary support to the work of the Division and the Agency.

Guidelines, Standards and Code of Practice

Through collaboration with the GNBS and other relevant sector agencies, the EPA continued to develop Standards, Guidelines and Code of Practice. The primary purpose of the *Standards, Guidelines and Code of Practice* is to provide sound, practical guidance to achieve good environmental management in keeping with the Environmental Protection Act No 11 (1996) and the Regulations of 2000. Anyone with an interest in promoting the sustainable development of Guyana's resources who follows these *Standards, Guidelines and Code of Practice* benefits from clear and consistent guidance.

During the year under review, the Technical Committee on Environment revised the Interim Standard for the Emission of Noise into the Environment. The revised document is to be finalized by the end of the first quarter in 2010 following public consultation. The Committee also commenced work towards developing a Code of Practice for the Disposal of Used Tyres. The Committee is developing the Standard in keeping with Guidelines developed by the Basel Convention for the environmental sound disposal of used tyres.

The Technical Committee on Tourism successfully drafted a Code of Practice for Bed and Breakfast Facilities. Following public consultation, the Draft should be finalized early in 2010.

In order to improve the management of human waste, the Technical Committee on Building Code developed a Code of Practice for the design and construction of the ventilated improved pit (VIP) latrine as a sanitary household solution for human excreta. The draft Code of Practice has been reviewed by the public. Through public consultations held in Region Three and Region Six, the Committee received valuable feedback from the public. The Code of Practice is to be finalized shortly.

The Agency continued to support the GNBS with the development of the National Conformity Assessment System through the National Committee on Conformity Assessment. The Agency is working towards the implementation of the ISO 17020 Standard for Inspection bodies. Significant progress was made with the development of an Inspection Management System Manual and Procedures for the EPA in accordance with the ISO 17020 Standard for Inspection Bodies. Work continued on the revision of the draft procedures based on feedback provided by GNBS. The Agency hopes to finalize the manual and all procedures in the coming year.

Projects

The Government of Guyana (GoG), through Local Stakeholder Agencies, partnered with the Caribbean Environmental Health Institute (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, 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 and the launch of the initiative in April, 2009. As a member of the Water Steering Committee, the Agency continued to lend support towards the implementation of the NPA/WSP.

Through the GoG/UNDP Capacity Building for the Management of Natural Resources and the Environment Project, the Agency contracted the Caribbean Environmental Health Institute (CEHI) to conduct a Hazardous Waste Inventory. This Hazardous Waste Inventory provided necessary information for the completion of the questionnaire on the Transmission of Information to the Basel Secretariat. In addition, a Hazardous Waste Management Strategy was developed and submitted to the Agency in the second quarter of the year. The Strategy was developed to improve hazardous waste management in Guyana. The Agency continued to work towards enhancing its capacity to adequately address hazardous waste management in Guyana.

Phase I of the Project on the Assessment of Marine Litter in Guyana funded by UNEP Regional Seas/CAR/RCU, was finalized during the year under review. Following the finalization of the Assessment, there was an intensive initiative to implement the PA/PE Strategy aimed towards informing the public on issues related to Marine Litter. This PA/PE Strategy represented Phase II of the project and reflected recommendations resulting from the study. The UNEP Regional Seas/CAR/RCU project focused on two thematic areas: Education and Awareness, and Institutional, Legislative and Policy Reform.

Multi-Lateral Environmental Agreements

The EPA continued to meet Guyana's obligations under the Basel Convention. The Agency completed and submitted to the Basel Secretariat the Transmission of Information Questionnaire for the year 2008. The Agency commenced managing the transboundary movement of hazardous waste through the processing of notification documents to country of import as well as communicating with countries who wished to use Guyana as a transit point. It was noted that during the year, used lead acid batteries were the major hazardous waste exported. Shipments were generally destined for Korea and Israel for recycling purposes.

