

ENVIRONMENTAL PROTECTION AGENCY



ANNUAL REPORT 2012

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OVERVIEW OF ACHIEVEMENTS 2012

The Environmental Protection Agency (EPA) began the year 2012, under the Ministry of Natural Resources and the Environment (MNRE), a new Ministry, established by the Government in December, 2011. The EPA adjusted over the year, to the different and additional processes and procedures established by the MNRE.

The Agency experienced the loss of six (6) staff members from its core programme who were assigned by the MNRE to its Head Office, National Parks Commission and the Pick-it-Up Campaign. As a result, the Natural Resources Management Division battled without a Director and a Special Projects Officer, for the entire year. Similarly, the Education, Information and Training Division operated without its sole Senior Environmental Officer and one of its four (4) Environmental Officers.

There was no movement on the Agency's proposal for the splitting of its Environmental Management Division (EMD) into two Divisions, each to be managed by a Director; positions for some additional staff were also included in the proposal. As such, the EMD continued to grapple with an increasingly excessive workload throughout the year exacerbated by frequent staff turnover.

The Agency also grappled with the challenge of completing its work-plan for the year in face of the late receipt of its subvention due to a lengthy delay in the passing of the 2012 National Budget. A total subvention of XXX was received for year, with XXX of this amount coming from the Environmental Trust Fund.

In spite of the various challenges faced the Agency worked assiduously towards completing its 2012 work-plan. Several major achievements were made under the various programmes implemented by the three technical Divisions of the Agency.

Natural Resources Management

Phase I of the € 2.4 M KfW funded Guyana Protected Areas System (GPAS) Project completed

A range of activities were financed by this Project in the Kanuku Mountains and Shell Beach which ultimately, led to these areas being declared legally protected in 2011. The Project also, financed sustainable livelihood initiatives; delineation and management planning processes; drafting of the current Protected Areas Act, 2011; and infrastructure development/livelihood activities in the Upper Mazaruni and Kaieteur National Park.

€ 5.15M Financing Agreement for GPAS Project Phase II Signed

This second GoG-KfW € 5.15M financing agreement is for support of Phase II of the GPAS Project. Approximately € 1.15M of GPAS Phase II funds is for infrastructure measures for the Protected Areas Commission; a management plan for the Shell Beach Protected Area; and follow-up support for community livelihood projects developed under GPAS Phase I. The remaining € 4M will be used as an endowment to the National Protected Areas Trust Fund (NPATF), to support a sustainable and long-term financing mechanism for the NPAS.

€ 4.3M committed to Guyana by the Germany Government for GPAS Phase III

An additional € 4.3M has been committed by the Germany Government for GPAS Phase III. This project aims to support the effective management of the National Protected Areas System, improve livelihoods and resource management capacities in local communities, and improve capabilities of the Environmental Protection Agency and Guyana Forestry Commission.

CBD's Strategic Plan for Biodiversity 2011-2020

A long-term action plan for the implementation of the UNCBD Programme of Work on Protected Areas was developed and submitted to the Secretariat with a view of contributing to the implementation of the CBD's Strategic Plan for Biodiversity 2011-2020.

Issued Biodiversity Research Permits

22 research applications were received; 28 research permits were issued; 15 exports permits were issued and a total of US\$10,500 was generated.

Commenced Regional Project on Biosafety

This project seeks to implement effective and sustainable National Biosafety Frameworks which cater for national and regional needs and are compliant with the Cartagena Protocol on Biosafety. The country budget and activities were approved and an initial disbursement of USD 18000 was received.

Implemented Biosafety Clearing House (BCH Phase II)

Guyana received US\$10,000 for the execution of 3 training workshops aimed at enlightening users on the modalities in place for use and contribution to the BCH. 50 persons were trained during the three workshops and 6 stakeholder agencies have been designated Competent National Authorities.

Commenced the Revision of the NBSAPs and Development of Fifth National Report to the CBD

The first disbursement of US\$50,000 to support this Report was received and steps are currently being taken to establish a Project Management Unit.

Environmental Management Programme

Authorized Operations

A total of two-hundred and eighty-eight (288) Applications for Environmental Authorizations were received from January to September 2012, of which one hundred and forty-eight (148) or over fifty percent (50%) have been processed to the point where a Permit was granted.

Investigated Environmental Complaints

One hundred and ninety four (194) environmental complaints were received from January to September 2012, representing an increase by seven percent (7%) compared with 2011. Despite this, the Agency was able to show a nine percent (9%) increase in the number of complaints investigated and follow-up visits conducted.

Conducted Environmental Audits

A total of sixty nine (69) Environmental Audits were conducted representing a four percent (4%) increase over last year and six (6) Compliance Inspections.

Environmental Awareness and Capacity Building

Raised Environmental Awareness

- Outreach was conducted with forty-four schools reaching some two thousand students on environmental issues related to climate change; biodiversity loss; and solid waste management.
- A three-day Environmental Camp was also conducted for thirty-five 6th graders and their teachers from eight primary schools in Regions 4, 5, and 10.
- Weekly discussions were coordinated on environmental issues and aired on the Guyana Today Show on NCN Channel 11, while, weekly articles were prepared on various topics for the Guyana Chronicle newspaper and Guyana Times Newspaper respectively.
- EPA's Newsletter the "Green-Leaf" was produced on a quarterly basis to inform the public of the major events and developments of the EPA. It was disseminated electronically to a wide range of stakeholders.
- The Agency intensified its participation in exhibitions this year which led to mobilization and set-up of an EPA Booth at ten (10) exhibitions compared to two (2) last year.
- A Youth Essay Competition on Coastal Zone Management was held which attracted thirty-eight (38) entries and two Coastal Clean-Ups were conducted in Berbice, one at No. 63 Beach and the other at Wellington Park.

Implemented Pick-it-up Guyana Campaign

Television programmes to highlight the issue of littering were produced and broadcast and a number of Press Conferences were hosted to launch initiatives in support of the Pick- it- Up Guyana Campaign.

Observed International Environmental Days

- An Art Competition was organized for Primary Schools and a Youth Biodiversity Forum for Secondary Schools in Essequibo under the theme "Marine Biodiversity" in observance of International Day of Biological Diversity.
- The Annual Green Walk was organized under the World Environment Day theme *Green Economy: Does it include you?* The event attracted hundreds of persons including His Excellency the President Donald Ramotar, and the Honourable Minister Robert Persaud, Minister of Natural Resources and the Environment.
- Two Rides-for-the-Environment, were also organized by the EPA in observance of WED - one in Linden and the other in Anna Regina. Both events attracted good participation.
- A Coastal Clean-up and data collection exercise was organised through a collaborative effort of the MNRE, EIT Division-EPA and Pick-it-up Guyana. The activity which took place along the Seawall from the Kitty to Kingston attracted approximately two hundred and fifty (250) persons representing ten (10) groups.

Conducted Teacher Training Workshop

An environmental education teacher training workshop was conducted in October, at Camp Wesleyana on the Soesdyke-Linden Highway. This has become an annual activity and this year, twenty-eight (28) 2nd year students and two lecturers of the Cyril Potter College of Education (CPCE) participated in the workshop>

Administration

Finance

The Agency received subventions totalling G\$148,192,000 from the Government of Guyana, compared to G\$123,334,000 in 2010. The difference between the total subvention received and the actual expenses for the year which was G\$167,125,000 was supported by revenues from the Agency which totalled \$20,000,000. Over the year, the Agency was dependent on Miscellaneous Receipts to support its operational expenses and this placed constraints on the Agency with regards to filling vacant positions and providing adequate support for field activities.

The financial statements for the Agency and the Wildlife Division for 2010 were prepared and submitted to Audit Office of Guyana.

All financial reporting requirements were met for the Biosafety Project; WWF KR- 37 Project and the KfW Small Grants Project being implemented by the Agency.

Administrative Services

The Administrative Unit continued to provide administrative and logistical support to all Divisions of the Agency.

Human Services

The Human Resources Unit continued to be responsible for recruiting a skilled and committed workforce and building a team of professionals empowered to perform competently and with excellence.

Workshop and Meetings

Staff of the Agency continued to benefit from training both in Guyana and overseas. In 2011, ten (10) Cabinet Papers were received for overseas workshops and meetings and a number of local training sessions were attended.

Geographical Information Systems

The GIS Database was updated with new information acquired from the field and from Sectoral Agencies such as the Guyana Lands & Surveys Commission (GLSC), Guyana Forestry Commission (GFC), and the Guyana Geology and Mining Commission (GGMC)

1. GUIDING LEGISLATION AND STRATEGIES

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 05, 1996, the **Environmental Protection Act (EP Act)** was passed in Parliament, thereby, establishing the Environmental Protection Agency (EPA). The EP Act mandates the Agency 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 its mandate, the Agency enables Guyana to contribute to global and national environmental protection, sustainable use of natural resources, and conservation. To achieve its mandate, the Agency develops and implements education, regulation and enforcement programmes and uses partnerships and collaborative approaches to strengthen the impact of its interventions.

1.3 FUNCTIONS

The functions of the Agency are stated in the EP Act, Part II 4 (1) and can be classified broadly as being *regulatory, coordinating, and the promoting of public participation in environmental protection*.

As part of its regulatory functions, the Agency enforces the EP Act (1996) and its amendments, and the Environmental Protection Regulations (2000), to ensure that measures for environmental protection are integrated into development activities.

The Agency also coordinates the sustainable use and conservation of Guyana’s natural resources. Both the coordinating and regulatory functions of the Agency 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

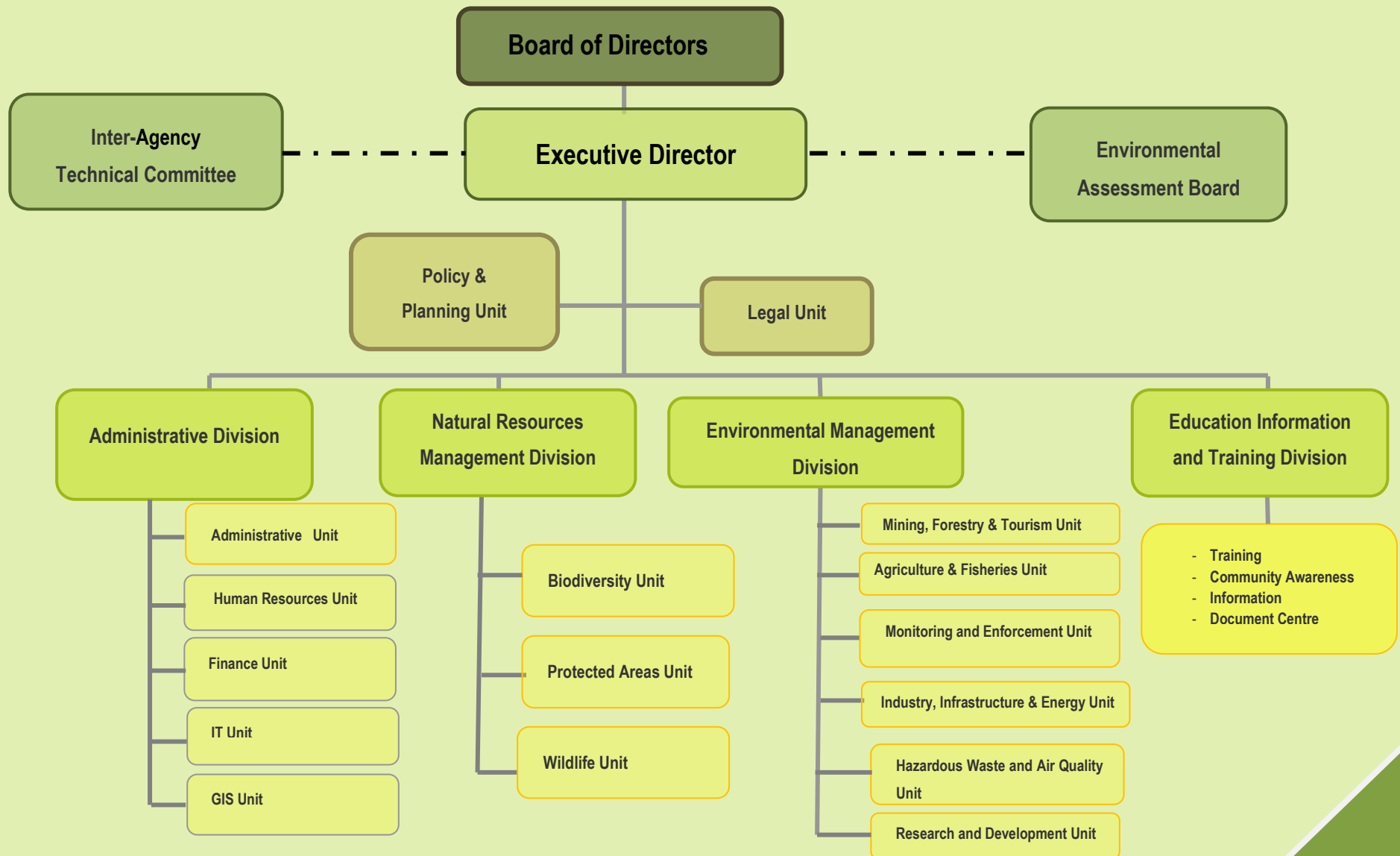
The Agency developed its Strategic Plan for the period 2006-2010. In the Plan, FOUR Themes are identified which are linked to two levels of objectives: Outcomes at the first level and Specific Objectives at the second level. The first theme: ***Promoting the Sustainable Use and Conservation of Biodiversity*** 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.

The Agency is seeking to develop a new Strategic Plan, taking into consideration new directions under the Low Carbon Development Strategy (LCDS) and the focus of the new Ministry of Natural Resources and the Environment (MoNRE).

1.5 ORGANIZATIONAL STRUCTURE

Figure 1 below shows the Organizational Structure of EPA during 2010. The Chairman of the EPA Board and the Executive Director of the EPA both report to the Minister of Natural Resources and the Environment.

Figure 1: Organizational Structure of EPA.



1.6 PROGRAMME AREAS

The mandate of the EPA is implemented through its Natural Resources Management (NRM), Environmental Management (EM), Education, Awareness, Capacity Building and Cross-Sectoral Programmes (Figure 2). 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, both of which are cross-cutting.

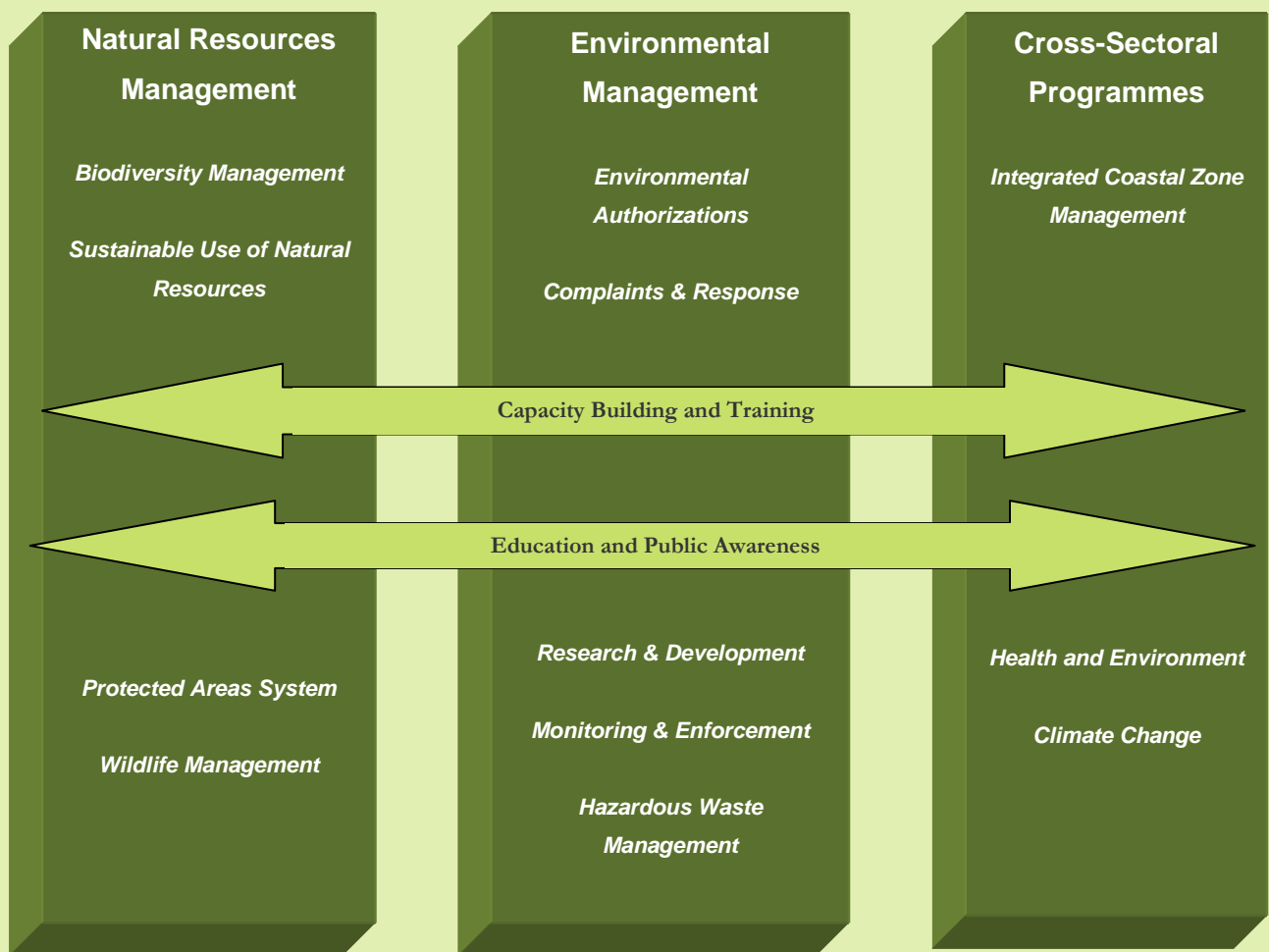


Figure 2: EPA Programmes, Components and Links.

1.6.1 Natural Resources Management

Having ratified the Convention on Biological Diversity (CBD) and the Cartagena Protocol on Biosafety (CPB), Guyana committed to developing National Strategies, Plans and Programmes for the conservation and sustainable use of biodiversity, and the regulation of the transboundary movement and use of Living Modified Organisms (LMOs) and Genetically Modified Organisms (GMOs) 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, and CPB 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 and with Amerindian Communities in Guyana. Some of the main collaborative Sectoral partners include the Guyana Forestry Commission, Ministry of Agriculture, Wildlife Division, Guyana Geology and Mines Commission, University of Guyana, National Parks Commission, among others. There is also collaboration with 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.

