

2016 ANNUAL REPORT
ENVIRONMENTAL PROTECTION AGENCY



Overview

The Environmental Protection Agency performed well against its 2016 annual Work Plan, meeting its targets in its various programme areas, particularly, in compliance monitoring, complaints investigation, litter enforcement, education and awareness and biodiversity projects funded under the global environmental facility (GEF). The early availability of its Government of Guyana subvention, facilitated the timely completion of the activities of the 2016 Work Plan. **Of note, is that the 2016 GoG subvention, provided funds for a consultancy to draft plans for a building requested in the 2016 budget to resolve the shortage of office space at the Agency.**

This year, the Agency also marked the twentieth anniversary of its establishment on June, 5, World Environment Day (WED). As such, activities to observe WED, were scaled-up and included a National Youth Forum, Hinterland-Coastal Youth Seminar, Awards Ceremony, and Community Clean-up exercises.

This year found the Agency charting new territory, pursuant to the authorisation of large-scale projects in the oil and gas sector. Together with this demand, the Agency was also required to attend to applications for authorisation of large-scale projects in forestry, and mining sectors and new projects in the agriculture sectors.

Over the year, the Agency delivering on its mandate for environmental management, granted close to six hundred (600) environmental authorizations and conducted nearly three hundred (300) complaints inspections. Further, the Agency, successfully closed thirty-eight (38) complaints, served ten (10) prohibition notices, pursued twelve (12) cases in court and conducted inspections to monitor compliance of one hundred (100) authorised projects.

In enforcement against littering, the Agency issued one hundred and thirty-one (131), citation orders obtaining ninety-eight (98%) compliance, successfully pursued four (4) in cases in court, issued twenty-three (23) fixed penalties and pursued two (2) cases for non-compliance with fixed penalties.

To strengthen its performance in relation to the Environmental Protection Regulations (2000) the Agency developed six (6) new environmental guidelines for hazardous waste and water management and drafted two (2) new regulations and a proposal to develop the terms of reference

for air quality monitoring. Further, in 2016, the Agency undertook an air quality baseline assessment in Linden, Region 10.

The Agency implemented GEF funded projects with outputs such as a *State of Environment Report*; *Finalized Access and Benefits Sharing Regulations*; *Prioritisation of Mining Hotspots for monitoring and enforcement based on biodiversity parameters*; *'Support to enhancing the Capabilities of the Guyana Mining School and Training Centre Inc'*; *'Support to uptake of Biodiversity-friendly Practices by Miners'*; *'Support to Strengthening of Monitoring and Enforcement of Mining Regulations'*; and *'Legal Review to Support Monitoring and Enforcement of Mining Regulations'*

Summary of 2016 Achievements

Environmental Authorisation

This year, the Agency received five hundred and seventy seven (577) Applications for Environmental Authorisations (EAs), an eight percent (8%) increase compared with 2015. About twenty percent (20%) of the applications received, were for new projects, while ten percent (10%) were related to existing operations. Close to sixty-percent (60%) of the Applications received were for short-term Noise Permits. Over the year, the Agency managed thirteen (13) Applications for projects which require an Environmental Impact Assessment (EIA) and thirty (30) Applications for projects which require an Environmental Management Plan (EMP). One hundred and forty-two (142) site visits, were conducted during the year, to facilitate the environmental authorisation of the projects.

Over the last three years, there was little variation in the number of Applications received and EAs issued. Six hundred and twenty (620), five hundred and ninety-one (591) and five hundred and seventy-seven (577) being granted for 2014, 2015 and 2016, respectively. For both 2014 and 2015, four hundred and fifty-four (454) EAs were granted, while four hundred and fourteen (414) were issued in 2016, a decline by forty (40) applications when compared with the two preceding years. For 2014, 2015 and 2016, the percentage of EAs issued based on the applications received were 72, 76 and 71 respectively.