Collaboration – Interdivisional and Sectoral Agencies Support

- The EMD provided technical assistance on environmental management issues and supported the EITD in the development and review of fact sheets, brochures, articles, newsletters and the participation in public awareness exercises including workshops and television programmes.
- Representatives of the Agency, continued to actively support national statutory Boards and technical committees, at the CHPA, GGMC, GFC, GNBS, Sea Defence, and the National Trust.
- The Agency revised several existing Memoranda of Understanding (MOU) with Sector Agencies as well as created new MOUs. A MOU was signed in January 2009 between the Environmental Protection Agency and the Ministry of Local Government. During the year, the Agency also worked towards revising MOUs between the EPA and the Ministry of Health, Guyana Forestry Commission, Ministry of Public Works. A new MOU between the EPA and the CH&PA was drafted.
- The Division worked with the Environmental Economist on several activities including starting the review process of the fee criteria, etc.
- EMD continued to involve the NRMD in review of EIA projects which affected the programme areas of that Division.
- The EMD participated in workshops hosted or arranged by the other Divisions.

Field and Laboratory Support

The Food and Drugs Department of the Ministry of Health, the Institute of Applied Sciences and Technology (IAST), and GUYSUCO provided the Agency with laboratory analysis services during the year.

Legislation and Legal Services

The support provided in the past by the Attorney General's Chambers with regard to management of court proceedings on environmental matters to be resolved by the Agency was withdrawn in the first quarter of 2009. The Agency obtained legal assistance through the Office of the President in the person of Ms. Jaya Manikchand.

4.5 Cross-Sectoral Programmes

Integrated Coastal Zone Management (ICZM)

- The ICZM Unit remained dormant during the first half of the year, with the ICZM Officer in the Unit continuing to actively provide support to the other units in the EMD, with particular focus on the Authorization and the EIA process.
- Towards the resuscitation of the ICZM Programme, a working group session with the major stakeholders previously represented on the ICZM Committee was held on October 20, 2009. The main outcomes of the meeting were to have a work programme prepared and having the Committee statutorily constituted.
- The Agency also collaborated with the European Union, Guyana Forestry Commission, and the Sea Defence Division towards the development of an Action Fiche: Global Climate Change Alliance – Sustainable Coastal Zone Protection through a Mangrove Management Project.
- The unit began compiling a report on Mangrove Management in Guyana for Office of the President at their request.

Climate Change

The EPA continued to provide support to and is supported by the Hydromet Division on all Climate Change issues. The National Climate Committee was resuscitated, and, under new Terms of Reference and work plan, the EPA continued to participate in activities of the Committee.

Constraints

- 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.
- Inadequate field staff and scarcity of financial resources, transportation, and equipment to undertake monitoring and inspections continued to be limitations.
- An Environmental Appeals Tribunal (EAT) was not in place to resolve objections and EIA matters in the permitting process.
- Due to the persist demand, most of the Division's time has been invested in on-going activities such as the permitting process and complaints management, and as a result, the extent of verification of existing industries, compliance monitoring and enforcement, research and development that should be done were affected.
- Budgetary constraints have also affected performance, in cases where field activities were planned for monitoring, permitting or complaints response and were delayed. Some projects and programmes were also not implemented.
- Timely submission of the various requirements of EIAs from consultants and developers and the provision of additional information for processing of environmental authorizations caused delays in the issuance of some environmental authorizations. Sectoral Agencies were also slow in providing necessary feedback.
- High staff turnover continues to plague the Agency, and has affected the performance of the Division since new employees lack institutional knowledge.

Important Meetings / Conferences

Officers from the Division participated in a number of meetings and workshops (See Appendix III for details).

5.0 Education Awareness and Capacity Building

The Education, Information and Training Division implements the Education and Awareness Programme of the Agency. Capacity Building is cross-cutting and is undertaken by all of the Divisions. In undertaking its responsibilities, the EIT Division plans and implements public awareness and education programmes with the goal of increasing understanding of environmental issues, thereby increasing participation in environmental decision-making at the individual and societal levels.

During the year 2009, the team of seven within the EIT Division, successfully met the challenges that arose and fulfilled the organizational objectives with a high degree of aplomb and professionalism.