The most important strategy documents guiding the work of the NRM Programme are the National Biodiversity Action Plans (NBAP I and II) and the National Biosafety Framework (NBF), which outline the major programme areas for biodiversity management in Guyana as: Conservation of Biodiversity, Sustainable use of Biodiversity, and Conservation and Sustainable use of Wildlife.

1.6.2 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 apply to the Agency for an Environmental Authorization. When an application is received, it is screened by the Agency, which then publishes its decision, on whether an Environmental Impact Assessment is required or not, and whether an environmental authorization will be granted or not.

- **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:** The EP Regulations (2000) provide for the regularizing of existing industrial activities 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 and Codes of Practice.**
- **Coordinating Environmental Management through Stakeholder collaboration.**
- **Managing Environmental Complaints:** the EMD continues to resolve legitimate environmental complaints.
- **Preparing for environmental emergencies.**
- **Enforcement.**

1.6.3 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 has served 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, promoting public awareness of and participation in environmental decision-making as well as informing the public of the systems and procedures established by the Agency for environmental management and conservation.

1.6.4 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.

1.6.5 Conventions and Multilateral Environmental Agreements (MEA)

Basel Convention

The Environmental Protection Agency is Guyana's Focal Point for the Basel Convention for the control of transboundary movements of hazardous wastes and their disposal. During the year, the Agency completed the Basel Convention Questionnaire for 2009. In addition, the Agency sought technical assistance from the Basel Convention Secretariat towards the finalization of the draft Environmental Protection (Export and Intransit Import) Hazardous Wastes Management Regulations, following approval from the Office of the President to do so. The Agency complied with the requirements of the Convention regarding the notification of Hazardous wastes movements 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.

The Agency prepared an Expression of Interest for the Caribbean Hub-ACP MEAs Project: Internship Facility in response to a letter received on October 05, 2011, regarding the project. This project aimed to strengthen the human resources capacities of Member Countries to ensure the sustainable implementation of the MEA requirements.

Cartagena Convention

The appointment of EPA as Focal Point for the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention) is still pending. Nevertheless, the Agency continued being actively involved in several activities related to the Convention.

The Agency participated in the Steering Committee for the National Plan of Action for the reduction of land-based sources of pollution that was developed for Linden. In addition, the interim Guidelines for industrial effluent discharged into the environment were under revision by the Technical Committee – Environment, Guyana National Bureau of Standards. This Standard will be a legally binding document, where the maximum permissible limits for the discharge of relevant parameters are established for different industries, in accordance with the Environmental Protection (Water Quality) Regulations.

The Agency continued to process Applications for Environmental Permits and assessed those projects in relation to their potential environmental impacts. Environmental Impact Assessments were required for projects which had potential environmental impacts to ensure sustainability for the project and the environment. Sector Agencies and Public consultations were carried out to include any concerns of the public regarding these projects and to ensure that consideration was given to them in the design and implementation of projects.

2. ADMINISTRATION

The Administrative Division comprises the Administrative, Finance, Geographical Information Systems (GIS), Human Resources, Policy and Planning, and Information Technology (IT) Units. The main responsibilities of the Division are the provision of IT and GIS Support to staff and Administrative and Human Resources Management. Materials, equipment and services to meet the needs of the Agency are procured with core funding from Government subvention and donor funded projects.

2.1 FINANCE

The Agency received subventions totalling G\$148,192,000 from the Government of Guyana, compared to G\$123,334,000 in 2010. The difference between the total subvention received and the actual expenses for the year which was G\$167,125,000 was supported by revenues from the Agency which totalled \$20,000,000. Over the year, the Agency was dependent on Miscellaneous Receipts to support its operational expenses and this placed constraints on the Agency with regards to filling vacant positions and providing adequate support for field activities.

For the year in review, achievements in Financial Management were as follows:

- The 2010 Draft Financial Statements for EPA and Wildlife Division were prepared and submitted to the Audit Office of Guyana;
- Quarterly Financial Overview were prepared and submitted to the Ministry of Finance;
- Monthly Financial Reports were submitted to the Board of Directors and Management of EPA;
- All financial reporting requirements for the Biosafety Project, WWF KR-37 Project and the KfW Small Grants Project were met in accordance with project guidelines;
- All sub-projects under the KfW Small Grants Project were officially closed and the funds remaining in the bank accounts were disbursed to Germany;
- An Audit of the KfW Small Grants Project for 2010 was conducted by the Audit Office and the report was submitted to Germany;
- An Audit of the National Biosafety Framework Project was conducted by the Audit Office and the audited report was submitted to Office of the President;
- The Agency's Budget for the year 2012 was prepared and submitted to the Office of the President.

2.2 ADMINISTRATIVE UNIT

The Administrative Unit continues to provide administrative and logistical support to all Divisions of the Agency. The Unit efficiently assisted with the evaluation and procurement of materials, equipment and

services through core funding from Government of Guyana and through several donor-funded Projects managed by the Agency. Some of the donors included UNDP, KfW and WWF.

2.2.1 Procurement and Management

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 Unit ensured that adequate stock levels were maintained to meet the needs of the various Divisions within the Agency through the use of the Inventory Management document and monthly stock reporting mechanisms that were implemented.

Approval was received from the Ministry of Finance for the disposal of a quantity of obsolete and damaged assets. This was completed and verified by Auditors from the Audit Office of Guyana. The Fixed Asset Database was updated reflecting the disposal of all damaged and obsolete assets. The Fixed Asset Database continues to be updated as assets are procured and distributed to employees. One hundred percent (100%) fixed assets check and verification was completed.

Under Capital Expenditure 2011, the Agency upgraded its ACCPAC SAGE Accounting Software, procured fire extinguishers, printers, air quality meter, chain saw, water dispenser, microwave and secretarial chairs. Other procurement included the supply of two (2) GPS units to aid in the mapping of points showing site locations. Also, personal protective equipment inclusive of safety boots, respirators, gloves and eyewear were procured for staff to conduct field visits.

2.2.2 Vehicle Maintenance

During the year in review, the Unit was able to fulfill the transportation needs of the Agency. However, repairs and maintenance continued to be a significant cost as the Unit strove to keep all vehicles in operation through regular and scheduled maintenance. An increased cost was as a result of the older models of vehicle that the Agency continued to keep in operation.

The Unit continued to prepare and submit weekly fleet inspection reports to management detailing the use and status of the vehicles. All relevant documents for the vehicles were renewed and updated and general servicing and minor repairs were completed when necessary. Additionally, tyres, air flow meter, and radiator were some of the spares procured and or replaced for the fleet during the period under review.

The radio system continues to malfunction and challenges are faced when communicating with officers in the field. The radio system cables were replaced for its effective operation based on a report from diagnostic testing that was executed. However the system is still to become fully operational and testing continues to be done to verify its operation. The satellite phone is operational and works as an alternative to the radio system whenever staff is in the fields.

2.2.3 Building and Compound Maintenance

The rehabilitation of the Eastern Wing of the building was completed and handed over by the Contractor (V.I. Graham Associates). This section houses the Hazardous Waste and ICZM Units, Stockroom and Kitchenette areas. Additionally, procurement was completed for the supply and installation of air conditioning units and grills for the section.

The Agency's air conditioning units have become problematic and malfunction intermittently. However, efforts were made to have them repaired and scheduled maintenance was undertaken to resolve some of the problems.

The first servicing/maintenance was completed on the generator set; the Unit continued to prepare and submit weekly inspection checklists for the set.

A new set of transformers and meter were installed by the Guyana Power and Light Inc. to satisfy the electrical demands of the Agency.

Contracts were prepared and/or renewed for the following services:

1. Servicing of the Agency's air conditioning units.
2. Cleaning of the water supply system and installation of water filters.
3. Minor carpentry repairs around the building.
4. Termite control and eradication of bees in the building.
5. Disposal of sanitary material.
6. Security services for the building.
7. Upgrading the main feeder (electrical) cables.
8. Rehabilitation of the vehicle shed.

The Unit continued to enhance the general aesthetics of the compound by planting decorative plants, regular weeding, cleaning and maintenance. Equipment has been procured for the care and maintenance of the compound.

2.2.4 Additional Support

Procurement, transportation, photocopying and support services were provided to the Agency's Outreach Programmes, KfW Small Grants component of the GPAS Project, National Biosafety Framework Project, and the World Wildlife Fund KR37 Project. Additionally, the Division coordinated the Agency's Occupational Health and Safety programme.

The Administrative Services work programme was reviewed and updated on a monthly basis.

2.3 HUMAN RESOURCES

Human Resources

The Human Resources Unit is responsible for recruiting a skilled and committed workforce and building a team of professionals empowered to perform competently and with excellence.

Achievements in Human Resources during 2012 are as follows:

Staffing:

Seventeen (17) suitable candidates were recruited to fill vacancies in the various divisions of the Agency as show in the Table 1. At the end of 2012, sixty-three (63) members of staff along with one (1) National Biosafety Framework (NBF) Coordinator, were in the employ of the Agency and were distributed across the four divisions (Appendix I).

Table 1: Staff Recruitment in 2012.

Divisions	Number of Staff Recruited	Designations
Administration	6	Administrative Assistant (1), Human Resources Officer (1), Finance Officer (1), Office Assistant (1), Administrative Officer (1) and Handyman (1).
Natural Resources Management	4	Executive Assistant (1), Senior Environmental Officers (2) and National Biosafety Framework (NBF) Coordinator (1).
Environmental Management	7	Environmental Officers I

During the year, there were fourteen (14) resignations, and one (1) termination. Currently there are vacancies for the following positions:

- One (1) Project Manager for the National Biodiversity Strategy and Action Plan (NBSAP) Project. This project was scheduled to commence in September, 2012, but is awaiting the MNRE's approval of the recommended candidate.
- One (1) Senior Environmental Officer, Wildlife Unit, NRMD – the Agency is awaiting the MNRE's approval of the recommended candidate.

Three (3) staff members were promoted to the post of Environmental Officer II. One (1) of these Officers is within the Environmental Management Division and two (2) within the Natural Resources Management Division. Two (2) staff members were also transferred to the Jenman's Educational Centre, where they are currently attached to the "Pick it up Guyana Campaign".

Staff turnover continued to be an issue at the Agency, with an increase in the number of persons leaving the Agency in 2012 being fourteen (14) as compared with twelve (12) in 2011.

Overseas Workshops and Meetings

Approval was received for eight (8) Officers to attend various workshops and meetings overseas as follows:

- The First Meeting of the Scientific, Technical and Advisory Committee (STAC) to the Protocol Concerning Pollution from Land-Based Sources and Activities in the Wider Caribbean Region (LBS Protocol), held during the period June 5-7, 2012 in Oranjestad, Aruba.
- Workshop on National Inventories and National Reporting of the Basel Convention for Central America and Mexico, which was held during July 17-20, 2012 in San Salvador, El Salvador.
- The Caribbean Regional Training Workshop for Biodiversity Clearing House National Focal Points (BCH-NFP), which was held in St. John's, Antigua during July 17-20, 2012.
- "First Regional Technical Workshop on Planning Methodologies for Adaptation to Climate Change and Presentation of the Mitigation and Adoption Mechanism for Integrated and Sustainable Forest Management," which was held in La Paz, Bolivia, during September 25-26, 2012. Unfortunately, the Agency had to subsequently substitute Ms. Persaud with Ms. Itwaru and while this substitution was accepted, it was not possible for Ms. Itwaru to obtain a flight, in time, to attend the Workshop.
- The Sixth Meeting of the Parties Serving as the Meeting of Parties (COP/MOP 6) to the Cartagena Protocol on Biodiversity and the Eleventh Meeting of the Conference of the Parties (COP 11) to the Convention on Biological Diversity which was held in India during the period October 01-05 and October 08-19, 2012.
- Intergovernmental Meetings of the United Nations Environmental Programme: 15th Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme and the 12th Meeting of the Contracting Parties to the Convention for Protection and Development of the Marine Environment of the Wider Caribbean Region. First Meeting of the Contracting

Parties to the Protocol Concerning Pollution from Land Based Sources and Activities), which was held in Punta Cana, Dominican Republic during October 25-27, 2012.

- Regional Biosafety Inception Workshop, which was held in Trinidad and Tobago, during October 29 – November 02, 2012.
- “Workshop for the Wider Caribbean, Under the Auspices of the United Nations, in Support of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects”, which was held in Miami, Florida, United States of America, during November 13-15, 2012.

Participation in Workshops and Meeting In-Country:

Throughout the year, officers participated in various meetings and workshops which have contributed to building capacity in the Agency. These were related to aspects of the Agency’s work as follows:

- Environmental and Social Management workshop held at Grand Coastal Hotel on April 19-20, 2012.
- Seminar on “Green jobs, promoting safety and health in a green economy” held at the Umana Yana on April 26, 2012.
- Meeting to discuss issues relating to “River Mining” which was organized by the Guyana Geology and Mines Commission and held at the Commission, on May 31, 2012.
- Launch of Guyana’s Oil and Gas Strategy at the CIDA PSU Building located at 56 Main & New Market Streets, Georgetown on May 28, 2012 at 10:00hrs.
- Presentation of GWI 5 Year Strategic Plan, held on May 09, 2012 at Regency Suites, 98 Hadfield Street, Work-en-Rust, Georgetown.
- Meeting organized by the Food and Agriculture Organization (FAO), held at the Ministry of Agriculture, on May 16, 2012. The objective of this meeting was to identify issues associated with Inland Fisheries in Guyana. This meeting was part of larger initiative, towards the formation of a National Policy and Strategic Plan for Inland Fisheries in Guyana.
- COBRA Workshop, held at the Cheddie Jagan Research Centre, 65-66 High Street, Kingston, Georgetown on May 8-9, 2012. This workshop was organized by IWOKRAMA with the main objective of engaging stakeholders.
- Disaster Management Workshop, organized by Guyana Civil Defence Commission on June 06-08, 2012 at the Commission, Thomas Road Thomas Lands, Georgetown. A follow-up workshop on was also attended on June 13-14, 2012 at the Pavillion, Regency Suites, Hotel, 98 Hadfield Street, Werk-en-Rust, Georgetown.
- Technical Assistance for Mangrove Management Workshop organized by the Guyana Mangrove Restoration Project on June 08, 2012.

- Country Disaster Risk Indicators and Flood Evaluation Workshop organized by the Civil Defence Commission on June 13-14, 2012 at the Commission, Thomas Road, Thomas Lands Georgetown.
- Workshop on the Presentation of the Draft Plan for the Prevention of Foot and Mouth Disease (FMD), held during the period September 24 – 26, 2012, at the Ocean View International Hotel.
- Meeting of the Committee of Stakeholders to address the issue of landscape restoration and replanting/rehabilitation of areas subject to mining, on August 24, 2012, at the Guyana Forestry Commission.
- Meeting organized by GNBS entitled “Promoting Accreditation Requirements in the Construction Sector, on July 30, 2012 at GNBS.
- Project Steering Committee Meeting for the Development of Land- Use Planning Project on July 25, 2012, organized by the Guyana Lands and Surveys Commission.
- Symposium on July 18, 2012, entitled “Utilizing Sustainable Practices to Preserve the Environment.” This event was organized by the Guyana National Bureau of Standards and held at the Regency Suites Hotel, Georgetown.
- Flood Preparedness and Response Exercise organized by the Civil Defence Commission. This exercise was held on July 12-13, 2012 at the Commission. A Damage Analysis meeting was also attended.

The Agency also facilitated four (4) work-study students, one of which was the winner of the EPA’s Essay Competition and the other two (2) were overseas students who were on vacation in Guyana and wanted a bit of exposure in their related field of study. There was also a Caricom MEAs Intern attached to the Hazardous Waste/Air Quality Unit, who was tasked with the responsibility of compiling the legal framework for the Basel Protocol in Guyana.

2.4 INFORMATION TECHNOLOGY

2.4.1 PC Support

The IT Unit repaired a number of desktops and laptops which were affected by hardware or software problems.

Fifteen computers were completely upgraded to replace problematic and obsolete systems. These computers were loaded with the Windows 7 operating and relevant software. Eighty-five percent (85%) of the Agency’s computers were upgraded to Windows 7 operating system to improve securities and better user functionality within the Server 2008 Environment.

All printers within the Agency were serviced and are fully functional. Four new printers were received and deployed to various Divisions. Defective monitors, mouse, keyboards, surge protectors, line conditioners and UPS were also replaced.

2.4.2 Network Support

During 2011, complete backup of the Agency data and virtual machines was done and archived on a regular basis.

During the year, the Unit diagnosed a Dell 2900 server and found defective SCSI HDD and memory Modules. These parts were completely replaced and are functioning perfectly. This server is used for the GIS Department and NBRIS application.

A new virtual machine was created to facilitate the NBRIS LAN Module for the Natural Resources Management Division.

The ISA 2006 (Internet Security and Acceleration Server 2006) was upgraded from Windows Server 2003 Standard Edition to Windows Server 2003 Enterprise Edition R2 to accommodate the newly constructed Domain Controller 2008. On several occasions, the server went down due to hardware and software problems. The IT department brought up an alternate server, loading all software data and re-configured all company policies. This server is functioning and performing the relevant functions applied in order to allow internet access to all users within the Agency.

The IT unit upgraded the Agency's firewall Service to Sonic Wall Firewall which aimed to achieve better network securities such as gateway antivirus, packet inspection, intrusion alert, bandwidth monitoring, internet access and usage, application level control, virtual private network, etc.

The Local Area Network was expanded to accommodate the Hazardous Waste Unit. This expansion included structured cabling and installation of network switches.

ESET NOD 32 Antivirus Business Edition and Microsoft Security Essentials were deployed to newly installed Operation System Windows 7. All computers and servers now have antivirus protection.

All network connectivity errors were fixed such as defectives cables, surface mounts and switches. User accounts, mapped drives and permissions were created to facilitate new staff entering the Agency. GIS software and one user license was donated by ESRI and was installed in the GIS unit.

2.4.3 Management Information Systems

Maintenance was done on the Assets database, restoring and configuring. This was updated and data sets migrated to be compatible with Windows 7.

ACCPAC datasets was backed up and all computer systems were upgraded to Windows 7 to facilitate the new version of ACCPAC 6.0. Data synchronization of Accounts Payable, Accounts Receivable, General Ledger and System Manager was set up and awaiting consultant to further complete the installation. Seventy percent (70%) completion was achieved on this.

The Data server and a new Domain Controller (EPAGUYANA.ORG) were created in server 2008 Enterprise Edition, and relevant configuration was done to facilitate the access of data and internet over the Network.

Work was done on the Permit database in the EM Division; this includes updates such as fields, functions, and reports. Tables were created for General, Compliance and Enforcement. Changes were done to tables such as Project, Developer Detail, Application, Payment, Fee-Type and Notification Type. Database problems were resolved to improve user interface functionality.

The Complaints Database was updated and maintained. The SQL backend of the database was backed up and also maintained.