In 2016, three hundred and forty (340) Short-term Noise Permits, twenty-two (22) Environmental Permits, four (4) Construction Permits, sixteen (16) Operation Permits, seven (7) Letters of Authorisation, twenty-four (24) Renewals, and one (1) Variance Permit were prepared and granted.

Water Quality Management

The Agency provided technical inputs for the *Code of Practice for Water Manufacturers and Filling Premises* and facilitated the review of *Interim Guidelines for Industrial Effluent Discharge into the Environment* in collaboration with the Guyana National Bureau of Standards (GNBS). Guidelines were also developed for the management of water resources in the mining and forestry sectors, and for wastewater treatment options. Drafts were prepared for a Monitoring Protocol for the Dakoura Watershed in Linden, and for EPA's Water Sampling Protocol.

Hazardous Wastes/Materials & Air Quality Management

Authorization of projects and activities with hazardous materials/wastes components continued. Among these projects, were scrap metal yards; facilities that store and export used lead-acid batteries (ULABs); and persons/companies removing and disposing of asbestos. Research and development continued, to enhance and advance progress in hazardous waste and air quality management with the following outputs achieved in 2016:

- An Environmental Guideline: *Storage of Waste/Used Oil and Tactical Responses to Oil Spills* was completed and the existing *Asbestos Guidelines* was amended;
- Environmental Protection (Transit and Export of Hazardous Wastes) Regulations, 2016 was drafted and finalised;

- Standard Operating Procedure (SOP) was drafted/developed for:
 - Processing of Notification Documents and the Issuance of Movement Document for the Trans-boundary Movement of Hazardous Waste.
 - Use of the Multi Rae Pro used to measure Volatile Organic Compounds (VOCs), Carbon Monoxide, Hydrogen Sulphide, Nitrogen Dioxide, Nitric Oxide and Radiation;
- A proposal was developed to seek funding to conduct a National Air Quality Scoping to support the development of National Ambient Air Quality Standards as required by the Environmental Protection (Air Quality) Regulations, 2000; and
- A Baseline Air Quality Monitoring and Assessment was conducted in Linden to gain an understanding of the current air Quality status of the Town, since the installation of the dust collectors at the kilns at Bosai.

Complaints Management

The Agency received two hundred and one (201) complaints in 2016, a nineteen percent (19%) increase over 2015. Complaints received related to odour nuisance from livestock operations, fumes, and noise and dust nuisance from the operation of workshops in Regions 3, 4, and 6.

Two hundred and eighty-nine (289) inspections were conducted in 2016, surpassing the target of two-hundred and forty one (240) set for the year and is the highest since 2014. The number of complaints inspections done this year, increased by twenty-five percent (25%) over 2015. One hundred and twenty nine (129) of the inspections conducted were for new complaints, one hundred and fourteen (114) were follow-up inspections, and forty-six (46) were related to compliance with Prohibition Notices and matters in Court. There was a twenty-two percent 22% and sixteen percent (16%) increase in new and follow-up inspections compared with 2015.

Thirty-eight (38) complaint cases were closed for the year, as a result of satisfactory compliance with the Agency's recommendations. The number of closed complaints also exceeded that of the past two years with a two-hundred and sixteen (216%) increase over 2015

Ten (10) Prohibition Notices were issued in 2016. Five (5) of twelve 12 matters in Court were resolved; three (3) were withdrawn, on the EPA's recommendations based on compliance with its recommendations.

Litter Enforcement

The Agency collaborated with nine (9) NDCS within Regions 3 and 4, and 6, and thirty-four (34) NDCs and Indigenous Communities within Regions 1, 2, 5, 6, 7 and 10. The Agency also collaborated with the Ministry of Natural Resources, Guyana School of Agriculture (GSA), National Agriculture Research Extension (NARE) and the Guyana Livestock Development Authority (GLDA) to address litter issues and implement the Litter Enforcement Regulations.

Ninety-eight (98) members of the Local Authorities and other partner Agencies of Regions 02, 05, 06, 07 and 10, were provided training towards assuming the role of Honorary Litter Prevention Wardens.