The achievement of benchmarks were realized through tried methodologies applied in a highly interactive and learner friendly environment. Maximum use was made of multiple media in the dissemination of information, and collaborations with partners and sector agencies were enhanced and maximized. This had a direct link to the expanded scope and reach achieved during the year as inroads were made with new target groups and communities in the three counties.

Additionally, the position of Documentation Assistant which was vacant for the period January-October, 2009, was filled. With a full staff complement, the support system for the implementation of programmes and the services provided internally as well as to members of the public were bolstered.

The targeted outputs of the Division in 2009 are summarised below.

5.1 Development of Educational Materials

The development of educational materials is a key element of the work of the Division. During the year, relevant information was selected and developed to meet the needs of varied target groups. This information was packaged on a range of topics and in varied formats for dissemination to groups and individuals throughout the country. Table 8 shows the range of materials developed in 2009.

Table 8. Education and Awareness Materials Developed in 2009.

Type	No.	Title
Information packages	**7**	Range of topics including Wetlands, Pollution, Waste Management, and Biodiversity.
Posters	**5**	Portraying Marine Litter, the combined National Programme of Action and Water Safety Plan, Correct Mining Practices, and Bio-safety.
Brochures	**3**	Marine Litter, Career Opportunities within the Agency, World Water Day.
Booklets/ Manuals	**2**	Climate Change for Home-Makers, draft of "Kids in a Changing Climate".
Stickers	**4**	Earth Day, World Water Day, Mining Exhibition, Annual Caribbean Scout Jamboree.
Bookmarks	**2**	Climate Change and LCDS.
Calendar	**1**	2010 Calendar.
Articles	**113**	Guyana Chronicle and Guyana Times Newspapers.
News Letters	**4**	Greenleaf was produced for each quarter of the year.
Reports	**1**	Annual Reports 2007 and 2008.

Conceptualisation and Review of Materials

The dynamic nature of education and training necessitates continuous adaptation, flexibility in creation and presentation of programmes. The Division was therefore integrally involved in the review as well as development of materials for use within the Agency. During the year, the concept for use on one of the Agency's most important and widely disseminated educational tools – the Calendar - was developed for the production of the 2010 issue.

In addition, the Division compiled a Manual on Climate Change for Home-Makers as well as prepared a draft of a Climate Change Workbook for Primary Schools.

Brochures on Marine Litter, Career Opportunities within the Agency, Trans-boundary Waters were created among others, as well as Flyers, Stickers and Bookmarks on a range of environmental issues including Climate Change.

Posters were also produced during the year on Marine Litter, the combined National Programme of Action and Water Safety Plan, Correct Mining Practices, and Biodiversity.

Press Releases and other information, including messages on Littering, for the media were compiled and submitted to the Government Information Agency for dissemination.

The Agency's news organ, the Greenleaf, was produced for each quarter of the year while the Annual Reports for 2007 and 2008 were finalized to include Summaries, Conclusions and Audit Reports.

5.2 Outreach

The EIT Division is tasked to ensure environment education reaches the populace and to equip the masses to make sound decisions for the maintenance of a safe and healthy environment. During the year, this task was undertaken with enthusiasm and innovation and this was evidenced by the increase in the number and reach of activities undertaken by the Division. Outreach programmes were successfully executed for the following occasions:

1. International Day of Biodiversity.
2. UG Open/Career Day.
3. World Water Day.
4. Earth Day.
5. World Environment Day.
6. Wildlife Festival.
7. International Coastal Clean-Up.
8. International Ozone Day.
9. International Day for Climate Action.

Anti-Littering

The EIT Division continued collaboration with the EM Division during the year in advancing the Agency's Anti-Litter Programme. Work was successfully conducted with Neighbourhood Democratic Councils (NDCs), Parent Teachers' Associations (PTAs), and Schools. A "Clean Classroom Competition" was introduced at one secondary school in Georgetown and meetings were held with members of the Regional Executive and Local Government Ministry, Region 5 RDC, Eccles/Ramsburg, Diamond/Grove, Rosignol/ Zeelust, Canals Polder and Hydroni/Parika NDCs, and the New Amsterdam Town Council.