2.4.4 Website Development

During the year, a new external website www.epaguyana.org was created and deployed. The hosting package was upgraded in order to accommodate data upload and more bandwidth usage.

In November, the Agency's website was hacked. The website was restored from backup and scripts were written to enhance the website's security.

Additions were made to the external website and a few functions were added. Public notices, EIAs, Vacancies and other related documents were uploaded.

2.4.5 Miscellaneous

The IT Unit attended and assisted other departments in presentations and seminars such as ACCPAC, NBRIS, BCH, ARCGIS 11 and CHM training, etc.

2.5 GEOGRAPHICAL INFORMATION SYSTEM (GIS)

The GIS Unit has responsibility for the efficient management of all spatial related data and for the empowerment of Staff with the necessary skills to enable the use of GIS data as a tool for sound decision-making. The Unit assistance the technical Divisions as follows:

Natural Resources Management Division (NRMD):

- Located GPS coordinates for the Amalia Falls Baseline Study Plan - a total of seven GPS points were located.
- Plotted GPS Points for the boundaries of Kanuku Mountains Final Protected Area and Shell Beach Protected Area based on descriptions obtained from NRMD. The digital boundaries for these areas were also received from Guyana Lands and Surveys Commission. These were used to update the boundaries.
- Simon and Shock International Logging Inc. (SSI) Part A & B boundaries were digitized based on the respective technical descriptions. The purpose was to determine the proximity of the Kanuku Mountains Protected Area, which shares a common boundary (Rewa River) with SSI-Part A.

Environmental Management Division (EMD):

- Updated the Geo-database for complaints received, for each Unit within the EMD.
- GPS coordinates, taken from inspections carried out by EMD officers, were converted and plotted in Google Earth. Satellite images, of points located, were extracted and prepared for environmental officers to present in their inspection reports.
- Prepared and completed Complaint Hotspots map. Invalid GPS coordinates were noted and discussed with the EMD. A PDF version was sent to EMD for feedback and comments.
- Prepared layout and printed "Landfill Sites according to NDC's Map" (Compiled in 2010)
- Plotted GPS locations and Google images of *63 Beach and Wellington Beach Coastal Clean-Up*.
- Prepared and printed a map showing Kato and Paramakatoi boundaries.
- Plotted GPS points and downloaded the trail for Amaila Hydro-Project area. The Map was prepared and exported to PDF format for officer.
- Met with EMD's Database Technician to discuss the information which was requested by the GIS Unit to update the Unit's geo-database. Information such as format of recording of GPS coordinates; type of complaint or project; and number of visits or complaints made is required.
- Prepared and saved map showing "Total dust, fumes and noise complaints received" (for 2012).

Chart showing Number of Complaints Plotted by Location for 2012

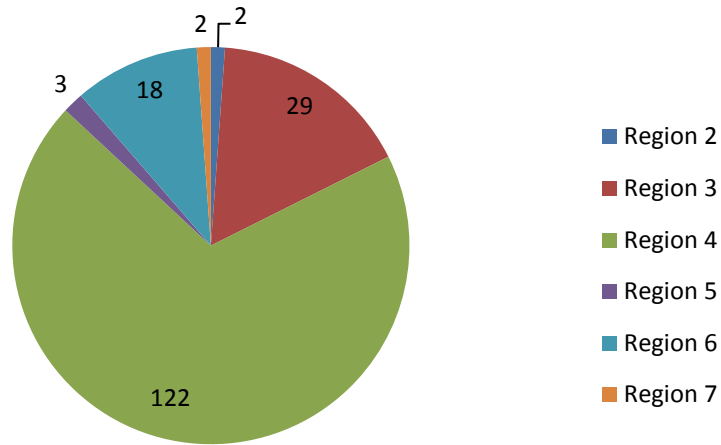
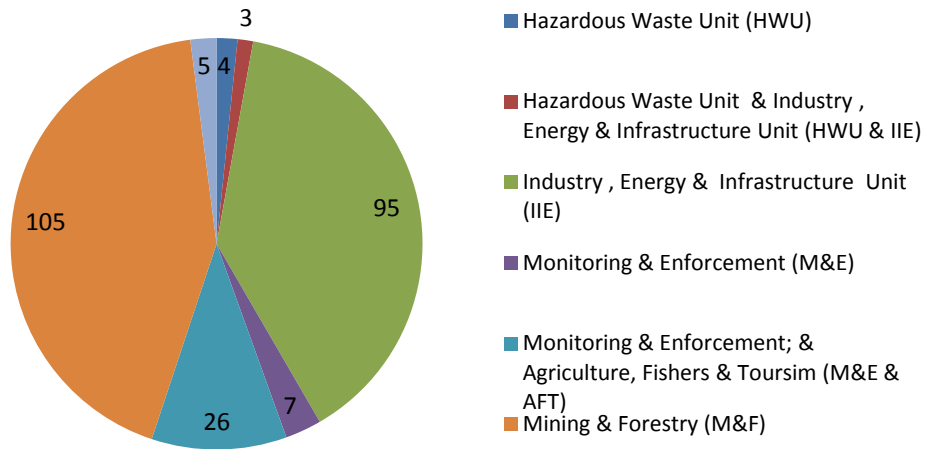
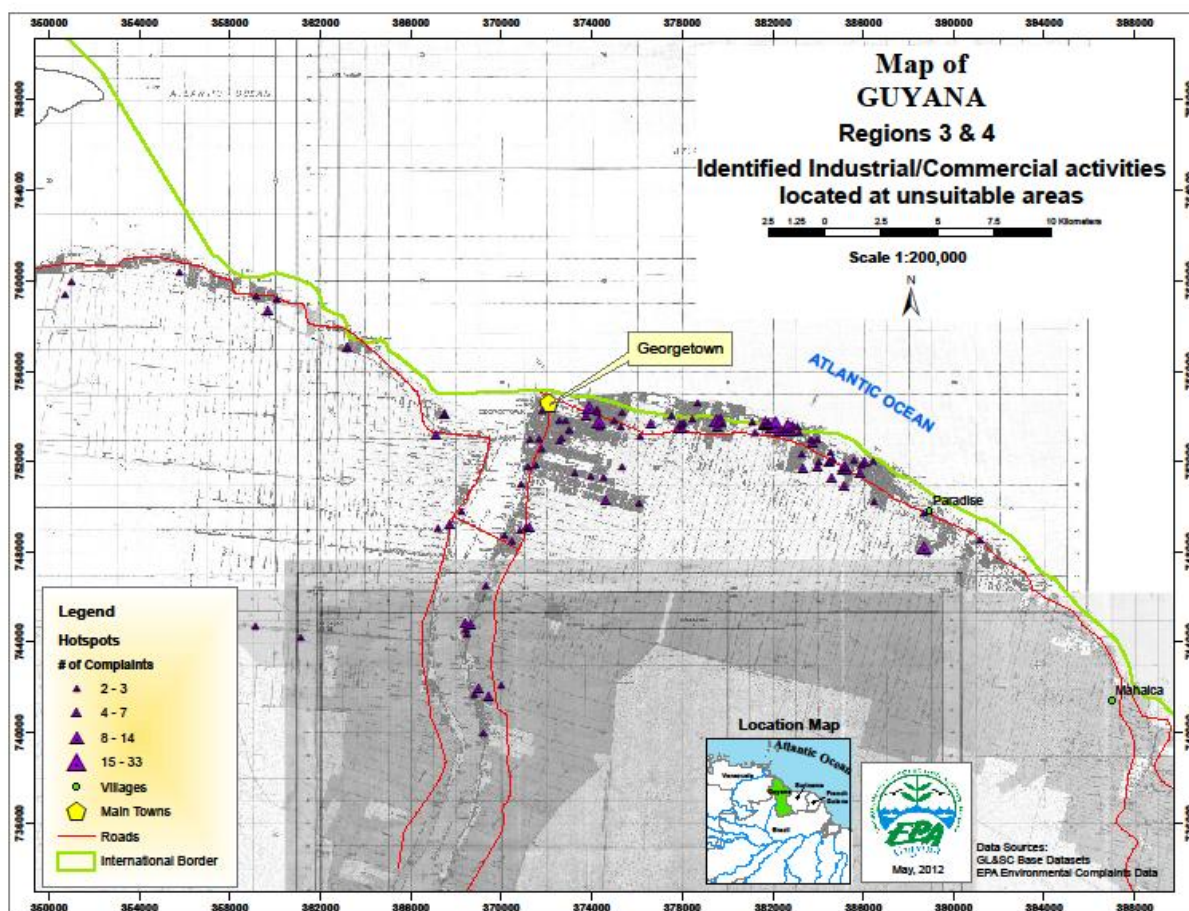


Chart showing Number of Inspections by Units within EMD for 2012





Types of Complaints	Number of Complaints	Division Units
Complaint Inspection	53	IIE, M&F, M&E, AFT, HWU
Compliance Inspection	2	M&E, AFT
Emergency Inspection	16	M&F, M&E
Environmental Audit	22	M&E, AFT, IIE
Follow-Up Inspection	37	IIE, M&E, AFT
Site Visit	89	IIE, M&F, M&E, AFT, HWU
Spot Check	1	IIE
Verification Visit	25	M&F, IIE, HWU
Total	245	

Table 1 showing Types of Complaints plotted by EMD Unit in 2012

Type of Complaints	Number of Visits	Frequency of Complaints
Dumping of Garbage	1	1
Asbestos Removal	1	2
Dust	17	46
Dust/Fumes	2	12
Dust/Noise	30	152
Dust/Noise/Fumes	1	4
Dust/Noise/Odour	4	32
Dust/Noise/Smoke	1	5
Dust/Odour	2	5
Dust/Smoke	2	2
Dust/Smoke/Odour	1	7
Fumes	11	23
Fumes/Noise	3	8
Garbage/Odour	3	3
Noise	59	164
Noise Nuisance	1	1
Noise/Fumes	6	16
Noise/Odour	7	19
Noise/Odour/Stockpiling of Materials in Inappropriate Area	1	1
Noise/Oil/Odour	1	2
Noise/Smoke	3	18
Odour	16	46
Oil	2	4
Sewage	1	1
Total	176	575

Table 2 showing Types of Complaints plotted by frequency in 2012

- **Education, Information and Training Division (EITD):**
 - Printed “The Greenhouse Effect” poster on 36x72 inches paper.
 - Printed four (4) 24”x36” Posters for Guyana Tourism Association Conference.
- **Other Activities:**
 - GIS Officer, Mrs. Darshini Seeram was appointed on January 9, 2012.
 - Collected and calibrated two (2) Garmin Oregon 550 GPS receivers from the Administrative Officer.
 - Prepared presentation on GPS Usage for all field staff.

- Assisted the IT Department in installing software for downloading waypoints from GPS receivers.
- A Presentation was made to EMD AND NRMD staff on GPS Use; practical demonstrations were also done.
- A Map showing Protected Areas and Areas for Biological Interest was prepared and saved as a PDF file for Iwokrama.
- The Unit received updated Property and Mineral Data from GGMC.
- Set Data Source and updated “National Environmental Network” Map which was created in 2004.
- Attended a Meeting with the Executive Director and SEO’s regarding the creation of a “Complaints Hotspots Map”. It was agreed that information about all environmental complaints should be submitted to the GIS Unit for the preparation of this map.
- Attended a meeting at the Ministry of Natural Resources and the Environment on “Strengthening Land-Use Planning and Sustainable Land Management”. The objective of this meeting was to discuss the creation and re-establishment of the National Natural Resources GIS Committee which would design and implement a mechanism for sharing spatial information among the sector agencies.

The GIS Unit also, attended a follow-up session on April 20, with the natural resources agencies to discuss the way forward for the Committee. This meeting was held at the Guyana Lands and Surveys Commission.

- The Unit staff attended GIS Committee meetings at the Guyana Geology and Mines Commission and the Guyana Forestry Commission, to discuss a memo for standardized use of GPS at sub agencies and the framework for the implementation and design for the proposed land information system.
- Sent *GIS Policy 2002* to staff for review, feedback and comments, in relation to the update of this document. This is part of the mandate of the Ministry’s GIS Technical Committee. Comments were made by staff from NRMD and the GIS Unit and discussed at the Committee meeting.
- The GIS Officer attended the “*Design and Implementation of an Integrated Disaster Risk Management Plan Workshop*” organized by the Civil Defense Commission. The purpose of this workshop was to provide training on the Comprehensive Approach to

Probabilistic Risk Assessment (CAPRA) software and its use in generating disaster risk maps, with particular reference to flood maps.

- ArcGIS Software and Google Earth were re-installed on the GIS Technician's computer, after the system crashed.
- Received and reviewed “Coastal Resources Map Project Proposal”, submitted by the ICZM Unit.
- On, August, 9, the staff met with Ms. Valerie Grant, GIS Specialist attached to the Mangrove Committee, and ICZM staff, Mr. Saywack, to discuss the GIS datasets which exists at the EPA. The purpose of this meeting was to identify datasets in relation to mangroves in Guyana.
- The Unit staff attended GIS Committee meeting held at the Ministry of Natural Resources & the Environment and the GL& SC. Presentation of the Revised GIS Policy of 2002 was done for the Minister of Natural Resources & the Environment and Heads of Agencies within the sector, at the last meeting.
- GIS Officer’s computer was damaged and subsequently replaced by the IT Unit.
- Purchased digital and hardcopy Gazetteer of Guyana from GL&SC. The program was installed and is functional.
- The GIS Officer attended a presentation at the EPA Boardroom made by a representative from the CDC on Disaster Risk Management.
- Staff attended video conference on October 15th at the World Bank to discuss GeoNode, with reference to the GIS Committee. (GeoNode is a platform for the management and publication of geospatial data. It brings together mature and stable open-source software projects under a consistent and easy-to-use interface allowing users, with little training, to quickly and easily share data and create interactive maps. GeoNode provides a cost-effective and scalable tool for developing information management systems) Follow-up on this forum would be done at the upcoming GIS Committee meeting.
- The GIS Officer attended a meeting at the Ministry of Amerindian Affairs to discuss the ‘Finalisation of the Amerindian Land Titling Document’ on October 17th.
- Attended meeting on October 25th for GISCAD, which is a company that offers various GIS and mapping solutions to organizations. This is done by providing the tools and resources to better manage and equip companies in technical fields.

- The GIS Officer attended Workshop on the Conservancy Adaptation Project hosted by the Ministry of Agriculture and the World Bank, which was held at the University of Guyana.
- The GIS Officer attended the MRVS Committee meeting with Conservation International.
- The Unit participated in the National GIS Policy Inception meeting at the GFC Multiplex.
- The GIS Technician attended meeting at the MNRE regarding the Christmas Social 2012.

3. NATURAL RESOURCES MANAGEMENT

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

The Natural Resources Management Division (NRMD) undertakes the above mandates, and in order to achieve them, the Division has three technical units: Protected Areas, Biodiversity, and Wildlife, each focusing on particular areas.

During December, 2011, the Director of the Division was transferred to the newly created Ministry of Natural Resources and Environment (MNRE). During the first quarter of 2012, the Senior Environmental Officer (SEO) of the Biodiversity Unit was transferred to the Ministry and the Special Projects Officer was seconded to the National Parks Commission. In the third quarter, the SEOs of the Biodiversity, Protected Areas and Wildlife Units, and the Executive Assistant (EA) tendered their resignations. As such, over the latter part of this year, the work programme of the Division was implemented by two five (5) Staff – two (2) at the level of Environmental Officer II and three (3) at the level of Environmental Officer I. An EA was recruited by the Agency in October, 2012.

Staff of the Division continued to function as representatives on various Committees and Boards.

3.1 PROTECTED AREAS

3.1.1 Establishment of a National Protected Areas System (NPAS)

Declaration of New Areas under the Protected Areas Act

During 2011, Kanuku Mountains and Shell Beach were declared as protected areas. With guidance provided by the MNRE, it was agreed that the description of each area, which was provided by the GLSC, will be attached to its respective Declaration Order for finalisation. Further responsibility for activities relating to the orders now lies with the recently established Protected Areas Commission (PAC).

3.1.2 Guyana Protected Areas System (GPAS) Project

Closure and Appraisal of Phase I of GPAS

During 2011, all sub-project activities under the KfW Small Grants Component of the GPAS Project concluded. A report on the Phase, including a Financial Overview, were prepared and submitted to the Ministry of Finance. The Protected Areas Unit also engaged in activities relating to the official closure of the Project. These included the preparation of the statement of Account for the disposition fund, the reimbursement of unspent funds and the commissioning of an Audit for 2011. The Audit Report was subsequently submitted to KfW.

The EPA prepared a report on the implementation of project activities in order to facilitate project appraisal. KfW requested additional information which was prepared and submitted. Additionally, and as part of the official closure process, a project completion evaluation mission was carried out by KfW during March 27 to April 02, 2012. The evaluation was conducted by Mr. Alfred Schweitzer, Sector Specialist for Natural Resources Management. A meeting was held with the EPA, GFA Consulting Group and Mr. Alfred Schweitzer of KfW, Entwicklungsbank, and a site visit was conducted to the Kanuku Mountains Intervention Area as part of the review process. The mission recommended that follow-up support be provided to sub-projects using the remaining funds during Phase II of the Project.

Implementation of Phase II of GPAS

On September 10, 2009, the Governments of Guyana and Germany, represented by the KfW Entwicklungsbank (the German Development Bank) signed a financing and project agreement for the provision of EUR 5 M to support the Phase II of the Guyana Protected Areas System (GPAS) - Conservation of Tropical Forests Project.

Through a Separate Agreement signed on December 19, 2011, the project financing and design were finalised. EUR 1M (Tranche I) was earmarked to finance small-grant project activities which include infrastructure measures for GPAS and the Protected Areas Commission as well as payment for consultancy services, while EUR 4 M (Tranche II) was provided to support a sustainable and long-term financing mechanism for the National Protected Areas System.

Phase II was designed to build on activities and outcomes of the first phase of the GPAS Project and has the overall objective to ensure the sustainable operation and management of the National Protected Area System.

Tranche I

Activities under Tranche I will focus on:

- Refurbishment of a building to house the Protected Areas Commission.
- Procurement of equipment for the Protected Area Commission.
- Development of a management plan for the Shell Beach Protected Area.
- Procurement of equipment and infrastructure development for Kaieteur National Park and Shell Beach Protected Areas.
- Consulting Services, and Monitoring.

Additionally, follow-up support will be provided to sub-projects using the remaining funds from Phase I.

Opening of Bank Account

A new foreign currency (EUR) bank account was opened for this Phase of the Project. Given its experiences with the Bank of Guyana under Phase I, the EPA, in discussions with the Bilateral Portfolio Department of the Ministry of Finance, was advised to source information from commercial banks regarding the opening of accounts. Based on the evaluation of quotations sourced from the various commercial banks, the EPA, with endorsement from the Donor, recommended that the account be opened at Demerara Bank Limited. Following no-objection from the MNRE, and approval from the Ministry of Finance, the account was opened at Demerara Bank Limited.