Two-hundred and twenty-two (222) complaints related to litter offences were received, a little over ten percent less than in 2015. Complaints emanated from Regions 2, 3, 4, 5, 6, 7 and 10 with over seventy percent of the complaints coming from Region 4. Further, eighty percent (80%) of the complaints related to *Littering A Public Place* and twenty percent (20%) to *Littering A Private Place*. Sixty-three (63%) of the offences received were related to domestic waste while two percent were recurring complaints. For the year, twenty-eight (28) complaints were referred to the Local Authorities including NDCs and the Mayor and City Council (M&CC).

One hundred and thirty one (131) citation orders (Clean-up and Litter Removal Order) were issued during the year, a decrease by over thirty percent compared to 2015 when two-hundred (200) citation orders were issued. A compliance rate of over ninety-eight percent (98%) - one-hundred and twenty-nine (129) cases - was recorded for citation orders issued in 2016, a ten percent (10%) increase over 2015. Compliance for four (4) cases was achieved through the Court and the Agency secured successful prosecution against offenders.

Twenty three (23) fixed penalties were issued within Regions 2, 3, 4, 7 and 10, compared to the 75 issued in 2015. A compliance rate 97% was recorded for issued fixed penalties in 2016. Compliance for two cases was pursued in Court where the Agency secured successful prosecution against offenders.

Six (6) Notices to attend Court were issued for litter offences, with charges varying from fifty thousand to one hundred thousand dollars (\$50,000 -\$100,000); four (4) were successfully prosecuted, while one was struck out, and one case is active.

Compliance Monitoring

Ninety- eight (98) compliance and monitoring inspections were conducted in 2016. Based on associated environmental risk, twenty-eight (28) high-risk, fifty-seven (57) medium-risk and five (5) low-risk projects were monitored during the year. High-risk projects inspected included mining operations and one off-shore petroleum exploration project; these were largely compliant with the Environmental Permits issued, as well as, the Environmental Regulations. Waste management was recognized as an issue with most of the projects monitored; prompting the Agency to provide continuous support to Permit Holders found non-compliant and develop a *Guideline for Construction and Operation of Oil-Water Separators*.

It was a challenge for the Agency to meet its target of monitoring thirty-five (35) high-risk projects set for 2016, due to human resource and financial constraints. However, overall, the Agency exceeded its target of eighty-five (85) projects set for 2016.

Collaboration

Through a collaborative effort with industry, the Agency conducted air quality monitoring in Communities in Linden and also carried out complaint inspections against permitted and non-permitted facilities in the industry, infra-structure and energy sectors.

Together with the Guyana Forestry Commission, the Agency conducted inspections of forestry related issues, such as non-compliance with Environmental Regulations of facilities and provided assistance to enable quick movement towards compliance.

The Agency received one hundred and twenty-eight (128) annual reports in 2016, representing over ninety-eight percent (98%) compliance and an increase by sixty-eight (68) reports received compared to 2015.

Research and Development

The Agency collaborated with the World Wildlife Fund for Nature (Guyana) to develop Environmental Protection Enforcement and Compliance Regulations. A final revised draft of the Regulations was submitted and the Agency was completed all training and other project related activities.

The Agency collaborated with the Ministry of Natural Resources and the UNDP, to implement a Project to develop a State of the Environment Report 2016.

The Agency collaborated with the Guyana National Bureau of Standards (GNBS), to revise *Industrial Effluent Guidelines* and to jointly garner support from the Inter-American Development Bank (IADB) to develop a proposal to gather baseline water quality data to improve the revision process.

A Coastal Resource Map for Guyana was prepared with data sourced from topographic scans of Guyana's Sea Coast, Turtle nesting sites, and areas with Mangroves. Ground assessment of land use, vegetation, mangrove status, soil type, biodiversity, infrastructural works and photographs was conducted to update the CRM. Further update of the CRM was done with data from coastal assessments done by the EPA in Regions 3, 4, 5 and 6.