Marine Litter Public Awareness

During the year, the Division created and successfully implemented a public awareness strategy for Marine Litter as a component of the Marine Litter Project. The strategy comprised a combination of media programmes and community participation and yielded satisfactory outputs in the form of published features in the Guyana Chronicle and Guyana Times Newspapers, a Poster, a Brochure, and the extension of Coastal Clean Up to the three counties of Guyana.

Exhibitions/Fairs

Environmental awareness was also brought to the public eye at several fora where there was mass participation. This included the University of Guyana Career Day Fair, the Global Development Village hosted by the Scout Association of Guyana, the Open Day Exhibition hosted by the Guyana Red Cross Association, and the Guyana Geology and Mines Exhibition.

Environmental Clubs and Camp

There was consorted effort during the year to revitalize Environmental Clubs countrywide and equip them to function vibrantly. Assistance and guidance was provided for programme activities for 2009 and the submission of reports to the EPA on details of membership and activities were encouraged.

In addition, an Environmental Camp was this year held during August 25–28 under the theme "Unite to Combat Climate Change" at the Yarrowkabra Training Centre, Linden/Soesdyke Highway. The Camp was funded by Conservation International through the Joint Education, Information and Communication programme. A major output of the Camp was a Youth Charter for Climate Change.

Wild-Life Festival

Another positive step taken by the Division during the year was work with the Wildlife Clubs of the North Rupununi. The 16 Clubs of this Region are not easy to access due to their geographic location and high cost of access to the far flung areas. Being able to interact with representatives from these groups was therefore one of the highpoints of the Division's programme for the year.

Maximum use was made of the opportunity and interactive sessions on Waste Management and Programme Planning were conducted. Club Members were able to plan programmes for the remaining months of 2009 as well as for the first quarter of 2010.

Climate Change Workshops

Climate Change Workshops were held for secondary school students in Berbice, East Coast, West Coast, and East Bank Demerara, as well as for Housewives in Berbice and West Bank Demerara as part of World Environment Day activities during the year.

Presentations

A number of Presentations on a range of issues were prepared for delivery at interactive outreach sessions countrywide. These included: the NDC and Waste Collection and Disposal, Solid Waste Management, 3Rs, Anti-Littering and Enforcement, the EPA Regulations and the Anti-Littering Programme, Water is Life – Wetlands Connect Us All, the Environment and Environmental Stewardship, Environmental Stress, Pollution, Youth and the Environment, Climate Change - Conservation in the Home, the Environment and Climate Change, 350, Uniting for Climate Action, Marine Litter, Mining and the Environment, Biodiversity and Climate Change, Schoolyard Ecology, Charter, Ozone and Planning for Environmental Clubs, among others.

In-house Seminars

Staff of the Agency benefited from in-house seminars co-ordinated by the Division on a diverse range of topics including the Guyana Shield Initiative Project**,** Marine Litter, and Benefits of Insurance, among others.

5.3 Media Programmes

The media programmes undertaken by the Division continued to be undertaken with creativity, and were a source of satisfaction to the Division.

'Our environmental Column- Guyana Chronicle'

A total of fifty-one (51) articles was published in the 'Our Environment' column of the Guyana Chronicle during the year, and in addition to the usual weekly submissions, a request was made for four (4) additional kids' articles for the Kid's Page Special in Sunday's Pepper-pot during the month of August.

'Our Earth, Our Environment Column- Guyana Times'

Fifty-five (55) articles were prepared for **'Our Earth, Our Environment'** Column in the Guyana Times during the year.

Guyana Today

Participation on the Environment Segment of the Guyana Today Show was delayed. However, 29 appearances were made by the EPA and partners during the year in addition to Panel Discussions for Environmental Days, and the Marine Litter Public Awareness.

Media Messages

Short Messages on Littering aimed at educating and motivating behavioural change were created and sent for publication by the Media through GINA. One of these messages was adapted for a television advertisement produced by GINA and broadcast by the National Communications Network (NCN).