Disbursement of Funds

The first disbursement of EUR 130,000 was received from KfW in July 2012. The disbursement was made against an expenditure forecast, presented for the period July to October, 2012. Documentary evidence on the use of funds was submitted to the KfW on October 31, 2012. A request for a second disbursement was made in December 2012.

Operational and Financial Plan

An overall operational and financial plan, including the estimates for 2012 and 2013 disbursements, which was prepared by the EPA, was subsequently approved by KfW. The plan, along with a report on the implementation of Phase II, was also submitted to the MNRE. The plan was subsequently revised based on adjustments to the proposal for the Phase. The expenditure forecast was presented against this adjusted budget.

GFA Consultancy Contract

The Proposal and Contract submitted by GFA Consulting Group for Consultancy Services to be provided under the Project was approved by KfW, signed by the EPA and the GFA Consulting Group, and distributed to all parties. GFA continued to offer support in the areas of proposal development and general project management. GFA's Contract was amended in November 2012 to reflect changes to the total contract value. This was necessary due to computational errors in the financial proposal. The advance payment and first interim payment were made.

Sub Project Implementation

(a) Management Planning Project for Shell Beach

A proposal, including the budget, was drafted and circulated to relevant parties – including the GFA Consulting Group and the Board of the PAC– for review and comments. It was later revised based on the comments received.

A pre-management planning activity will be conducted by the EPA and the Protected Areas Commission during the first quarter in 2013. This activity, which is the first component of the proposal, is necessary to build capacity given the following: (1) considerable time would have elapsed since the completion of the delineation exercise, (2) many of the Toshias and Village Councils would have changed; and (3) there have been several recent developments which need to be discussed with communities, such as the protected areas legislation. The budget and the activity and travel schedules were prepared.

(b) Tukeit Guest House and Warden's/Caretakers Building

Initial activities for this project commenced in June, 2012. Innovative Engineering Consultancy Services (IECS), contracted by GFA, and the EPA conducted a visit to determine the conditions on site and assess the cost of services, such as transportation, in order to facilitate the preparation of the Engineer's Estimate and the Tender Document for the construction component of the project. The EPA completed the preparation of the Tender Document for the project's supervision component. Subsequently, the National Procurement and Tender Administration Board (NPTAB) approved all relevant documents, including the shortlist of Contractors and Consultants, and granted no-objection for the Agency to pursue selective tendering, for both components of the project. The approved Contractors and Consultants were invited to submit bids which were opened on September 18, 2012, at the NPTAB. Awards were made to Yusuf General Contracting and Innovative Engineering Consultancy Services for the construction and supervision components, respectively, and the Contracts were signed on November 09, 2012. Advance payments were made and activities have commenced.

(c) Building for the Protected Areas Commission

Following several discussions, it was agreed by the Ministry of Natural Resources and the Environment that refurbishing and extending the building of the National Parks Commission (NPC) will be done in order to accommodate the offices of the PAC. As an initial step, it was agreed that the execution of some minor construction works (including the erection of an internal wall, installation of a ceiling and painting) to the boardroom on the ground floor of the NPC building will be done, to create office space, in the interim, for the Commissioner and staff. Having been granted approval from the MNRE, the Agency sourced three Contractors to bid for the works. An award was subsequently made by the MNRE to Kurt Cumberbatch Construction Services. The Contract was signed on September 10, 2012. The works commenced on September 16, 2012, and were completed in November 2012. It included additional minor activities and corrective works. All payments were made to the Contractor and this phase of activities was closed.

In relation to the extension works, the GFA facilitated the preparation of the Bill of Quantities, Tender Document and drawings for the construction component, while the EPA prepared the Tender Document for the supervision component. The documents were reviewed and finalised based on comments, including those of the MNRE, NPTAB and KfW. A submission was made to NPTAB and bids are expected to open on January 08, 2013.

(d) Equipment and Furnishing for the PAC

The PAC, through correspondence dated August 20, 2012, requested approval to proceed with the procurement of an initial list of items. The list of items and budget were approved by the EPA/KfW on August 23, 2012. Items were procured by the Protected Areas Commission, with assistance from the EPA. All payments were made directly to the suppliers by the EPA, in accordance with an agreement made between the EPA/GFA and the PAC.

The Tender Document for the procurement of two vehicles for the PAC was prepared by the Commission and approved by KfW and EPA. Given that the PAC led the tendering process, the Agency requested the submission of documentation with relevant correspondences and approvals. Bids are expected to be opened on January 08, 2013.

(e) Follow-up Support to GPAS / Community Based Sub-Projects and Baseline Study

The draft proposal prepared by EPA/PAC and GFA was approved by KfW following a revision of key elements such as the Terms of Reference. However, the proposal was revised, particularly in relation to

the target areas, given the recent signing of an Agreement between Conservation International Guyana and the Inter-American Development Bank for the execution of a similar initiative in the Kanuku Mountains. The Terms of References were also further revised based on comments from KfW. The consultancies will be advertised in January 2013.

Tranche II

Joint Account

KfW, Germany, transferred the Euro 4M into the Joint Account held at Demerara Bank Limited. The EPA subsequently received a tax exemption from the Guyana Revenue Authority for the monies being held in the Account. Copies of monthly bank statements were provided by Demerara Bank Limited and distributed to all relevant parties. The transfer of the funds from the Joint Account into the Conservation Trust Fund was effected on June 28, 2012. Evidence of the transfer of funds was submitted to KfW on July 06, 2012.

Invoice for Legal Opinion

In late 2011, Cameron and Shepherd prepared a Legal Opinion validating the Joint Account Agreement governing the Joint Account held at Demerara Bank Limited. An invoice for these services was provided by Cameron and Shepherd, and the EPA facilitated the necessary payment.

Implementation of Phase III of GPAS

Phase III Consultancy

The EPA submitted a letter soliciting KfW's assistance for the preparation of a study under GPAS III, and the Terms of Reference for the Consultant identified to conduct the study. The study focused on an analysis of the initial situation and climate proofing, stakeholders and target groups, institutional capacities and roles, and impacts and risks of the proposed Project. The EPA met with the Consultant and participated in a capacity assessment under the Consultancy. The Consultant submitted the Final Report to the EPA and KfW, Germany, and following several revisions, the report was finalised and endorsed by the EPA.

Phase III Report

A report on Phase I of GPAS, including information on the project design and detailed budget (Euro 4.3M) for Phase III, to inform the overall study being carried out by the GPAS Phase III Consultant, was prepared by the EPA following discussions with relevant stakeholders on options for the use of the

funds. The report was submitted to KfW, the MNRE, Mr. Shyam Nokta, and Mr. Ben ter Welle for their review and inputs. Comments received by the EPA on the draft report and during the appraisal mission were addressed, and the report was subsequently finalised and approved by KfW. This report and the report produced under the consultancy mentioned above were consolidated by the EPA and submitted to KfW in November 2012.

KfW Appraisal Mission

KfW, Germany conducted an Appraisal Mission to Guyana during the period March 26, 2012 to April 04, 2012. An appraisal of GPAS Phase I, progress control of GPAS Phase II, and preparations for GPAS Phase III were the primary objectives of the mission. Site visits were also conducted to the Shell Beach and Kanuku Mountains Protected Areas during March 29-30, 2012, and March 28-30, 2012, respectively. Meetings were also held with the Guyana Forestry Commission, the MNRE and the Board of Directors of the Protected Areas Commission and the Board of Trustees of the Conservation Trust Fund. *Aide Memoires* for each of three phases of the GPAS Project were signed at the end of the mission.

Financing Agreement

The Governments of Guyana and Germany signed the financing agreement for Phase III of the Project in December 2012.

3.1.3 Establishment of a Protected Areas Commission (PAC)

Budget for the Protected Areas Commission - The EPA prepared and submitted a revised budget for the establishment and operations of the PAC. A narrative on the proposed budget was also prepared and submitted to the MNRE.

Board of Directors and Meetings of the PAC

The EPA assisted the Ministry with a presentation on Protected Areas, and extracts of the Protected Areas Act for distribution at the first meeting of the Board of Directors of the PAC which was held on February 24, 2012. The following appointments were made at the meeting: Mr. Shyam Nokta, Chairman; Retired Major General Joseph Singh, Vice Chairman; and Ms. Juliana Persaud, Secretary. The EPA also prepared and delivered a presentation at the second meeting of the Board of Directors on Recent

Protected Areas Initiatives, On-going Projects and Future Plans. The Agency provides the Board with monthly reports on the status of the GPAS Project.

3.1.3 Establishment of Conservation Trust Fund

At the end of 2011, a Conservation Trust Fund was set up as an interim financing mechanism in order to secure the funds committed by the Global Conservation Fund through Conservation International.

By-laws and Recruitment of Executive Director

The by-laws governing the operations of the CTF was approved at the continuation of the first meeting of the Board of Trustees (BoT) of the CTF on January 04, 2012. Upon request by the BoT, the Terms of Reference (ToR) and guidance on the Salary and Benefits Package for the Executive Director (ED) was prepared by the EPA and CI-G as part of a Recruitment Committee. These were subsequently approved by the BoT and the ED position was advertised. Fifteen (15) applications were received, and following review and interviews, Ms. Nadia Sagar was appointed as the ED of the CTF.

Establishment and Operation of the CTF

The Separate Agreement to the Financing Agreement outlined a number of conditions that have to be fulfilled before the release of KfW funds into the CTF. A workplan, including timeline, for the completion of these activities and the capitalisation of the fund, initially prepared by CI-G, was prepared and updated throughout the period upon request by KfW. All conditions as outlined by KfW have been fulfilled and the transfer of the funds from the Joint Account into the CTF was effected on June 28, 2012.

Mr. Romas Garbaliuskas, Senior Legal Advisor of Conservation International visited Guyana during May 30 to June 01, 2012. Meetings were held with the representatives of the Government of Guyana and the CTF to discuss the Global Conservation Fund Grant Agreement. The Grant Agreement was finalised and signed, and USD 3.5 M was transferred by the GCF. The CTF was officially launched on July 27, 2012. KfW has since indicated that the funds can be used, while in the CTF, for investments provided that the investment manager is contracted and the investment strategy is approved by the Board of the CTF. Dr. David Singh was recognised as the Trustee nominated by the Major Donors (KfW and GCF) for all purposes of the CTF Trust Deed and Bylaws, by way of correspondence dated July 25, 2012.

Conservation International-Guyana (CI-G) also facilitated a meeting with the Suriname Conservation Foundation and its Investment Manager to learn about their experiences and requirements for the management and operations of Conservation Trust Funds.

KfW and CI Foundation (GCF) nominated Dr. David Singh as the Trustee to represent the Major Donors for the purposes of the Trust Deed and Bylaws.

During the period November 15-16, 2012, the CTF conducted a workshop to develop the vision statement, values, goals and objectives of its five-year strategic plan. The EPA and GFA Consulting Group participated in the workshop.

3.1.4 Establishment of Criteria for identifying Priority Areas within Guyana's Forest

The Protected Areas Unit revised the third draft of the document which it previously prepared as a means of guiding the development of criteria for the identification of priority biodiversity areas at a national level and within the context of the REDD-plus relevant components (mining, forestry and agriculture) of the LCDS. The document was circulated to the Governmental Agencies: Guyana Forestry Commission, the Guyana Geology and Mines Commission, the Ministry of Agriculture and the Ministry of Amerindian Affairs. Following the receipt of comments from the Agencies, and following guidance from the MNRE, the document was circulated to the other stakeholders who attended the workshop for review. Comments received from the stakeholders were incorporated into the document. Following a request for guidance on the next steps made by the Agency, Mr. Shyam Nokta indicated that further responsibility for this activity would lie with the Protected Areas Commission.

3.1.5 Capacity Building

The Senior Environmental Officer of the Protected Areas Unit attended the Capacity Building Workshop for the Implementation of the Programme of Work on Protected Areas in Bogota, Colombia during March 12-16, 2012. A report on the workshop was prepared and finalised.

3.1.6 Support Public Awareness

Education and Awareness – A brochure which focuses on the GPAS Project was prepared.

World Wetlands Day Message – A message for the Minister of Natural Resources and the Environment on World Wetlands Day, 2012, was prepared and submitted by the EPA to the MNRE. The message was subsequently uploaded by the MNRE on its website.

3.1.7 Other Activities

Report on Ramsar Convention

An overview on Wetlands, the Ramsar Convention, and Guyana's current status as it relates to Accession to the Convention was prepared and submitted upon request by the MNRE.

Kaieteur National Park Management Planning Process

The EPA assisted in the review of Biological Assessment Reports prepared within the framework of the Kaieteur National Park Management Planning Process being funded by the WWF. The integrated management plan, and tourism and business plans were also reviewed, and comments were submitted to the PAC Board.

GFA Mission

Mr. Tomas Keilbach, Regional Director for Latin America and the Caribbean, GFA Consulting Group, conducted a visit to Guyana during the period November 21-27, 2012. Mr. Keilbach met with the Executive Director and Staff of the Protected Areas Unit on November 22 and November 26, 2012, respectively, to discuss the GPAS Project.

Kanuku Mountains Community Representative Group (KMCRG) Workshop

The Unit participated in a workshop organized by the KMCRG during the period November 20-23, 2012. The workshop sought to build the capacity of newly elected Village Council members in Protected Areas. Information on the functions of the PAC, content of the PA Act, 2011, and previous protected areas initiatives in Guyana were shared.

3.2 SUSTAINABLE USE OF 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 and export biological specimens from Guyana. For the reporting period, applications were received from students, professionals, and institutions worldwide. These included Raw Television, U.K; Blue Paw Artist, Germany; Rancho Santa Ana Botanic Garden, U.S.A.; Humboldt State University, U.S.A; Montana State University, U.S.A.; University of Kent, U.K; Utrecht

University, Netherlands; Smithsonian Institute, U.S.A.; University of Oxford, U.K., College of Charleston, U.S.A.; University of Edinburgh, U.K.; and Coastal Plain Institute and Land Conservancy, U.S.A.

The majority of the Research Projects were concentrated primarily in the interior locations of Guyana, such as, Kaieteur Falls, Mabura Hill Forest Reserve and the Iwokrama Rainforest, Region 8; the Rupununi, Region 9; the Pakaraima Mountains, and the Upper Mazaruni District, Region 7.

Research Applications

For the reporting period, twenty-four (29) Research Applications were received by the Natural Resources Management Division (See Figure Xa).

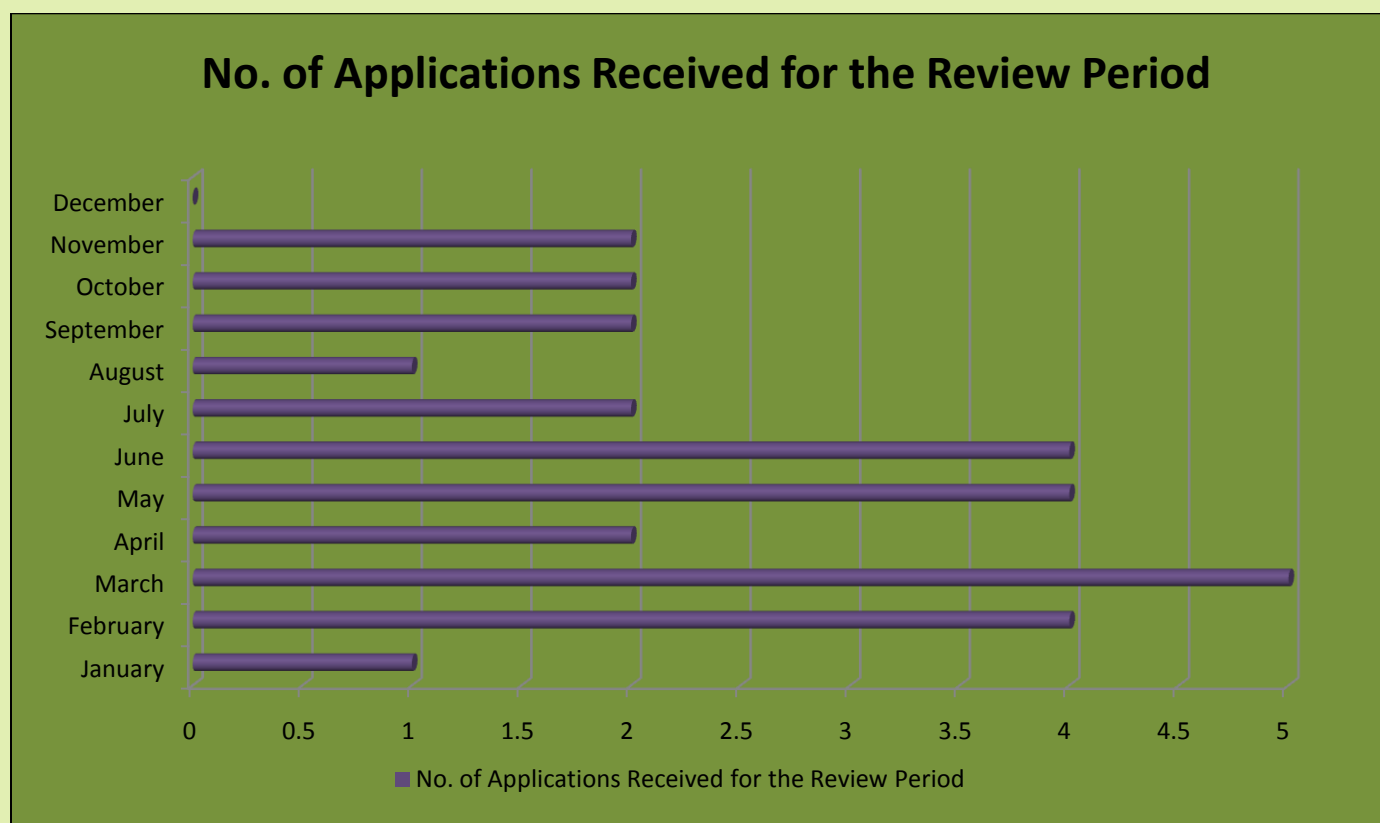


Figure Xa: Monthly distribution of applications received during review period.

Processing of Research Applications and Issuing of Permits

Applications Processed: A total of twenty-six (26) research applications were processed and approved.

Research Permits Issued:

Thirty-two (32) Research Permits were issued for the reporting period, six (6) covering research applications that were received and processed in 2011 but approved in 2012 and one application for 2012 that was issued with two (2) research permits. Twelve (12) research permits were extended. These included four (4) requests pertaining to geographical scope, six (6) requests for research period and one (1) request for both. Additionally, one (1) request for the addition of an additional team member to Research Permit was granted. The permits issued were for research to be conducted for flora, fauna, filming, and others studies. **Figure Xb** shows the categories of applications permitted by the EPA during the reporting period.