A draft strategic plan was developed for Integrated Coastal Zone Management to aid in streamlining work in this area. Also, a draft Communications Strategy was also crafted to guide public awareness of ICZM.

Three-hundred and fifty-three (353) locations were digitized including locations of pollution complaints, new projects and compliance inspections. In addition, thirty-eight (38) locations where fines and penalties were instituted, and sixty-eight (68) complaints for littering were mapped. Further, the Agency has commenced the mapping of research projects submitted to the EPA to include locations and the type of research done to provide baseline information when doing follow-up projects.

Establishment of the Multilateral Environment Agreement Unit

The EPA established a Multilateral Environmental Agreement Unit (MEAU) to support and coordinate activities and projects related to biodiversity multilateral agreements. The Unit was staffed with persons previously focused on work on Protected Areas, since this area of work is now the responsibility of the Protected Areas Commission.

Guyana Protected Areas System (GPAS) Project- Phase II

Through a Separate Agreement signed in 2009, between the Government of Guyana and Government of Germany (represented by the German Development Bank – KfW) , EUR 5M was committed to support the GPAS Project Phase II – Conservation of Tropical Forests. This Project was officially closed in 2015 and financial closure was effected in 2016.

A KfW Project Mission was conducted this year on GPAS II and GPAS III Projects and to discuss the commencement of GPAS III and the closure of GPAS II. The GFA Consulting Group, contracted by KfW to produce a Situation Analysis Report, met with the Agency to discuss the details of the project design for GPAS III and Audit Reports submitted by the Audit Office of Guyana. Following this discussion, the Agency submitted several supporting documents to KfW in relation to the KfW Audits and the transfer of funds under GPAS Phase II, Tranche II.

The audit Report of Financials for the period ending December 2015 was completed and submitted to KfW Germany. This Report also met the requirements stated in KfW's ToR for Audit of the Disposition Fund. Further, supplements to the Audit Reports for the periods ending December 2012/2013 and 2014, were submitted to KfW in September 2016. The Supplements were requested by KfW in accordance with the KfW ToR for Audit of the Disposition Fund, within the Project Agreement.

National Biodiversity Action Plan

The Agency distributed the NBSAP 2012-2020, and the Fifth National Report to the Convention of Biological Diversity (CBD) to one hundred (100) key stakeholders, inclusive of government, academia, the media, non-governmental organizations (NGOs) and civil society.

The Agency requested information, indicators and targets from stakeholder agencies in relation to tracking progress on NBSAP's priority actions. These together, with inputs from the Agency were used to prepare a comprehensive list of indicators for monitor progress on priority action SO 4.4, of the NBSAP.

Following a workshop hosted by the CARICOM Secretariat in June 2016, on Integrated Environmental Assessment Tools for Enhanced MEA implementation, the Agency was approached by CARICOM, in partnership with the UNEP Regional Office for Latin America and the Caribbean (ROLAC), to partake in a project to aid implementation of the NBSAP. The proposed project aims to identify synergies with biodiversity MEAs and SDGs and mainstream these across sector agencies in attaining objectives of the NBSAP, and to develop and identify financing mechanisms for the

implementation of the NBSAP. A draft Small-Scale Funding Agreement with a proposed timeline of 3.5 months with an identified allocation of US \$20, 000 was reviewed by the Agency, in collaboration with the UNEP ROLAC Office. The proposal was approved by the Ministry of Natural Resources and subsequently Department of Environment; the Agency awaits the next steps and contract signing from UNEP ROLAC.

Global Environment Facility Small Grants Programme

As a member of the National Steering Committee (NSC) for the Global Environment Facility Small Grants Project (GEF SGP) the Agency attended meetings and consultations in support of the review of the draft GEF Country Programme Strategy and Baseline Assessment Report for the 6th Operational Phase (2015-2018) and provided comments for the finalization of the Strategy.

The Agency also supported the NSC in the review of concept notes and five project proposals for the national small grants projects.