5.4 Documentation Centre

A Documentation Assistant joined the staff of the EIT Division and has been involved in organising materials in the Documentation Centre, filing Clippings of Newspaper Articles, and providing assistance to Researchers.

<u>Proposals</u>

The Division created three (3) proposals for Public Awareness for PET Bottle Recycling, Anti-Littering, and Marine Litter.

Collaborations, Partnerships and Staff Training

The achievements of the Division during the year to some extent stemmed from the cordial relations with other stakeholders and partners, and the dynamic collaborations forged with them. These included Iwokrama, Conservation International, the Inter- American Institute for Cooperation in Agruiculture – IICA, University of Guyana, Guyana Geology and Mines Commission among others.

Avenues for possible further collaboration were also explored during the year with the Women Affairs Bureau, and the National Parks Commission.

Staff members of the Division were also exposed to a number of training courses which aimed at building their capacity. Some of the sessions attended included a World No – Tobacco Day Seminar, Chainsaw Milling Workshop, Technology Trends and Application of Photovoltaic Systems, REDD, REDD+ and Guyana, Development of a Monitoring, Reporting and Verification System for Guyana**,** Mitigation and Abatement Analysis Workshop, among others.

The foundation is therefore well established for the continuation of efficient delivery of public education and awareness programmes in the year ahead.

CONCLUSION

The Agency successfully implemented its work programme in 2009. This is laudable in view of the many challenges that emerged and were addressed. The Agency had to make up for down-time from the movement of its NRM and EIT Divisions to the new location at Sophia, gaps in power supply, and telephone and internet services. Additionally, ensuring a full complement of staff was a significant challenge in the face of many vacancies emerging over the year but despite this, the Agency was able to forge ahead with its planned activities.

Particular success was achieved in the areas of fulfilling the responsibilities under the Convention of Biological Diversity through the Biodiversity Enabling Project. The finalization and submission of the Protected Areas Bill, the Access and Benefitting Sharing Regulations and the Wildlife Conservation Regulations are notable achievements particularly in view of the elaborate processes involved in their preparation.

Environmental Management by its very nature is challenging, and the Agency is particularly satisfied with the proactive move it has taken to pursue the renewal of authorisations, and the response it has received over the year.

The complaints and response aspects of the Agency work has been growing steadily and with the level of human and other resources available, their resolution continued to be a challenge in 2009. This is an area that would be a focus for the Agency in strengthening its collaboration with sectoral partners.

Whenever opportunities to build capacity were available, these were capitalized on by the Agency. This is an area which will continue to be pursued by the Agency to ensure that it has the requisite capability to meet the needs of society as it relates to environmental management and natural resources conservation and management.

APPENDIX 1 - Staff Training

Training Event	Venue	Date (2009)	Participant (s)	Designation and Division
3rd Stakeholder Workshop for the Kanuku Mountains Management Planning Project	Lethem	January 21-24	Chuvika Harilal	EO II - NRMD
National Climate Committee (NCC) Meeting	GFC Boardroom	January 28	Dominique Saheed	SEO (A.g.) - NRMD
Retreat to Review of the National Heritage Trust Act (National Trust)	Prairie International Hotel	January 29	Indira Mattai	SEO - EMD
GNBS Workshop on the ISO 26000 Standard on Social Responsibility	Tower Hotel	February 4	Tashana Redmond	SEO -EMD
"Sustainable Manufacturing as a new frontier for the Caribbean (GMSA)	Cheddi Jagan Research Centre	February 19	Indira Mattai Tashana Redmond	SEO –EMD SEO -EMD
Solid Waste Management (facilitated by IDB) -	IDB		Rameena Mangal Colis Primo Felicia Adams	EO I-EMD EOII –EMD EO I- EMD
Training in Resources Valuation (GL&SC)	GLSC	March 2-6	Juliana Persaud	EO II - NRMD
Training in Enforcement and Hazardous Waste (EPA-UNDP-CEHI)	Girls Guide Pavilion	Commenced April 15 for 6 weeks(3 wks at a time)	Rameena Mangal Colis Primo Tashana Redmond Renwick English	EO I-EMD EOII –EMD SEO – EMD EO II EITD
Watershed Modelling & Management Workshop	University of Guyana	April 20-21	Clydecia McClure Teijvarti Persaud	EO II – NRMD EO II EMD