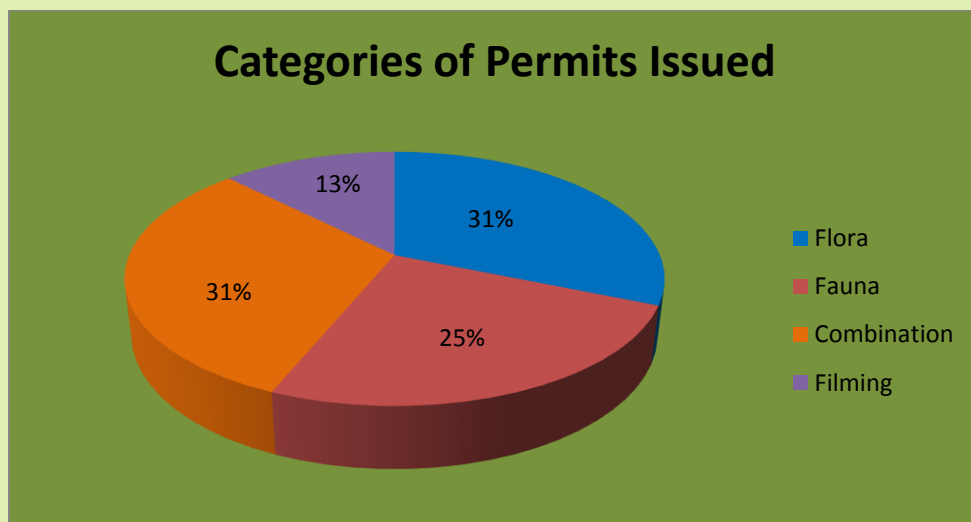


Figure Xb: Categories of Research Applications Permitted by the Agency, January-December, 2012.

Export Permits Issued: At the end of the reporting period, fifteen (15) export permits were issued for specimens collected under Research Permits issued in 2012. A further three (3) export permits were issued for specimens collected under Research Permits issued in 2011. The specimens exported include floral (DNA samples) specimens, faunal (tissue samples) whole fish specimens, fin clips, Dung Beetles, Odonata, frog specimens and Blattodea specimens. All specimens will be used in accordance with the

Guidelines for Biodiversity Research in Guyana and are to be returned as specified by the Centre for the Study of Biological Diversity (verification body acting on behalf of the EPA), University of Guyana.

Analysis: Of the twenty-nine (29) applications received for the period, 83% have been completely processed, approved, and issued with permit to conduct Research (representing 24 Of 29 applications) and the remaining 17% (representing 5 of 29 applications) of the applications received are at various stages of processing. During the period, no application was denied approval.

Comparative Analysis (2011 vs. 2012): Figure Xc below shows a comparison of research applications received for the same period during 2011 and 2012. The two years show varying trends for the review period, with January being the month with the least applications received in 2012 and October being the month with the most applications received for 2011. No applications were received for the months of July and December, 2011 and 2012, respectively.

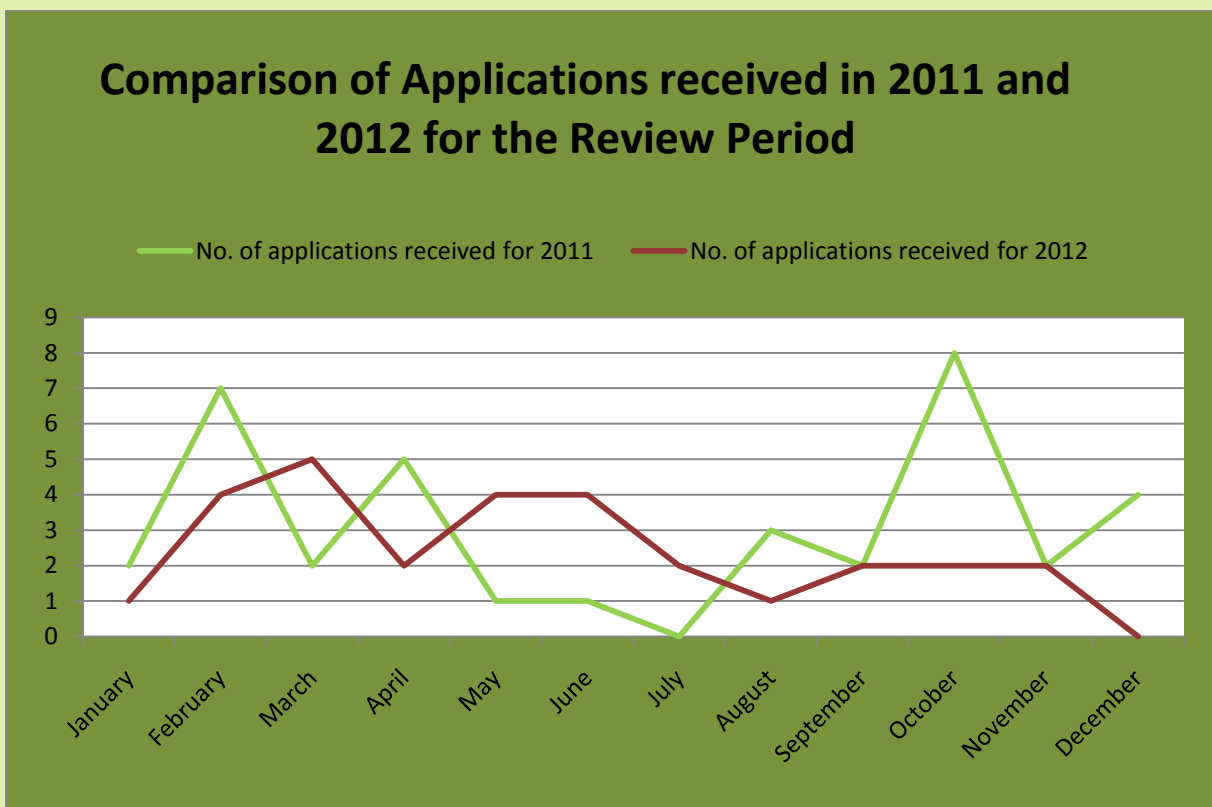


Figure Xc: Comparison of the number of Research Applications received, January-December 2011 and 2012.

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 and the Guyana Forestry Commission (GFC), when possible. The Agency continued to preserve its linkages with other relevant sector-agencies and organisations 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 continues to ensure that researchers fulfill their reporting obligations as stipulated by their research permits prior to departing Guyana and the issuing of any export permits.

Revenue Generation

A total of eleven thousand, one hundred and fifty-five United States dollars (US\$11, 155) was generated for the period from application, late application, and permit fees for both 2011 and 2012. This excludes permit fees for applications currently being processed or to be processed.

1.2.2 Biodiversity Projects

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

Regional Project on Biosafety

Guyana has endorsed the project proposal entitled "Implementation of a National Biosafety Framework in the Caribbean Sub-Region countries of Bahamas, Belize, Grenada, Guyana, Jamaica and Suriname" with the support of UNEP.

Mr. Ian Kissoon, performed duties of the National Biosafety Coordinator, during the period April 02, 2012 to June 15, 2012. With his assistance, the matrix of country activities and budget was revised and re-submitted to the Project Management Office along with a work-plan. Additionally, a list for the composition of the National Steering Committee (NSC) was prepared along with the TORs for the members of the Committee.

After seeking guidance from the Regional Office on filling the vacated position of National Biosafety Coordinator, Ms. Jenniffer Bentick began duties on August 27, 2012. Since assuming the position a thirteen member NSC has been convened and three committee meetings have been held.

Guidance was sought from the Attorney General's Office on the way forward as it pertains to the finalizing the national biosafety legislation. ToR for a Consultant to Prepare the Biosafety Bill was finalized and forwarded to the Administrative Unit so as to advertise for the vacancy. ToR for a Project Assistance were also finalized and sent to the Administrative Unit so as to advertise for the vacancy.

Additionally, the Project Manager along with the EPA's Finance Officer attended the Regional Project Inception Workshop, where the project budget and workplan were reviewed. A draft revised project budget and 2013 workplan were prepared.

Further, all equipment and materials to set up the project office have been procured.

National Biodiversity Research Information System (NBRIS)

Another round of testing was conducted following the rectification of the initial set of issues. During this testing, no new issues were identified and the final stage of the WEB module was reached.

During the final round of testing of the LAN module, several issues were encountered. A meeting was scheduled with Mr. Garraway to rectify those issues.

Given that the Special Service Agreement between the EPA and Mr. Garraway expired while there were a number of outstanding issues, the parties agreed to an extension until the end of July. However, there were still a number of outstanding issues that were not rectified before the expiration of the extended Special Service Agreement, as such, both parties agreed to further extend said contract until December 31, 2012.

Testing of the both the WEB and LAN modules continued and there was an adjustment to the agreement template on the LAN to include images. All other issues that arose during testing have been rectified. However, the processor for the NBRIS server was damaged and the software had to be placed on a virtual machine until the required parts are sourced.

The unit is currently preparing to conduct one final round of testing before launching the programme.

Continued Enhancement of Capacity Building for Effective participation in the Biosafety Clearing House

The second national workshop targeting users of the BCH was facilitated by Regional Advisor, Mr. Fred Phillips on February 21-22, 2012 at the Centre for Information Technology, University of Guyana. Form 6 (Evaluation of Performance) for Mr. Phillips along with the Regional Advisor's mission report was submitted to Mr. Ocampo. The Unit also prepared a workshop report.

Correspondences were sent to seven agencies; Ministry of Agriculture (MoA), Ministry of Health (MoH), National Agricultural Research and Extension Institute(NAREI), Guyana Revenue Authority (GRA), Faculty of Natural Sciences University of Guyana, Guyana National Bureau of Standards (GNBS) and Guyana Consumers Association (GCA) requesting confirmation of their willingness to function as Competent National Authorities of the BCH. All agencies have confirmed their willingness to perform these duties.

As per project agreement, all activities should have been concluded by April 06, 2012. However, the third workshop under the Project was not held by Guyana. As there are unspent funds totaling US\$6647, the EPA requested and received an extension to the Project to facilitate hosting of the final workshop.

The third national workshop targeting education institutions, also facilitated by Mr. Phillips, was conducted on September 13 to 14, 2012, at the Centre for Information Technology, University of Guyana. There were nine participants representing CPCE, GSA, UG, the National Library, Guyana Livestock Association and the EPA.

The Unit prepared and submitted the project closure documents, as well as a proposal for the use of the unspent funds to UNEP office in Nairobi, Kenya.

Also, the unit was given administrative rights for the national BCH website. Guidance is currently being sought from the regional BCH specialist on options for redesigning the website.

Support to Guyana for the Revision of the NBSAPs and Development of Fifth National Report to the CBD

The Agency received the Project Document, and a correspondence indicating that Phases 1 and 2 of the Project have been approved. The Unit completed the Project Cooperation Agreement, Contact Details (Annex 4), Third Party Form (Annex 7A) and the Country Request Template and forwarded same to the UNEP Office.

Interviews for the position of Project Manager were conducted and a suitable candidate has been identified and endorsed by the MNRE. However, the candidate subsequently refused the offer.

A request for the revision of the budget line for the Project Manager's salary was approved by UNEP. The position was readvertised and a suitable candidate was again identified. The Agency is awaiting feedback from the MNRE.

Implementation of National Biodiversity Action Plan (NBAP II)

A questionnaire designed to determine the level of implementation of the NBAP II activities was distributed to the following sector agencies: the Guyana Forestry Commission, World Wildlife Fund (WWF), National Parks Commission (NPC), the Guyana Lands and Surveys Commission (GL&SC), Ministry of Agriculture-Fisheries Department and the National Agricultural Research Extension Institute (NAREI). The questionnaire was completed by all the agencies with the exception of the Ministry of Agriculture - Fisheries Department. Follow up meetings were also conducted with all the agencies that completed the questionnaire. The information gathered will be utilised to conduct a review of the NBAP II.

1.2.3 Rio +20 National Submissions

The Rio+20 United Nations Conference on Sustainable Development (UNCSD) was held in Brazil on 4-6 June 2012. The objective of the Conference is to secure renewed political commitment for sustainable development, assess the progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development, and address new and emerging challenges. The Conference will focus on two themes: (a) a [green economy in the context of sustainable development](#) and poverty eradication; and (b) the institutional framework for sustainable development. In preparation for the Conference, the Government of Guyana with funding from the United Nations Department on Economics and Social Affairs (UNDESA) through the UNDP prepared a policy document along with a National Report on Guyana's progress since the United Nations Conference on Environment and Development (UNCED) in 1992.

The contract for the preparation of the National Report on Sustainable development between the UNDP and the consultant was signed on February 15, 2012. The Division reviewed and provided comments on the first draft of the report. The Division also assisted with the preparation and execution of the National Stakeholders' Workshop held on March 10, 2012 at the Umana Yana. Comments received from stakeholders were sent to the Consultant for inclusion in the report.

Additionally, a request for the facilitation of a second meeting was forwarded to the UNDP. Approval and support for the hosting of the meeting was received from UNDESA via UNDP. The Unit prepared and submitted a budget for the execution of the meeting to the UNDP. Additionally, the Division assisted with the preparation and execution of the National Stakeholder Meeting held on June 11, 2012 at the International Convention Centre.

1.2.4 Global Environment Facility

A meeting of the GEF Working Group was held on May 04, 2012. Notes of the meeting were prepared for submission to the ED for review. Based on the discussions of the Working Group, a follow-up meeting is to be held with the relevant agencies to revisit the 'Mainstreaming Biodiversity' Project.

Additionally, an Expanded Constituency Workshop for GEF Caribbean Countries was held in Antigua and Barbuda during May 08-10. Representatives from the EPA, GLSC and PTTCB attended the workshop. Following the meeting, a correspondence was submitted indicating that Guyana is in support of the applicant from Japan as the new CEO of the GEF.

Country Support Programme

The tool-kit to access resources under the GEF Country Support Programme (CSP) was received and reviewed. Following this an Annual Work Plan to assist the Focal Point with the implementation of activities was submitted to UNEP.

The EPA received a total of GYD 1,776,050 representing USD 9000 being the amount for execution of activities outlined in the Annual Work Plan, 2012. A correspondence was sent to Mr. Henry Salazar, Country Relations Officer, confirming receipt of funds.

Additionally, Terms of Reference for the development of the GEF website were drafted and a contract is being prepared for signing at the beginning of the new year.

Technology Needs Assessment (TNA) Project

Dr. Roger Luncheon, GEF Political Focal Point (PFP), has approved Guyana's participation in the TNA project. A correspondence on Guyana's endorsement of the project was prepared and submitted to UNEP on August 16, 2012.

Third National Communication (TNC) under the UNFCCC

The UNEP received GEF grants to support the preparation of the TNC project of Guyana. An initial draft of the Project Cooperation Agreement for the project was completed and submitted to the UNEP office for review before signing. Further, Dr. George Manful is required to review and provide comments on

the draft Project Cooperation Agreement for the preparation of the TNC, which was drafted by the UNFCCC Focal Point.

Small Grants Programme (SGP)

The Project Coordinator for the GEF Small-Grants Programme was recruited by the UNDP and commenced work on June 15, 2012.

The EPA sought guidance from the GEF Political Focal Point in relation to the composition of the National Steering Committee (NSC) as well as the suggestion put forward by the National Coordinator that the GEF Operational Focal Point be a member of the committee responsible for the selection of the NSC members. The EPA was advised that the GEF Operational Focal Point along with the National Coordinator and the UNDP Resident Representative would be responsible for the selection of the NSC members. A meeting was held with the National Coordinator on September 20, 2012, to review the proposed list of members for the NCS. Seven candidates from various NGOs were identified. A correspondence giving the GEF Operational Focal Point's no objection to the proposed members was prepared and sent to the National Coordinator. The seven candidates were approved and notified, and the first NSC meeting was held on November 30, 2012. Ms. Dionne Frank was elected as Chairperson of the committee while Dr. Indarjit Ramdass was elected Vice Chairperson. Comments on Guyana's priorities in relation to the SGP's objectives were also submitted to the National Coordinator.

Additionally, following a request made by the UNDP, Ms. Juliana Persaud was nominated as Dr. Ramdass's alternate representative on the National Steering Committee.

3.3 CONSERVATION AND SUSTAINABLE USE OF WILDLIFE

The Wildlife Unit of the Natural Resources Management Division (NRMD) is tasked with the responsibility for the coordination, development, and maintenance of a programme and activities for the sustainable use and conservation of Wildlife in Guyana.

3.3.1 Revised 2012 Work Programme

The Unit's work programme for 2012 was revised and approved by the Executive Director. The Unit currently operates with one officer, an Environmental Officer I (EOI).

3.3.2 Wildlife Conservation and Management Regulations

Electronic copy of the draft Wildlife Management and Conservation Regulations and the Explanatory Notes were provided to Mr. Joslyn McKenzie, Permanent Secretary, Ministry of Natural Resources and the Environment, and Mr. Durjhon, Attorney General Chambers, Ministry of Legal Affairs upon request.

3.3.3 Specially Protected Areas and Wildlife (SPAW) Protocol

The Unit has reviewed the Guidelines and Criteria for the listing of Protected Areas in Guyana under the SPAW Protocol. Currently, the Protected Areas Unit is assisting with the preparation of Guyana's report for submission to the SPAW Secretariat, for inclusion of the four (4) Protected Areas under the SPAW List of Protected Areas.

3.3.4 Investigation of Sea Turtle Nesting at Good Faith, Mahaicony

The Environmental Protection Agency (EPA) received a report on June 29, 2012 regarding a sea turtle that would have nested at Good Faith, Mahaicony, in the vicinity of the Gulf City Beach.

An investigation was carried out by the Wild Unit and a report was done and submitted to the EPA and the Ministry of Natural Resources and the Environment. A work plan to raise awareness for the protection of marine turtles was drafted and submitted for review. A budget and time schedule is currently being prepared.

3.3.5 Projects being implemented by the NRMD

The Unit continues to assist with the implementation of Projects being executed by the Division. These include the Regional Biosafety Project, Biosafety Clearing House - Phase II, and the RIO+20 Consultancy.

3.3.6 Database of Species List

The Unit continues to work on entering species data into the database of all species collected under Research Permits granted by the Agency.

3.3.7 Awareness Materials

The Unit developed a brochure focusing on wildlife, 'Guyana's Wild Giants'. The brochure is currently being prepared for distribution to stakeholder agencies. The Unit is also in the process of developing a poster that depicts wildlife hotspots in Guyana based on data obtained from the Wildlife Division.

3.3.8 Guyana Wildlife Management Authority Board Meeting

The Board has expired on December 31, 2011. The EPA is awaiting guidance from the Wildlife Management Authority with regard to the appointment of a new Board.