Global Environment Facility Funded Projects

Facilitation of the GEF Projects National Approval Process

The Agency facilitated the review and endorsement of the project identification form (PIF) of two (2) GEF STAR Allocation Projects:

- “Strengthening the enabling framework for small and medium-scale gold mining in Guyana and uptake of practices to reduce biodiversity loss, mercury use, deforestation and forest degradation” (GEF Allocation US \$4,974,970; Co-financing US \$29,662,745; Total Allocation US \$34,637,715; Expected Duration: 84 months; Implementing Agency: UNDP)
- “Mainstreaming Low-emission Energy Technologies to build Guyana’s Green Economy – Total financing” (GEF Allocation; US \$1,971,188; Co-financing US \$9,800,000; Total Allocation US \$11771,188, Duration: 48 months; Implementing Agency: UNDP)

The Agency also facilitated review and endorsement for submission to the GEF Secretariat, project identification form (PIF) and expression of interest for four (4) other GEF funded projects as indicated in the table below:

GEF Project Implementation

Notification was received from the UNDP, of one (1) approval from the GEF Secretariat for the medium-sized project, "Strengthening Technical Capacities to Mainstream and Monitor Rio Conventions Implementation through Policy Coordination" (GEF Allocation US \$1,199,750; Co-financing \$1,276,100; Total Allocation \$2,475,850, 48 months). Approvals from all parties for project execution were attained by the Implementing Agency and a Project Inception Meeting was held with key stakeholders.

The Agency participated in the Caribbean Constituency Meeting, held in Grenada on October 16-17, 2016. Updates on status of GEF 6 Projects in Guyana, planned and approved were presented at the meeting.

The Caribbean Constituency's Alternate on the GEF Council for the next cycle from Guyana, Ms. Ndibi Schwiens, was identified by the Department of the Environment and communicated to the GEF Secretariat; a welcome email was received on December 22, 2016, from the Secretariat.

Biodiversity Research

Twenty-one (21) Applications for Research Permits were received from students, professionals, and institutions worldwide. (**See Figure Xa**).

For the year, twenty-three (23) Research Permits were granted and fifteen (15) Export Permits issued. Further, one (1) application was cancelled and two applications (2) were postponed to 2017. The majority of Research Projects were concentrated in interior locations, such as, Iwokrama and Rupununi in Regions 8 and 9, respectively. Research Permits granted were for research conducted on flora, fauna and filming in 2016 are shown in (**See Figure Xb**).

Figure Xc shows a comparison of the research applications received and Permits issued in 2014, 2015 and 2016. It is clear that there has been a decrease in applications received over the past three (3) years and a corresponding decrease in Permits issued.

Monitoring and Enforcement

The monitoring and enforcement aspect of the Research process has been maintained over the year, by local counterparts from the University of Guyana, when possible; three (3) local counterpart reports were received this year. The Agency conducted monitoring visits at Iwokrama, Yupukari, Shulinab and Dadanawa, in Region 9 to monitor compliance of current permitted research activities and community owned research.

The Agency continued to maintain linkages with relevant sector agencies and organizations such as, the Ministry of Indigenous Peoples' Affairs (MolPA), the Protected Areas Commission (PAC), the Guyana Forestry Commission (GFC) and Local Communities to ensure researchers' adherence to the National Biodiversity Research Guidelines and the Terms and Conditions of Research Permits. The Agency continued 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. For the reporting period, eleven (11) preliminary reports were received from researchers.

Revenue Generation

A total of six thousand five hundred and fifteen United States dollars (US\$6,515.00) was generated from application, late application, and permit fees.