Greenhouse Gas Emission Inventory	Ministry of Agriculture	May 18- 22	Rameena Mangal Uditt Jagdeo	EO I – EMD EO I- EMD
NCSA Stakeholder Consultation Workshop (EPA)	Hotel Tower	May 21	Teijvarti Persaud	EO II - EMD
Watershed Management Plan Stakeholder Consultation Workshop	GL&SC	June 09	Teijvarti Persaud	EO II - EMD
Validation Workshop on the Draft 2009 Investor Roadmap	Grand Coastal Inn	June 17	Tashana Redmond	SEO- EMD
Workshop on Traditional Knowledge incorporation into Biodiversity Management	Tower Hotel	June 23	Sharifah Razack Dominique Saheed Oumar Ramcharran	Director (a.g.) NRMD SEO – NRMD EO II - NRMD
Seminar, Counteracting the Tobacco Industry	Cara Lodge Hotel	June 24	Anzaleen Hoosein Sean Mendonca	EO I – EMD EO I- EITD
Public Launch of Kaieteur National Park Management Planning Process	Hotel Tower	June 25	Sharifah Razack Dominique Saheed Chuvika Harilal Julianna Persaud	Director (a.g.) NRMD SEO – NRMD EO II – NRMD EO II - NRMD
Vulnerability and Adaptation Assessment Workshop	Ministry of Agriculture	July 7-10	Geeta Singh Renwick English	Director – EMD EO II - EITD
Chainsaw Milling the Guiana Shield/Caribbean Workshop	Regency Hotel	July 8-9	Oumar Ramcharran Sean Mendonca Uditt Jagdeo	EO II – NRMD EO I- EITD EO I – EMD
Technology Trends and Application of Photovoltaic Systems	Guyana Energy Agency	July 27-29, August 3-5	Yasmin Farouk Veronica Rose	EO I- EITD EO I- EMD

SAICM Project Planning & Inception Workshop on National Chemicals Management Profile	Ministry of Agriculture	July 29-30	Karen Alleyne	EO II -EMD
PAHO Consultation on the Biannual Workplan	Grand Coastal Inn	July 31	Tashana Redmond	SEO - EMD
GSWMP, Institutional Strengthening workshop on Solid Waste Management in the context of Global Warming	Ministry of Finance Training Room	August 10 & 21	Anzaleen Hoosein Veronica Rose	EO I- EMD EO I-EMD
Public Consultation on the Draft Guyana Standard, "Code of Practice for the design and construction of Ventilated Improved Pit (VIP)	RDC Office, Region 3	August 12, 2009	Tashana Redmond	SEO - EMD
National Consultation on a Draft Public Education Strategy for Climate Change	Red House	August 14	Padmini Persaud	SEO-EITD
Consultation Workshop on the Resource Valuation Report of the Case Study Area	Guyana Lands & Survey Commission	August 17	Nalissa Persaud	EO II - EMD
Launch of Component 300: Sun component 312 - CARICOM CIDA Trade and Competitive Project	Ministry of Foreign Affairs	August 19	Padmini Persaud	SEO -EITD
Capacity Building Related to Multilateral Environmental Agreements (MEA) in African, Caribbean and Pacific (ACP) Countries - The Caribbean Hub Needs Prioritization Workshop	Liliendaal Convention Centre	September 8-10	Geeta Singh Tashana Redmond	Director –EMD SEO - EMD
Workshop, Capacity Building to Multilateral Environmental Agreement (MEA)	Convention Centre	September 8 -10	Damian Fernandes Dominique Saheed	Director NRMD SEO - NRMD
Workshop on the Monitoring, Reporting and Verification System for the Implementation of the REDD Framework in Guyana	Guyana Forestry Commission	September 15	Geeta Singh Asma Sharief	Director –EMD SEO I - EMD