3.3.9 Other Activities

Research: The Unit continues to assist the Biodiversity Unit with the processing of Research Applications and issuing of Research and Export Permits.

Introductory Workshop by the Marine Stewardship Council (MSC) for the sustainable management and fishing practices through a fishery certification programme

The Unit participated in the workshop on March 16, 2012 at the Ocean View International Hotel. The objective of the workshop was to facilitate potential fisheries certification project in Guyana and to provide guidance to stakeholders on the key requirement to become certified according to international standards. The workshop focused on creating awareness of the MSC Programme, the progress made to date by the MSC, the benefits that can be incurred under the MSC, and the process of becoming MSC certified. A report was prepared and submitted to the Executive Director, EPA.

COBRA Workshop: The Unit participated in the 'Community Own Best Practice for Sustainable Resource Adaptive Management in the Guyana Shield (COBRA) Project Stakeholders' Forum: Scenarios for Guyana's Future' and a report was prepared for review.

Presentation on Ecosystem Services – The SEO, Wildlife Unit, facilitated a presentation on the EPA's mandate in relation to Ecosystem Services in Guyana under the Prioritizing Ecosystem Services for Guyana's MRVS Workshop held on March 14, 2012 by the Guyana Forestry Commission.

LCDS Amerindian Development Fund (ADF) Village Economy Development (Phase 1) under Guyana REDD+ Investment Fund (GRIF) Project Document – The Unit reviewed the document and provided comments to the UNDP at its local Project Appraisal Committee Meeting held on March 22, 2012.

International Day for Biodiversity (IDB), 2012: Presentation at CPCE and the University Of Guyana

The SEO delivered presentations on "Marine Biodiversity" at the Cyril Potter College of Education (CPCE) and the University of Guyana (UG) in observance of International Biodiversity Day, 2012.

4. ENVIRONMENTAL MANAGEMENT DIVISION

In the Environmental Management Division (EMD), the year 2011 was a year of new things, starting with the implementation of the new organizational structure based on a Divisional approach to tasks. The objective was to improve the efficiency of the Division by streamlining the functions of the units, and enhancing the supervisory role of the senior officers. The implementation was successful, and the results surpassed expectations, especially in the areas of Authorisations and Renewals of Environmental Authorisations. Additionally, a new unit, the Hazardous Waste/Materials & Air Quality Unit, was established in February, 2011, and has been focusing on developing tools to enforce the Hazardous Waste and Air Quality Regulations, 2000.

The Division continued to manage the processes of Environmental Authorization, Complaints and Response, and Monitoring and Enforcement. The processing of Environmental Authorisations and management of complaints were carried out by the three sectoral units, 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, processing Applications for Renewals, Variance and Transfer and coordinating the Anti-Littering Programme. The Division also has an Integrated Coastal Zone Management (ICZM) Unit. During the year, the Unit faced the challenge of an extended vacancy of the ICZM officer position. Nevertheless, the Unit took steps to resuscitate the Integrated Coastal Zone Management Committee (IZCMC) and pursued funding to support the necessary activities.

Furthermore, the Division conducted Research and Development activities to improve its processes, practices, procedures and guidelines. During 2011, some of the internal procedures of the Division were revised and improved. Changes aimed to contribute to the enhancement of the Division's efficiency on processing Environmental Authorisations Applications, improve collaboration with Sector Agencies, ensure the involvement of all relevant parties on the Authorisation of developmental activities, and on the resolution of environmental complaints, and to provide better guidance to developers on how to meet the Agency's requirements for compliance.

4.1 AUTHORISATIONS

The Environmental Permitting Process as prescribed in the Environmental Protection Act, 1996, the Environmental Protection Regulations, 2000, and the Environmental Protection Amendments, 2005, continued to be implemented. A comprehensive approach to environmental management was utilized, based on Regulations and Standards developed. The Agency continued to support the work of the Environmental Assessment Board (EAB).

Twenty-one (21) 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.

4.1.1 The Permitting Process

The Agency continued to process and permit new development projects for Environmental Authorization. During the year 2011, four hundred and ten (410) Applications were received for Environmental Authorizations. These included ninety-eight (98) for new projects, fifty-five (55) for existing operations, seventy-nine (79) for renewals, four (4) for transfer, fifteen (15) for variance, and one hundred and fifty-nine (159) Noise Applications. The total number of Applications received increased by 14 percent in relation to 2010.

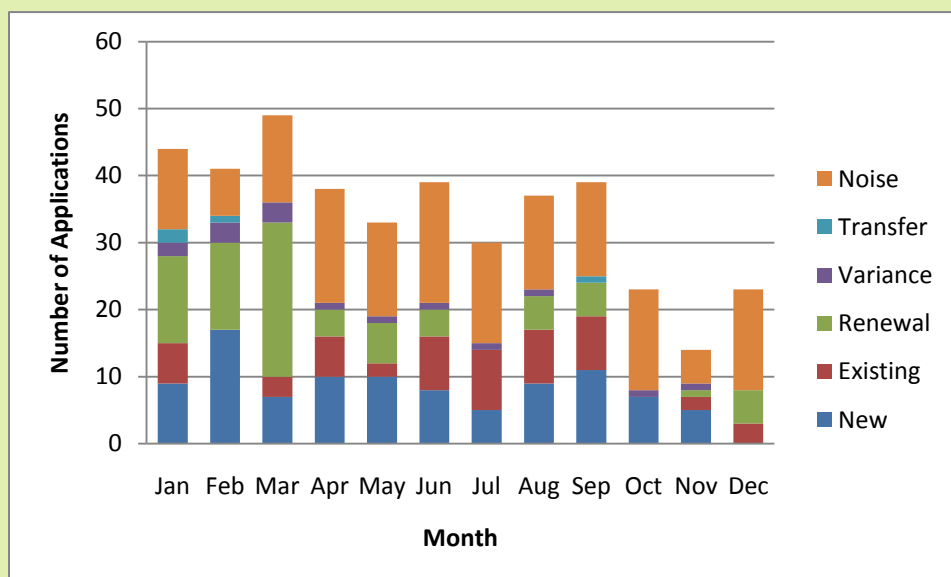


Figure 12: Environmental Authorisations Applications received in 2011

The Mining and Forestry (M&F) Unit received the highest number of Applications for the development of new projects. Lumber and lumber-processing facilities accounted for a large number of Applications received for Environmental Authorisation. This reflects the developmental tendency in the country and highlights the importance of establishing sustainable logging practices in keeping with the Low Carbon Development Strategy (Appendix IV).

4.1.2 Distribution of Authorization Applications across EMD'S Sectoral Units

The Mining and Forestry Unit (M&F) received the highest number of Environmental Authorisation Applications during the year under review, followed by the Industry, Infrastructure and Energy Unit (IIE), Monitoring and Enforcement Unit (M&E), and Agriculture, Fisheries and Tourism Unit (AFT) (Table 3). For projects going through the Environmental Authorisation process, one (1) was required to conduct EIA, while eleven (11) were required to prepare EMPs. Projects of this nature were managed mainly by the M&F and IIE Units. Additionally, the Monitoring and Enforcement Unit (M&E) received ninety-eight (98) Applications for the renewal, variance, and transfer of Environmental Permits. A total of three hundred and thirty seven (337) inspections were conducted as part of the Authorization process. This represented an increase of 65 percent in relation to 2010 (204).

Table 3: Applications received by Units

Units	No. of Applications	Permits Issued	EMP Projects	EIA Projects
AFT	27	8	1	
IIE	52	34	3	
M&F	73	57	6	1
M&E	98	54		
HW	1		1	
Noise	159	157		
Total	410	310	11	1

4.1.3 Distribution of Permits Granted in 2011

Three hundred and ten (310) Environmental Authorizations were issued during the year 2011, this represents a 51 percent increase in relation to 2010 figures (204). The 310 permits granted included seventy-four (74) Environmental Permits, sixty-six (66) Operational Permits, three (3) Construction Permits, ten (10) Letters of Authorization, and one hundred and fifty-seven (157) Noise Permits (Figure 3).

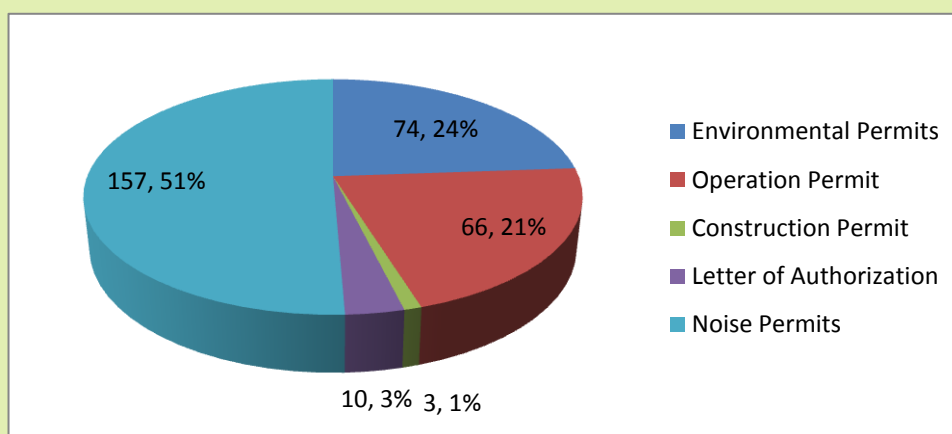


Figure 13: Distribution of Permits granted in 2011.

From the granted Permits, two EIA projects, the Romanex Guyana Int. Marudi Mountain Alluvial Gold Mining Project and the CPT Logging and Sawmilling Project, were issued Environmental Authorisations in April and July, 2011, respectively.

4.1.4 Overall Performance of the Permitting Process

The Agency's efficiency on the processing of Environmental Authorisations is assessed by the ratio of Permits granted over Applications received. During the last two years, performance has increased significantly (Figure 4) with 6 percent increase in efficiency. This was realised due to the implementation of the new organizational structure, and an increased staff complement.

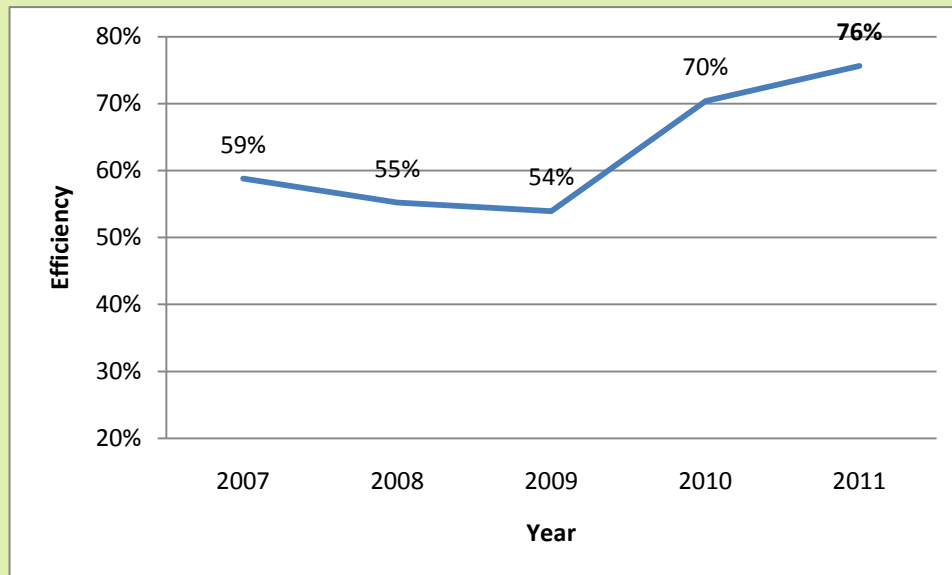


Figure 14: Environmental Authorisation Programme Efficiency.

The main constraints for the issue of Permits were the workload in relation to the human resources, and the fact that many of the Applications being processed were lacking submission of outstanding information. In this regard, the Division implemented a new strategy involving strict control in the acceptance of Applications which have been successful for recent projects; nevertheless, there are still Applications prior to 2011 with this limitation. There is a continuous effort to ensure these projects continue with the process of Authorisation.

4.2 MONITORING AND ENFORCEMENT

The Unit's monitoring activities increased significantly during the year 2011. A total of eighty-eight (88) Environmental Audits were conducted, representing a 151 percent increase compared to 2010. The Environmental Audits entailed the verification of compliance by companies with their existing Environmental Authorisations. Additionally, the Unit continued to process renewals, variances and transfers of Environmental Authorisation. During the year under review, the Agency received seventy-nine (79) applications for renewal of Environmental Authorisation, four (4) for transfer, and fifteen (15) for variance. All operations with Permits that expired in 2011 were reminded of the requirement to apply for Renewal of their Environmental Authorisation.

Additionally, the Unit worked along with other Units to investigate complaints and recommend enforcement actions to be taken. The Unit also reviewed numerous Monitoring & Compliance Reports / Environmental Management Plans (EMPs)/Annual Reports and Closure Plans during the year, and made recommendations.

The Agency improved the enforcement of the Environmental Protection Act through the issuance of Prohibition Notices. A total of eight (8) Prohibition Notices were issued in 2011. The Agency also proceeded with enforcement action through the courts, filing injunctions against those persons non-compliant with the Prohibition Notices. At the end of 2011, the following (6) cases were legally engaging action:

1. D.R. Dhunmun (*Swine Rearing Operation*)
2. Rajunauth Iserdar (*Swine Rearing Operation*)
3. Jadoo Narine & Hardat Narine (Service Station)
4. Leondre Ramcharran (Spray Painting Operation)
5. D.P. Shivrattan (Furniture and Molding Factory).
6. Awad Boodhoo (Hardware Store).

The Agency has also sought to strengthen its compliance monitoring towards resolving cases of persistent environmental nuisance e.g. Bosai at Linden, and Hackh Rice Mill at Cane Grove, Mahaica. There is dire need for an in-house legal Officer to be attached to the Agency, as there are many cases requiring legal attention and the current logistical arrangements do not facilitate speedy response from the current legal representative.

The Anti-Littering Work Programme continued to be maintained as a Programme under the Monitoring & Enforcement Unit Work Programme.

4.3 COMPLAINTS AND RESPONSE

4.3.1 Complaints Received in 2011

The Division continued to respond to environmental complaints and emergencies from the public. During 2011, a total of two hundred and seventy-five (275) complaints were received by the Agency of which, one hundred and forty-six (146) were new while one hundred and twenty-nine (129) were recurring (Figure 15). The number of complaints received by the Agency in 2011, reflected a decrease of 21 percent compared to 2010, when three hundred and fifty (350) complaints were received.

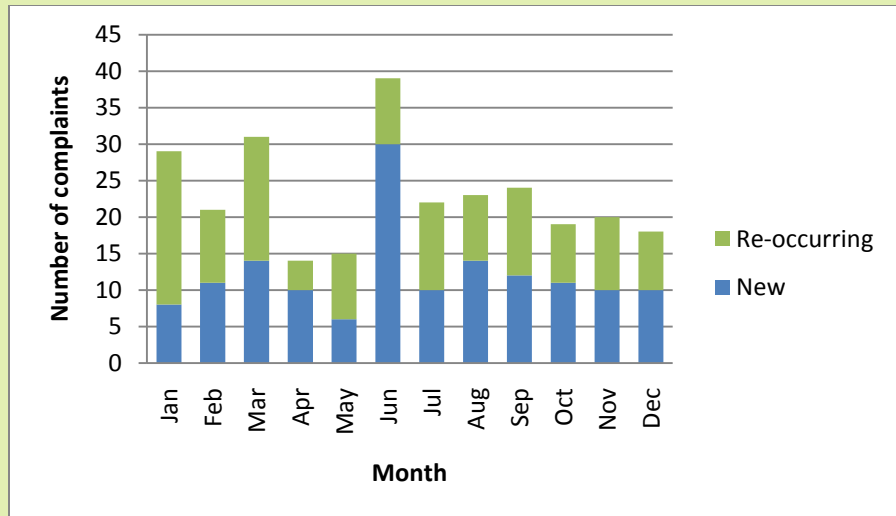


Figure 15: Complaints received in 2011.

4.3.2 Management of Complaints

During the year under review, the Agency inspected one hundred and seventeen (117) 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 sixty-nine (169) follow-up inspections were conducted. Additionally, ten (10) complaints were inspected and subsequently referred to the relevant Agencies (Figure 16).

Follow-up inspections allow 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 were essential in resolving the complaint issues. Six (6) complaints were closed as a result of the Agency's efforts towards compliance with mitigation measures.

The Agency received several complaints that were not under the purview of the Agency. These were referred to the relevant Agencies. During the year, the Agency referred twenty-four (24) complaints to agencies such as an NDC and the CH&PA (based upon the initial information collected from complainants).

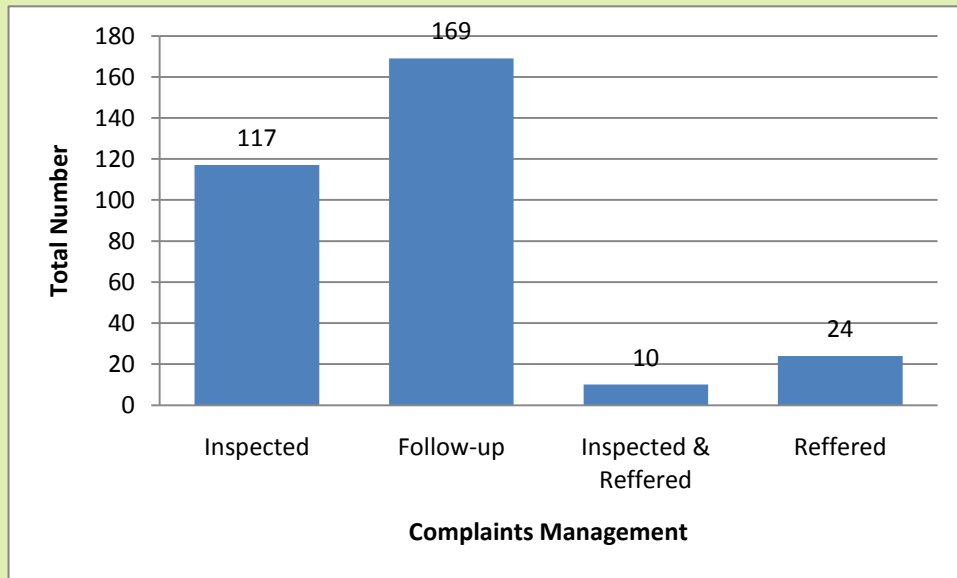


Figure 16: 2011 Complaints Management.

Furniture and woodworking operations, generators, spray painting workshops, and poultry operations were the sources of the greatest number of complaints in 2011. Swine rearing and waste disposal were also significant causes of complaint. The Industry, Infrastructure and Energy (IIE) Unit received the largest number of complaints in 2011 accounting for 63 percent, followed by the AFT Unit with 22 percent. These complaints were made with regards to fume and noise pollution associated with the operation of furniture workshops and 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 criticized, 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 and liquor restaurants.