Advancing the Nagoya Protocol in the Caribbean Region

In terms of Access and Benefits Sharing of Genetic Resources (ABS), the following was achieved in 2016:

- Approval was received from the Ministry of Natural Resources to procure the services of a legal consultant to finalize the ABS Regulations.
- An Inception meeting on the ABS Project was conducted at the EPA with key stakeholders. It included a session that allowed for comments towards updating the draft ABS Regulations.
- A video was produced to create awareness on ABS and to meet the project's objectives of dissemination of messages to a wide and diverse set of stakeholders in the most appropriate manner. The collection of footage for the video was facilitated by the Agency and shooting was done at Iwokrama, Fairview, Wowetta, Bourda Market, Parliament Building, City Hall and the High Court. Interviews were also done with the Senior Councilors of the hinterland communities and translation of the script for the video was done in five (5) of the indigenous languages (Patomona, Awkawio, Mukushi, Wai Wai and Wapishana).
- The Agency participated in the Inception Workshop and ABS-Clearing House (ABS-CH) Workshop held in Trinidad and Tobago and Jamaica, during the periods April 24 to 27, 2016 and July 20 to 23, 2016, respectively.

Implementing National Bio-safety Framework in the Caribbean Sub Region (Regional Bio-safety Project)

The Administration of the project was handed-over at the start of 2016 and achievements during the year are as follows:

- A budget re-phrasal was done to facilitate the remaining national project activities which included the revision of the Bio-safety Policy and re-imburement of funds to the Agency.
- The last consignment of laboratory equipment was delivered to the National Agricultural Research and Extension Institute (NAREI), as such, an inventory was prepared and submitted to the Regional Project Manager. Also, a Memorandum of Understanding (MoU) between NAREI and UWI outlining parties' responsibilities was drafted by the project but is yet to be endorsed.
- As it relates to capacity-building, training workshops were held in areas such as risk communication, use of technical guidelines for decision – making for GMOs, and importance of border control and plant quarantine, with participation from relevant stakeholders such as the GRA, Plant Quarantine Officers and the EPA.
- Project closure documents (Project Financials and Terminal Report) were prepared and submitted to the Regional Manager.
- The Bio-safety Bill and Regulations were approved by the EPA Board.

Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector (Mainstreaming Biodiversity Project)

The Mainstreaming Biodiversity project started the year with the commencement of the '*Prioritization of Hotspots*' and '*Capacity Building for EPA Officers*' Consultancies.

The '*Prioritisation of Hotspots*' consultancy sought to prioritise mining hotspots for monitoring and enforcement based on biodiversity parameters. While the consultancy faced logistical difficulties resulting in several no-cost extensions, it was successful in being able to prepare and submit a comprehensive Prioritisation Report, to the Agency.

The '*Capacity Building of EPA Officers*' consultancy delivered training for twenty-four (24) officers of the Agency on the various Acts and Regulations governing the mining sector in Guyana. A checklist for the monitoring of mining was also developed as part of the consultancy.

Bench equipment was procured by UNDP for the Guyana Mining School and Training Centre Inc. The equipment was handed over to the GGMC by the Minister of Natural Resources in an event which received media coverage.

During the last quarter of the year, the Project aimed to complete the remaining consultancies:

- '*Support to enhancing the Capabilities of the Guyana Mining School and Training Centre Inc*';
- '*Support to uptake of Biodiversity-friendly Practices by Miners*';
- '*Support to Strengthening of Monitoring and Enforcement of Mining Regulations*';
- '*Legal Review to Support Monitoring and Enforcement of Mining Regulations*'

A Project Assistant (Mr. Osbert Ellis) was hired to facilitate administration of the project and a Project Steering Committee (PSC) meeting was held to discuss project activities completed to date, the budget and the Project's 2017 Annual Work-plan.

Support to the Preparation of the Third National Bio-safety Report on the Implementation of the Cartagena Protocol on Bio-safety to the CBD.

The tendering process for the consultancy for the Project was prolonged owing to no bids being received in the 1st bid opening. Following the NPTAB's recommendation to go the route of selective tendering, the consultancy was awarded, the contract signed, a draft report prepared and presented at a National Stakeholders' Workshop; and the Final 3NR was submitted to the Agency in September, 2016. The Department of Environment (DoE) approved the 3NR and it was submitted

to the Convention on Biological Diversity (CBD) Secretariat via the Biodiversity Clearing House (BCH) in November, 2016.