UNDP Workshop on Results Based Management (RBM)	Ocean View Conference Centre	September 21	Tashana Redmond Oumardatt Ramcharran	SEO –EMD EO II -NRMD
Remote Sensing	Guyana Lands & Surveys Commission	October 19, 2009 to November 06	Nadia Nasir Chuvika Harilal Teijvarti Persaud	GIS – Technician – AD EO II – NRMD EO II - NRMD
Access and Benefit Sharing Workshop.	Foreign Services Institute, Ministry of Foreign Affair	October 23	Damian Fernandes Dominique Saheed Oumar Ramcharran	Director – NRMD SEO –NRMD EO II - NRMD
Annual NARI Research Conference	NARI	October 12-13	Anzaleen Hoosein	EO I- EMD
Public Presentation on Reduced Emissions from Deforestation and Degradation – plus (REDD+) and Guyana by Ralph Ashton.	Cara Lodge	October 23	Geeta Singh Uditt Jadgeo Liddon Kellman Renwick English	Director –EMD EO I –EMD Field Technician – EMD EO II - EITD
Participated in a Monitoring, Reporting and Verification Systems Workshop on REDD+ and Guyana's LCDS.	Savannah Suite, Pegasus Hotel	October 27-28	Oumar Ramcharran	EO II- NRMD
Implementation of Incentive Measures Workshop.	National Library	October 28	Damian Fernandes Dominique Saheed Stacy Lord	Director –NRMD SEO – NRMD EO I -NRMD
Workshop on Guyana's Monitoring Reporting	Savannah Suite,	October 28 - 29	Hance Thompson	SEO –EMD

and Verification (MRV) System.	Pegasus Hotel		Asma Sharief Sean Mendonca	EO I- EMD EO I-EMD
Mitigation & Abatement Analysis Workshop aimed at gathering information for the preparation of Guyana's Second National Communication to the UNFCCC.	Ministry of Agriculture	November 10-12	Tashana. Redmond Veronica. Rose Renwick English	SEO –EMD EO I – EMD EO II - EITD
Workshop on Medical Waste Regulations and Guidelines (MoH).	Regency Suites	November 17	Geeta Singh	Director - EMD
Chainsaw Milling Project: Preparatory Meeting of the MSD Process	Cara Lodge	November 19	Uditt Jagdeo Rameena Mangal Oumardatt Ramcharran	EO I – EMD EO I- EMD EO II- NRMD
Workshop- Hydroclimatic Disasters in Water Resource Management	Regency Hotel	Nov 30- Dec 2	Indira Mattai Geeta Singh	SEO- EMD Director -EMD
Regional Workshop on REDD	Guyana Forestry Commission	December 2-3	Sean Mendonca Damian Fernandes Hance Thompson Asma Sharief	EO I- EITD Director, NRMD SEO-EMD EO I-EMD
GSWMP, Institutional Strengthening Workshop	Guyana Teacher's Union	Dec 4	Liddon Kellman Veronica Rose	Field Technician –EMD EO I-EMD