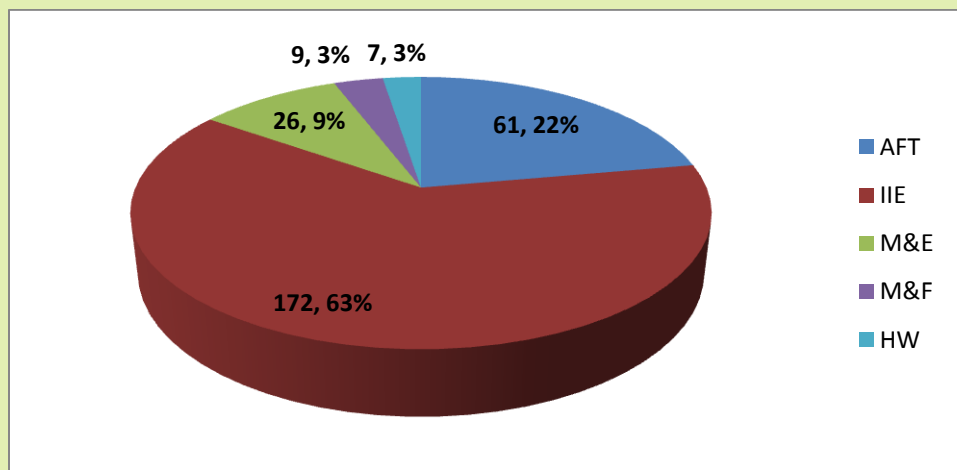


Figure 17: 2011 Distribution of Complaints by Sectors/Units.

4.4 HAZARDOUS WASTE/MATERIAL & AIR QUALITY MANAGEMENT

The HW&AQ Unit was formed on February 01, 2011 and development of the Unit in terms of clearly defining an Action Plan, procedures, guidelines and mechanisms that will support the functioning of the Unit were undertaken. Capacity Building of the members was also pursued.

4.4.1 Unit Development

The Unit has developed a Work Plan of activities which included the development of guidelines and forms to support the Agency in the execution of its mandate according to the Environmental Protection (Hazardous Wastes) Regulations, 2000.

- Development of guidelines: The following draft guidelines were developed - Storage, transportation and Occupational Handling of Biomedical Hazardous Waste, Storage, Transportation and Occupational Handling of Chemical/Industrial Hazardous Waste/ Materials, and Removal, Treatment and Disposal of oily sludge. The Guidelines were submitted to the Board and approved on September 2011. Guidance was sought from the Ministry regarding these documents.
- Development of supporting documents: The following documents were developed to support the Unit Work-plan - Notice of Activity Form for hazardous waste generators (new operations), Reporting and Record Keeping Form for hazardous waste generators, and Manifest Form for the transport of hazardous wastes. The Forms were submitted to the Board for approval on July 15, 2011 and were implemented in the Agency upon approval.
- Memorandum of Understanding: The Unit drafted an MOU between EPA and the Pesticide and Toxic Chemical Control Board.
- Collaboration: The Unit has been actively involved with the Authorisation Programme by providing Permit Conditions specific to Hazardous Waste Management for different sectors and activities, i.e. gas stations, logging operations, saw mills, GWI water treatment facility, and Repsol Mudplant. The Unit has also been involved in the review of the Haags Bosh Landfill Site EIA Addendum for the hazardous component of the facility. In addition, the Unit reviewed an Environmental Management Plan (EMP) For Tiger Tanks Waste Management Facility.
- Emergency Response: In collaboration with IIE, the Unit responded to an Oil Spill report on February 21, 2011, and in follow-up actions on February 24, 2011. The Unit responded to complaints regarding the leakage of waste oil into the surrounding drains in Enmore, ECD, and the leakage of lead acid into the surrounding drains in Craig, EBD, in September. The Unit also responded to an emergency regarding the leakage of fuel/oil into the Demerara River at the Muneshwar Wharf in September.
- Public Awareness: a Hazardous Waste Information Brochure and a Factsheet on treatment/disposal option for Waste Oil, for public sensitization, were prepared. Additionally, consultations and meetings were conducted with different private and government Agencies to inform and promote awareness regarding the role they play or should play in relation to hazardous wastes management.

4.4.2 Projects

The Unit was also involved with specific projects undergoing Environmental Authorization, such as Tiger Tank Limited-Waste Management Services, Mr. Dennis Rambarran Ship dismantling and Mr. Henry Rambarran Jr. Ship dismantling.

4.5 RESEARCH AND DEVELOPMENT

In exercising its functions, the EPA is mandated under Section (4) of the EP Act, 1996, to continuously formulate policy recommendations and plans in the furtherance of its functions, standards and guidelines to be observed for the improvement and maintenance of the quality of the environment, and to conduct, promote and coordinate research in relation to any aspect of pollution or prevention. Research and Development continued to provide necessary support to the work of the Division and the Agency.

4.5.1 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* was to provide sound, practical guidance to achieve good environmental management.

- Standards Development: During the year under review, the Technical Committee - Environment, started to review the Interim Standard for Industrial effluent discharge into the environment.
- Conformity Assessment: 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 worked towards the implementation of the ISO 17020 Standard for Inspection bodies. A Gap Analysis was conducted by GNBS; as a result, an Action Plan was developed, and an Internal Committee was formed to pursue the activities of the Action Plan. At the end of 2011, 70 percent of the activities were successfully concluded. The Action Plan was completed by the first quarter of 2011.
- Environmental Guidelines: The Environmental Guidelines for Swine Rearing and Spray Painting Operations were finalized and approved by the EPA Board on September 2011. The Agency sought guidance from the Ministry to proceed with the release of the documents to the public. Additionally, the Environmental Guidelines for Poultry Rearing Operations were drafted.

4.5.2 Projects

- *National Programme of Action and Water Safety Plan:* The Government of Guyana (GoG) through Local Stakeholder Agencies partnered with the Caribbean Environmental Health Institute (CEHI) and 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 National Plan of Action activities, for which the EPA is responsible for implementing, were reviewed to assess progress. A document was developed stating the status of the activities and the follow – up actions to be taken.
- *Fee Criteria Revision:* The review of the Fee Criteria for New Projects was started; several consultation meetings were conducted during April to October 2011. A draft Format was finalized and it was approved to be tested during a trial period of 2 months. The results and final format are expected during the first quarter of 2012.
- *Capacity Building:* A workshop on “Hazardous Waste Management in Guyana” was conducted by SENES Consultants during March 07- 08, 2011. This capacity building project was supported by the Inter-American Development Bank. There were a total of twenty-seven (27) participants, thirteen (13) being Officers of the Agency. This project supported the establishment of the new Unit which deals with hazardous waste and air quality.

4.6 MULTI-LATERAL ENVIRONMENTAL AGREEMENTS

The EPA continued to meet Guyana’s obligations under the Basel Convention by managing the trans-boundary 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 South Korea and Hong Kong for recycling purposes.

The EPA prepared an Expression of Interest for the Caribbean Hub-ACP MEAs Project: Internship Facility in response to a letter received on October 5, 2011, regarding the project.

4.7 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 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.
- 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.

4.8 FIELD AND LABORATORY SUPPORT

GUYSUCO provided the Agency with laboratory analysis services during the year.

4.9 CROSS-SECTORAL PROGRAMMES

Integrated Coastal Zone Management (ICZM)

- The ICZM Unit remained dormant for a major part of the year.
- The New ICZM Officer in the Unit continued to actively provide support to the other Units in the EMD.
- Research was conducted towards the development of a strategy for the delineation of the Coastal Zone.

4.10 CONSTRAINTS

- Legal Support remained a challenge over the last six (6) 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 major limitations.
- An Environmental Appeals Tribunal (EAT) was not in place to resolve appeals and objections in EIA matters.
- Due to the persistent demand, most of the Division's time was invested in ongoing 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 was 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.
- There was need to have more technical staff to deal with the dynamics of the new types of large scale, high profile projects received by the Agency.
- Security for field Officers especially when conducting night investigations was also lacking.

4.11 IMPORTANT MEETINGS / CONFERENCES

Officers from the Division participated in a number of meetings and workshops as reflected in Appendix II.

5. 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. Public awareness and education programmes are planned and implemented with the goal of increasing understanding of environmental issues, thereby increasing participation in environmental decision-making at the individual and societal levels.

Achievements of the EA and CB Programmes during 2012 are summarized below.

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. The materials produced included the following:

Booklets/Handouts/Flyers

A total of eleven (11) booklets/handouts were prepared for distribution and training purposes during the year. These were as follows:

- Training Manual on Water and Sanitation;
- Energy workbook for Grade 4 students;
- Worksheet: Marine Biodiversity;
- Scavenger hunt activity sheet;
- The Rs of waste management pyramid;
- Insect pyramid;
- Action Planning;
- Programme planning cycle;
- Planning Environmental Activities;
- Composting handout (1); and
- Environmental Education.

Brochures/Bookmarks

Three (3) new brochures were created during the year:

- Water pollution;

- LCDS made simple ; and
- Bookmarks depicting messages on energy conservation.

Posters/Banners

- Poster depicting career opportunities at the EPA.
- Poster of EPA's Permitting system flow chart.
- International Day for Biological Diversity Banner.
- Collage of Marine Biodiversity.
- Posters (3): Marine Biodiversity; Benefits of Marine Biodiversity and People who depend on Marine Biodiversity.

Green Leaf Newsletter

The Division produced its usual quarterly electronic newsletter which highlighted environmental issues, Agency news, projections and achievements, among other topics in a timely manner.

Information/Activity Packages

Several packages were prepared for schools and environmental clubs. Materials included in these packages were related to World Wetlands Day, and International Day of Biodiversity, as well as general information on environmental issues.

Earth Day

Packages for this observance were distributed to sixteen (16) environmental clubs/schools in Georgetown.

International Day for Biodiversity

Packages were prepared for schools in Georgetown and its environs and Essequibo. Information packages were also prepared for schools participating in the Agency's Art Competition.

Generic packages were also given throughout the year to the Nature School visitors and outreach activities such as exhibitions and Climate Change sessions.

Teaching Aids

A total of eleven (11) teaching aids were prepared to enhance awareness outreach efforts during the year. These were:

- Greenhouse effect teaching aid;
- Greenhouse gases game;

- LCDS dialogue;
- Energy bowling game;
- Trivia Game/Action Window;
- Minerals match game;
- Mining callouts game;
- Pillars of sustainable development exhibit;
- Environmental Authorisation Process flow chart;
- Environmental Showdown game; and
- Water Jeopardy game.

OUTREACH

Outreach is vital to fostering awareness on environmental issues and influence attitudinal change for a clean and healthy environment. 2012 was a very challenging but rewarding year for the Agency as it sought to expand the magnitude and reach of its public awareness programmes. The outreach conducted for 2012 built on the success of the previous year and included the following:

International Year of Sustainable Energy for all (2012)

2012 was designated the International Year of Sustainable Energy for all by the United Nations General Assembly. The main objective of the year was to bring focus to sustainable energy use. In this regard, a significant portion of the work of the division focused on the dissemination of information relating to sustainable energy use.

World Wetlands Day

In collaboration with the Nature School of the National Parks Commission, Primary Schools were targeted for World Wetlands Day (WWD) 2012. A total of one hundred and fifty - six (156) students were involved in activities focusing on the WWD Theme: ***"Tourism in wetlands"***.

World Water Day

The EIT Division produced bookmarks focusing on ***"Water and Food Security"***: These were distributed at exhibitions throughout and at the Nature School outreaches. A presentation on "Protection of the environment and freshwater resources for maintaining food security" was done for World Water Day Seminar coordinated by GWI.

Earth Day

A presentation was delivered to Stewartville Secondary School's Environmental Club (20 students) on 'Earth's Biodiversity'.

International Day for Biodiversity

In collaboration with stakeholders, International Biodiversity Day (IDBD) observances were given were wider spread, targeting both Primary and Secondary schools.

Eleven (11) sessions on 'Marine Biodiversity' were conducted with 11 schools in Georgetown, East Coast and East Bank of Demerara, in preparation for the Art Competition in Observance of IDB. A total of fifty-five (55) entries were received from eight (8) Primary Schools (Grade 6 levels) for the Art competition. The three top prize winners won book vouchers worth \$20,000, \$15,000 and \$10,000, respectively. The first prize winner also won a Day Tour to Splashmin's Fun Park for 3 persons, including meals, compliments of the National Parks Commission.

In addition, interactive presentations on Marine Biodiversity were delivered at eight (8) Primary Schools on the East Coast Demerara and Georgetown. Some two hundred (200) students benefited from the exercise; a presentation on Marine Biodiversity was delivered to students of Mae's School; Biodiversity Youth Forum for targeted Secondary Schools in Region 2; fifty two (52) students and eight (8) teachers from five (5) secondary schools on the Essequibo Coast participated; Marine Biodiversity Collage, along with other Marine Biodiversity materials Exhibition in the lobby of the National Library; Stamp Exhibition depicting Marine Biodiversity at the Guyana Post Office Corporation; TV Panel discussion on NCN 11; and Newspaper Articles in the Guyana Chronicle and Guyana Times.

WED 2012

Several activities were conducted in observance of World Environmental Day 2012. These included a presentation to the Red Cross Youth Group, Green Walk, two (2) Rides-for-the-Environment in Linden and Anna Regina and the Annual Environmental Camp.

Environmental Camp

The Annual Environmental Camp was held from July 17 – 20, 2012, at Camp Somerville, Soesdyke. Thirty-five (35) children aged 9-12, seven (7) teachers and six (6) Officers of the EPA participated in the Camp which was held under the theme, "Green Economy: Does it include you?".

International Ozone Day

Newspaper articles were published, and a television appearance was coordinated on the Guyana Today Show highlighting the activities undertaken by the Ozone Protection Unit, Hydrometeorological Office.

Annual Taxidermy Camp

One presentation on the topic “Water Conservation” was delivered to thirty-five (35) participants attending the Annual Taxidermy Camp hosted by the Guyana National Museum.

Teacher Training Workshop

Twenty-eight (28) second year Trainee Teachers at the Early Childhood and Primary Level and two (2) Lecturers of the Cyril Potter College of Education participated in the third Environmental Education Workshop during October 18 – 21 at Camp Wesleyana, Linden/Soesdyke Highway.

School Visits

Students (80) and Teachers (4) of the New Amsterdam Multilateral School were hosted in the Agency’s Boardroom for interactive presentations on the work of the EPA, Water Pollution, the LCDS and Climate Change. Six (6) information packages were also presented to the group.

Climate Change

Climate Change outreach using the Activity booklet “Children and the Changing Climate” created by the EITD were conducted with students of the Grade 6 level . Thirty- seven (37) sessions were conducted with thirty-two (32) primary schools in Georgetown, East Bank Demerara, West Bank Demerara, West Coast Essequibo, East Coast Demerara and West Coast Berbice. A total of 1760 students benefited from this exercise. This outreach will be continued in 2013.

EC Supervisory Training:

Supervisors of Environmental Clubs of 15 Schools in Regions, 3, 4 and 10 participated in sessions intended to provide skills and resources to enhance and resuscitate Clubs within Schools. Each participant was presented with resources and a Handbook for EC Supervisors compiled by the EITD.

Nature School - Guyana Zoological Park

Collaboration with the Guyana Zoo for Outreach at the Nature School was conducted in 2012. These sessions highlighted a different topic for each school term: Tourism in wetlands, Thirstin's Wacky Water Adventure (highlighting water conservation) and Understanding Marine Debris, respectively. Sessions held on Wednesdays, involved a total of 845 students from 19 Primary Schools.

PRESENTATIONS

During the year, a total of fifty- four (54) presentations were prepared and delivered by the EIT team (Appendix V). The majority of these presentations were themed on the different environmental observances for which they were prepared and were delivered to various target groups including environmental clubs, schools, community and youth groups. All presentations were interactive and formatted to engage the audience in discussion.

MEDIA PROGRAMMES

Television Appearances

- The medium of television was utilized as fully as possible in the promotion of environmental awareness. Through the Guyana Today Show hosted on the National Communications Network (NCN), the Agency was permitted a fifteen-minute weekly segment based on availability of broadcast time. This opportunity was maximally utilized during the year, with the Agency coordinating twenty-one (21) appearances throughout the year to highlight a range of environmental issues.

Panel Discussions

Along with the Guyana Today show, NCN Channel 11 facilitated a panel discussions for the International Day for Biodiversity Diversity: Panelists included Michelle Kalamadeen and Calvin Bernard. The theme was 'Marine Biodiversity'.

Press Releases

Three (3) press releases were prepared and sent to the Government Information Agency (GINA) for dissemination to Media Houses during the year. The press releases focused on:

- International Day of Biological Diversity;
- World Environment Day observances;

- A new Guest House and Warden Building to be built for Kaieteur National Park.

Interviews

Interviews were conducted and broadcasted by various television channels to highlight various activities concerning World Environment Day:

- Kids TV (Channel 9) highlighted the Environmental Camp.
- The Division facilitated an interview by NCN on Earth Day for their programme Youth Expressions.

Newspaper Articles

Throughout the year, newspaper articles were prepared for and published in the Guyana Chronicle and the Guyana Times to highlight a range of environmental topics and issues.

In the “Our Environment” Column in the Sunday Chronicle a total of forty-three (43) articles were published for the year.

For the Column “Our Earth, Our Environment” featured in the Thursday Edition of the Guyana Times, a total of fifty (50) articles were prepared for publishing.

A news -spread was also published for International Day for Biological Diversity.

EXHIBITIONS

The Division participated in a number of Exhibitions (Appendix VI) during the year during which information material on a range of environmental issues were distributed. The opportunity was also maximally utilised to engage the public in interactive activities through which they learnt of environmental issues.

CONCEPTUALISATION AND REVIEW OF MATERIALS

The dynamic nature of education and training necessitates continuous adaptation, flexibility in creation and presentation of education materials.

Two new manuals were created in 2012 - *Training Manual on Water and Sanitation* and *Energy workbook for Grade 4 students*.

DOCUMENTATION CENTRE

The Document Centre continued to be a valuable source of information for researchers and members of the public.

PICK IT UP GUYANA

The Ministry of Natural Resources and the Environment from June undertook a campaign to “clean up” the garbage evident in all parts of the country, promote awareness and foster sound environmental values among citizens. Titled “Pick it Up Guyana”, the operation is being executed with support from the private and public sectors. It involves businesses, government offices and citizens from all walks of life working together to clean up the environment. Emphasis is being placed on the adoption of environmentally sound practices, enforcement and deliberate actions to rid the environment of garbage.

Elements of Pick it Up Guyana

A holistic approach is being adopted for a successful campaign. The main elements of the operation include the following:

- 1. Enforcing littering fines**
- 2. Enforcing standards within Governmental and private institutions**
- 3. Clean-up drives**
- 4. Plastics and recycling**

Achievements

Pick it Up Guyana was officially launched in June and coordination activities to put systems in place are ongoing.

Clean-Ups

To date, the support of stakeholders has been secured and work has started both in the interior with the mining communities and on the coastland with several community groups and business organizations undertaking clean up and enhancement exercises.

In the interior locations, environmental enhancement activities were undertaken at Port Kaituma, Mahdia and Itaballi in collaboration with the Guyana Geology and Mines Commission (GGMC).

Public Awareness

The public awareness component of the programme has seen the creation and erection of billboards, scrolls and posters, the writing and publication of newspaper features, production of television programmes (Six (6) 15-minutes programmes) and a number of public service announcements (PSAs). A jingle aimed at influencing behavioral change towards environmentally friendly practices in relation to waste management was also produced and is currently being broadcast.

Additionally, brochures and flyers were also created for dissemination to members of the public.

Press Conferences were coordinated to provide updates of the initiative to the media, press releases were prepared and disseminated and Panel Discussions were also coordinated.

Additionally, the Pick It Up Guyana team participated in a number of exhibitions including GuyExpo.

Environmental Volunteer Programme

An Environmental Volunteer Programme intended to mobilize and equip citizens from all walks of life to undertake environmental enhancement activities within their communities and influence behavioral change towards sound environmental practices was launched. An advertisement encouraging participation in this programme was produced and this is currently being broadcast via radio and television. Empowerment sessions for Volunteers have also been conducted in Berbice and Georgetown.

STAND Initiative

In collaboration with the Ministry of Education, Pick It Up Guyana launched an initiative – Schools Taking Action With New Dedication (STAND). Intended for implementation within schools countrywide, STAND is currently being undertaken in six (6) pilot schools: Redeemer, Rama Krishna and Eccles Primary Schools and New Campbellville and Lodge Secondary School and St Joseph High School.

These schools are engaged in separation of plastics and aluminum cans for recycling. Information sessions on waste management and composting were also conducted within these schools.

Data Collection

Preparation for the collection of data to guide policy decision in relation to the use of plastics is currently being done. A Questionnaire for administration to Supermarkets was created and this project will be undertaken shortly.

Draft Legislation

Draft Litter legislation has been crafted and is currently being reviewed by Stakeholders.

CONCEPTUALISATION AND REVIEW OF MATERIALS

The 'Pick it Up Guyana' campaign being a new initiative saw the development of a number of public awareness materials which included brochures, posters, games, bill boards etc; aimed at promoting environmental awareness and fostering sound practices.

6. CONCLUSION

The Agency successfully implemented its work programme in 2012. 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.

The complaints, authorisations and response aspects of the Agency work have continued to increase without a proportional increase in human and other resources. The challenge of advancing enforcement matters legally still remains although significant numbers of case summaries have been provided to the Agency's legal retainer.

Whenever opportunities to build capacity were available, these were capitalized on by the Agency. These will continue to be pursued by the Agency to ensure that it has the requisite capability to meet its needs to deliver on its mandate of environmental management and natural resources conservation and management.

APPENDIX I. EPA STAFF LIST AT THE END OF DECEMBER, 2011.

APPENDIX I - EPA STAFF LIST AT THE END OF DECEMBER, 2012

	Name of Officer	Designation
	Office of the Executive Director	
1	Indarjit Ramdass	Executive Director (ED)
2	Kerean Geer	Executive Assistant to ED
3	Ramsarran Etwaroo	Driver to ED
	ADMINISTRATIVE DIVISION	
4	Dhanraj Persaud	Administrative Director (AD)
5	Faneeza Alli	Executive Assistant to AD
	<i>Policy, Planning & Research Unit</i>	
	Vacant	Environmental Economist
	<i>GIS Unit</i>	
6	Nadia Nasir	GIS Technician
7	Darshini Seeram	Environmental Officer (GIS)
	<i>IT Unit</i>	
8	Ryan Tiwari	IT Specialist
9	Antonio Valenzuela	Network Administrator
10	Stefan Rix	Technical Support Officer
	<i>Human Resources Unit</i>	
11	Ronley Kendall	Human Resources Officer
	Vacant	Human Resources Assistant
	<i>Finance Unit</i>	
12	Lancelot France-Cummings	Finance Officer
13	Fiona Marshall	Senior Accounts Clerk
14	Debbie Wilkinson	Senior Accounts Clerk
15	Hollee Ragnauth	Accounts Clerk
16	Dadre Bayley	Accounts Clerk
	<i>Administrative Unit</i>	

17	Shivon Caesar	Administrative Officer
18	Divinjali Bailey	Administrative Assistant
19	Garth Husbands	Driver
20	Deodat Puranram	Driver
21	Kamal Ramdayal	Driver
22	Kumardev Samaroo	Officer Assistant
23	Avinash Persaud	Officer Assistant
24	Winifred Perreira	Cleaner
25	Carla Anderson	Cleaner
26	Fredrick Perreira	Handyman
	<i>Environmental Management Division</i>	
27	Geeta Devi Singh	Director
28	Radhika Mootoo	Executive Assistant
29	Sonia Gumbs-Luke	Senior Environmental Officer
	Vacant	SEO, R&D
30	Teijvarti Persaud	Senior Environmental Officer
31	Tashana Redmond	Senior Environmental Officer
32	Karen Alleyne	Senior Environmental Officer
33	Felicia Adams	Environmental Officer II
34	Anzaleen Hoosein	Environmental Officer II
35	Nalissa Persaud	Environmental Officer II
36	Colis Primo	Environmental Officer II
37	Savitri Itwaru	Environmental Officer II
38	Dulcie Abrahams	Environmental Officer
39	Monique Williams	Environmental Officer
40	Gregoria Vaughn	Environmental Officer
41	Melinda Franklin	Environmental Officer
42	Andrew Gupta	Environmental Officer
43	Latoya Farinha	Environmental Officer
44	Marcia Hall	Environmental Officer
45	Sharmin Joseph	Environmental Officer

46	Earlla Nelson	Environmental Officer
47	Saudia Sadloo	Environmental Officer
48	Junior Paul Chanderpaul	Field Technician
49	Shellaun Harper-Cox	Field Technician
	Vacant	Environmental Officer, ICZM
<i>Education, Information and Training Division</i>		
50	Sharifah Razack	Director
51	Fareena Alli	Executive Assistant
52	Padmini Persaud-Roberts	Senior Environmental Officer
53	Candacie Thompson	Environmental Officer II
54	Sean Mendonca	Environmental Officer II
55	Aretha Forde	Environmental Officer I
56	Deuel Hughes	Environmental Officer I
<i>Natural Resources Management Division</i>		
	Vacant	SEO, Biodiversity Unit
	Vacant	SEO, Protected Areas Unit
	Vacant	SEO, Wildlife Unit
57	Juliana Persaud	Environmental Officer II
58	Stacy Lord	Environmental Officer II
59	Diana Fernandes	Environmental Officer II
60	Rae Smith	Environmental Officer II
61	Rayner McAndrew	Environmental Officer
62	Alisha Rambarran	Executive Assistant
63	Joanne Ford	Environmental Officer
64	Jenniffer Bentick	NBF Coordinator

Total Staff

Males 21

Females 43

64

APPENDIX II. MEETINGS AND WORKSHOPS/SEMINARS ATTENDED BY THE STAFF.

Nalissa Persaud – EO II	The FPA/ACP: FLEGT Support Programme Workshop
Geeta Devi Singh – Dir EMD Enrique Monize – GIS Officer	Capacity Building Sessions on the MRVS: Forest Area Change Assessment Capacity Building Sessions on the MRVS: Forest Carbon Stock Assessment
Geeta Devi Singh – Dir, EMD Marle Reyes- SEO, R&D Karen Alleyne- SEO, HWMAQ Sonia Gumbs-Luke - SEO, IIE Felicia Adams – EO II Colis Primo – EO II Mahendra Saywack - EO I Savitri Itwaru - EO I Malicia Hall - EO I Latoya Farinha - EO I Kimberly Craig - EO I	Hazardous Waste Management in Guyana
Geeta Devi Singh – Dir, EMD Earlla Nelson – EO I	World Water Day Workshop (Ministry of Agriculture).
Mahendra Saywack – EO1	Occupational Health and Safety Training hosted by REPSOL – “Hand and Finger Injuries”
Ms. Geeta Devi Singh – Dir, EMD	Disaster Response and Risk Reduction Coordination Platform Meeting (3rd)
Geeta Devi Singh – Director, EMD Mahendra Saywack – EO1	Workshop: “Expanding Bio-energy Opportunities in Guyana Training, hosted by Ministry of Agriculture”
Karen Alleyne-SEO- HWAQ	Attended the National Strategic Approach International Chemical Management (SAICM) Implementation Plan Workshop.
Ms. Malicia Hall- EOI Ms. Shabana Yusuf- EOI	Seminar: Induction/Orientation-Public Service Ministry, Training Division.
Geeta Devi Singh – Dir EMD Tashana Redmond – SEO AFT/ME Sonia Gumbs-Luke – SEO II Teijvarti Persaud – SEO M&F Marle Reyes – SEO R&D	Workshop: Offshore Oil and Gas Management: The U.S. Model.
Earlla Nelson - EO I	Workshop: “Expanding Bio-energy Opportunities in Guyana

Mahendra Saywack - EO I	Training, hosted by Ministry of Agriculture”
Osbert Ellis – EO1	Workshop: Payment for Ecosystem Services (PES), hosted by the Guyana Forestry Commission.
Ms. Geeta Devi Singh – Director EMD	Risk Programme Management (RPM) Course (USAID & CDC)
Desiree Hopkinson – EO 1	Workshop : Review of the Economics of Climate Change in the Caribbean –(Office of Climate Change)
Ms. Tashana Redmond – SEO M&E/AFT Ms. Marle Reyes Pantoja – SEO R&D	Understanding the requirements of the ISO 14001:2004
Karen Alleyne	Regional Training Workshop on Enhancement of Implementation and Enforcement Capacity, Strengthening the Legislative, Regulatory and Enforcement Capacity of Small Developing States in the Caribbean with regard to the Basel, Stockholm and Rotterdam Conventions.
Ms. Desiree Hopkinson – EO I Ms. Latoya Farinha – EO I Ms. Asma Sharief – EOII Mr. Colis Primo – EOII Ms. Kimberly Craig – EO I Ms. Shabana Yusuf – EO I	Training Workshop on Conservancy Adaptation Project with presentation series on GPS Data Acquisition and Processing, Bathymetry Surveys and Applications in the Conservancy Channels and Rivers and Real Time Kinematic Procedures and Applications in the EDWC.
Ms. Sonia Gumbs-Luke – SEO IIE	Workshop on Climate Risk Adaptation in the Caribbean.
Ms. Sonia Gumbs- Luke – SEO IIE Ms. Felicia Adams – EOII	Induction Training Course on Social Engagement Plan for Multi –Stakeholder Committee
Karen Alleyne-SEO HWMAQ	Developing a National Implementation Plan for Strategic Chemicals Management in Guyana, Stockholm Convention Inception Workshop.
Shabana Yusuf- EO I Mahendra Saywack- EO I	Expand knowledge of the potential use of biomass energy.
Kimberly Craig – EO 1	Continued Enhancement of Building Capacity for Effective Participation in the Bio-safety Clearing House Portal.
Anzaleen Hoosein – EO11 Mahendra Saywack – EO1 Latoya Farinha – EO1 Earlla Nelson – EO1	General Training-Landfill Construction and operations.
Dr. Indarjit Ramdass – ED Ms. Tashana Redmond – SEO M&E Ms. Marle Reyes – SEO R&D	Ninth General Capital Increase - Water Resources and Adaptation to Climate Change - Developing an Agenda to respond to Climate Change Impacts on Water Resources
Dr. Indarjit Ramdass – ED Ms. Geeta Devi Singh – Dir, EMD Ms. Tashana Redmond – SEO M&E Ms. Teijvarti Persaud – SEO M&F	IDB’s Environmental and Social Safeguards - The purpose of the workshop was to provide an introduction to international safeguards as part of the process to develop international best practice safeguard standards for REDD+ programmes in

Ms. Marle Reyes – SEO R&D	Guyana.
Ms. Geeta Devi Singh – Dir EMD	Tenth Meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
Ms. Nalissa Persaud – EO 11, M&F Ms. Earlla Nelson – EO 1, M&E	Workshop at the Guyana Forestry Commission CD –REDD (Capacity Development for forest- related GHG inventories)
Ms. Sonia Gumbs-Luke-SEO-IIE	One-day Workshop on the preliminary findings on the application of the IDB Disaster Risk Indicators to Guyana.
Ms. Marle Reyes Pantoja – SEO R&D. Ms. Teijvarti Persaud – SEO M&F Ms. Sonia Gumbs-Luke – SEO IIE.	Petroleum Seminar. Preparing for Offshore Energy Resources – The Atlantic Canada Oil & Gas Experience.
Ms. Felicia Adams-EO II, IIE Ms. Clydecia Mc Clure-SEO, NRMD	Workshop hosted by the Guyana Lands and Survey Commission on the on the Development of a Land Use Planning Project.
GIS Staff	Geographic Information System (GIS) and Global Position System (GPS) training workshop
GIS Staff	Geographic Information System (GIS) training seminar
GIS Staff	Second phase of workshop on Multi-user geodatabase applications on GIS

**APPENDIX IV: DISTRIBUTION OF APPLICATIONS FOR NEW PROJECTS RECEIVED
IN 2011 BY SECTOR.**

New Applications	No. of Applications
Agri Chemical Storage	1
Animal & Food Production & Tourism	1
Aquaculture Farming	1
Bauxite Mining	1
Cattle Ranch and Guesthouse	1
Firewood (Buying and Selling)	1
Funeral Home	1
Furniture Workshop.	2
Gas/ Service Station/ Fuel Depot	9
Gold Mining	1
Hotel/Guest House/ Apartment Building	3
Ice Factory	1
Infrastructure Projects - East Bank Demerara Four Lane Expansion/ Improvement Access Road to International Airport/ Rehabilitation of Sea Defence/ Quarantine Officer Quarters/ Onshore Logistic Facility/ Extension of Cheddie Jagan International Airport	6
Installation of Fibre Optic Cables	1
Kilm Drying Complex	1
Logging	3
Logging and Sawmilling	5
Lumber Yard (with and without processing)	7
Petroleum Exploration/ Drilling	2
Potable Sawmill	10
Poultry Processing	2
Production/Storage of Lubricating Oils	2

Quarrying	1
Rice Mill	5
Sand Mining	6
Sawmill	16
Shallow Well	1
Storage of Aviation Fuel	1
Toilet Paper Manufacturing	1
Transit Point for Logs	1
Underwater Logging Sinker Recovery	1
Waste Management Facility	1
Wharf	1
Wood Processing Facility	1
Total	98

APPENDIX V: PRESENTATIONS PREPARED AND DELIVERED IN 2011.

Month	Title	Target group
January	Tourism in Wetlands	Nature School
	Climate Change	Primary Schools (13)
February	Tourism in Wetlands	Nature School
	Climate Change	Primary Schools (4)
	Let's Talk Energy	Stewartville Secondary School
	Pollution, Climate Change and Energy	New Amsterdam Multilateral School
	Let's Talk Energy	Girl Guides
March	Tourism in Wetlands	Nature School
	Introduction to Environmental Education, Forming Environmental Clubs and Programme Planning	Supervisors of Environmental Clubs
	Protection of the environment and freshwater resources for maintaining food security	World Water Day Seminar
April	Let's Talk Energy	Environmental Clubs of schools in Linden
	Marine Biodiversity	
	Managing your Environment	OSH Workshop
	Green Jobs	OSH Fair
	Earth's Biodiversity	Stewartville Secondary School
	KfW – Supporting Livelihoods of Communities in Protected Areas	13 th Sustainable Tourism Conference

May	Marine Biodiversity	Primary Schools (8)
	Marine Biodiversity	Mae's School
	Forest Biodiversity	Betsy Ground Primary
	EITD's Projections for 2012	EPA Board of Directors
	Thirstin's Wacky Water Adventure	Nature School
June	"Green Economy – Does it include you?"	Red Cross Youth Group
July	<ul style="list-style-type: none"> - Global warming- storyline; - Climate change; - Measuring your carbon footprint; - Waste management; - Composting; - Becoming an Environmental Educator; - Basics of environmental education; - Energy conservation – story telling; - Actions for energy conservation; and - Infusing environmental education into the various subject areas. 	EPA Environmental Camp
August	Water Conservation	Taxidermy Camp
	Effect of Illiteracy on an Individual's Ability to Care for the Environment	Ministry of Education's Adult Literacy Programme Workshop
September	Understanding marine debris	Nature School
October	<ul style="list-style-type: none"> - EE History, Concept, Principles and Approaches; - Environmental Educator vs Environmentalist; - EE Tools and Methodologies; - Infusion vs Diffusion; - Environmental Issues – Global & local; - Problems vs Issues: Criteria for Prioritising; - Experiential Learning; - Water; - Sustainable Land Management; - Climate Change; 	Teachers Training Camp

	<ul style="list-style-type: none"> - Biodiversity; - Creating an Action Plan; and - Programme Planning. 	
	The 3Rs of waste management	Lioness club workshop
	Understanding marine debris	Nature School
November	Climate Change	Primary Schools (12)
	EPA and Environmental Sustainability	Seminar on Sustainable Management of the Extractive Sector
	Understanding marine debris	Nature School

APPENDIX VI: EXHIBITIONS PARTICIPATED IN 2011.

Exhibition	Date	Venue	Theme
Lethem Easter Expo	April 06-09, 2012	Lethem	
National Science Fair	April 11-13, 2012	New Amsterdam Technical Institute	"Science and Technology: Unlocking potentials for green societies"
The 13 th Sustainable Tourism Conference	April 15-17, 2012	National Convention Centre	"Keeping the right balance:Sustaining our resources"
Linden Expo	April 27-29, 2012	Linden	"Celebrating our diversity while reclaiming Linden's identity"
International Day for Biological Diversity	May 21-25, 2012 May 21-25, 2012	National Library Guyana Post Office Corporation	Marine Biodiversity
Better Living Expo	July 01, 2012	Parika	"Walking on sunshine"
Guyana Geology and Mines Commission	August 19-20, 201	National Park Tarmac	"Investment and technological growth for

Mining Fair			sustainability in the mining sector”
GuyExpo	September 27-30, 2012	Sophia exhibition site	“Strengthening the traditional, embracing the new”
Fire Safety Exhibition	October 12, 2012	Fogarty’s Water Street Pavement	“Fire Safety is everyone’s business, get involved now”
Kwakwani Day	November 03, 2012	Independence Square, Kwakwani	