Appendix II – NRMD Meetings and Training in 2009

Meetings
• United Nations Development Programme Meetings;
• Meeting on GEF Funded Projects;
• Meeting on Phase II Proposal for the Capacity Building for Management of Natural Resources and the Environment Project;
• GEF Working Group Meetings;
• Meetings with Ministry of Legal affairs on the ABS Regulations;
• Invasive Alien Species Task Force Meetings;
• Amazon Cooperation Treaty Organization (ACTO) Meeting;
• Meeting with the Amazon Geo-referenced Socio-environmental Information Network (RAISG);
• Bilateral Portfolio Meeting;
• Biosphere Meeting;
• Meeting on Protected Areas Cost Modelling;
• Wildlife Management Authority Meeting;
• Kaieteur Management Planning;
• Occupation Health and Safety;
• Working Group Meeting on Agriculture and the Environment;
• First Stakeholder Meeting WWF Wetlands Assessment Project;
• PMR Meeting at Ministry of Finance;
• Meeting on KNP Management Plan, KR 037 Project and the Wetlands Project;
• Meeting to discuss E&A's contract and the buildings at Kaieteur;
• Meeting on the proposed Kanuku Mountain Protected Area;
• Multi-Stakeholder Dialogue Preparatory Meeting under the Chainsaw Milling Project;
• Meeting for the Clearing House Mechanism; and
• Annual Review Meeting on the implementation of the NCSA and BEAP.
Workshops/Seminars
• Watershed Management Workshop;
• Stakeholder Workshop for the Kanuku Mountains Management Planning Project;
• National Toshaos Conference;
• Results Based Management Workshop;
• Workshop, Capacity Building to Multilateral Environmental Agreement (MEA);
• Workshop on Access and Benefit Sharing;
• Workshop on Implementation of Incentive Measures;
• Monitoring, Reporting and Verification Systems Workshop on REDD+ and Guyana's LCDS; and
• Ecosystem Services Monitoring at the UNDP Office on December 14, 2009.
Training
• Remote Sensing Training.

ENVIRONMENTAL PROTECTION AGENCY

STAFF LIST-at the end of December, 2009

Name of Officer	Designation
Indarjit Ramdass	Executive Director
ADMINISTRATIVE DIVISION	
Dhanrajie Madray	Director - Admin
Vacant	Executive Assistant
Office of the Executive Director	
Vannie Rooplall	Executive Assistant
Ramsarran Etwaroo	Driver
Policy, Planning & Research Unit	
Vacant	Environmental Economist
GIS Unit	
Vacant	GIS Specialist
Nadia Nasir	GIS Technician
IT Unit	
Vacant	Technical Support Officer
Ryan Tiwari	IT Specialist
Human Resources Unit	
Seema Greene	Human Resources Officer
Bibi Fatima Ali	Cleaner
Laverne Rampersaud	Cleaner
Finance Unit	
Vacant	Finance Officer
Raywattie Singh	Accounts Clerk
Fiona Marshall	Accounts Clerk
Hollee Ragnauth	Snr. Accounts Clerk (ag.)
Procurement Unit	
Vacant	Administrative Officer -General
Dharamdei Jodhan	Administrative Assistant
Vickkaesy Sukhrram	Office Assistant
Orlando Kirton	Office Assistant
Mr Mohamed Baksh	Driver
Ms Kamal Ramdial	Driver
Mr Anthony Fraser	Driver
Environmental Management Division	
Geeta Singh	Director
Tashana Redmond	Senior Environmental Officer
Indira Mattai	Senior Environmental Officer
Hance Thompson	Senior Environmental Officer
Sonia Gumbs	Senior Environmental Officer
Felicia Adams	Environmental Officer I
Asma Sharief	Environmental Officer II
Teijvartie Persaud	Environmental Officer II
Anzaleen Hoosein	Environmental Officer I
Nalissa Persaud	Environmental Officer II
Colis Primo	Environmental Officer II

Rameena Mangal	Environmental Officer I
Karen Alleyne	Environmental Officer I
Cleavon Cameron	Environmental Officer I
Veronica Rose	Environmental Officer I
Samantha Heyligar	Field Technician
Liddon Kellman	Field Technician
Radika Motoo	Executive Assistant
Education Information & Training Division	
Sharifah Razack	Director
Padmini Persaud -Roberts	Senior Environmental Officer
Yasmin Farouk	Environmental Officer l
Sean Mendonca	Environmental Officer I
Candacie Brower-Thompson	Environmental Officer lI
Renwick English	Environmental Officer lI
Fareena Ali	Documentation Assistant
Natural Resources Management Division	
Damian Fernandes	Director - NRMD
Dominique Saheed	Senior Environmental Officer
Chuvika Harilall	Environmental Officer lI
Oumardatt Ramcharran	Environmental Officer lI
Juliana Persaud	Environmental Officer II
Stacy Lord	Environmental Officer l
Ashiana Persaud	Executive Assistant

Total Staff

Total Males	17
Total Females	34
	51