Conservation and Sustainable Use of Wildlife

The Agency continued efforts to coordinate, develop, and maintain a programme of activities for the sustainable use and conservation of Wildlife in Guyana.

Wildlife Conservation and Management Regulations

Activities were carried out in 2016 as part of the implementation of the Wildlife Management and Conservation (WMC) Regulations as follows:

- In collaboration with the Wildlife Management Authority World Wildlife Day, 2016, was commemorated with school outreach programs and a presentation to EPA staff.
- A presentation on the World Environment Day 2016 Theme, “Zero Tolerance for illegal wildlife Trade” - “Go wild for Wildlife” was delivered at the Youth Forum held at the Arthur Chung Convention Centre
- Guidelines were prepared to address cruelty to Iguana while in captivity and several visits were conducted at strategic locations in Regions 4, 5 and 6, as part of the implementation of the guidelines.
- The Agency reviewed the Wildlife Management and Conservation Regulations, 2013, and compiled comments for proposed amendments, as a preparatory step towards future implementation of the Wildlife Conservation and Management Bill.
- Assistant Professor, Anthony Cummings of the University of Dallas Texas met with the Agency to share information about a mobile phone application that he has developed for use by members of the public to report incidence of challenges related to big cats.
- The Agency participated in a training session on wildlife camera trapping and research methodologies, organized by PANTHERA. At the session, the Agency also delivered a presentation titled “Understanding and developing a communication mechanism for the effective management of wildlife in Guyana.”
- PANTHERA met with the Agency to discuss the Memorandum of Understanding between the two entities, the continuation of PANTHERA’s sustainable wildlife project.
- The Agency attended a meeting at the Ministry of Natural Resources to discuss the PANTHERA mission in Guyana. Subsequently, the Agency reviewed and provided comments on a MOU between PANTHERA and the Ministry of Natural Resources.
- Dr van Vliet, Wildlife and Livelihood Expert from CIFOR presented to the Agency her plans to conduct a preliminary assessment of bush meat trade in Guyana, and her proposed project on sustainable hunting in the framework of a large Afrique Caraïbes-Pacific program, called WILDMEAT, to be financed by the European Commission
- The Agency informed that sport fishing of Arapaima was illegal during a meeting with the

Director of the Guyana Tourism Authority (GTA) and the Head of the Wildlife Management Authority.

- A number of wildlife complaints were investigated during the year including:
 - Possession of a large number of Scarlet Macaws (*Ara macao*);
 - Presence of jaguars (*Panthera onca*) in four Communities (Lima Sands, Tapakuma , Whyaka Mainstay and Lake Capoey)in Essequibo Region No. 2 ,
 - Smuggling of birds, from North-West District Region No.1;
 - Harvesting of Manatee in the Abary River for sale; and
 - Illegal hunting and collecting sea turtles at Santa Rosa Region No. 1.

Volunteers, Work Study and Secondment

The Agency accommodated one (1) volunteer from Japan International Corporation Agency (JICA), within the Educational, Information and Training Division (EITD).

The Agency also received one (1) Environmental Officer on secondment from the Ministry of Presidency, whom was placed within the Environmental Management Permitting Division (EMPD).

Promotions

Two (2) staff were promoted from the position of Environmental Officer I to Environmental Officer II after satisfactorily performing in the former position for a period of two years.

Information Technology

During the year IT services were provided to staff of the Agency in keeping with needs and as far as could be accommodated by the Agency's financial resources. Among the services provided were:

- The Complaints and Permits Database and its SQL backend were backed-up and maintained. Queries and data sets were generated based on the requirements of the EMP and EMC Divisions respectively.
- A terms of reference for the restructuring of the Agency's Database systems was submitted to the Executive Director; this project is awaiting funds.
- New documents, downloads and vacancies were uploaded to www.epaguyana.org website.
- The GEFUYANA.ORG country website was updated and maintained.
- New sections and download Categories were created for the Website as per the needs of the Agency.
- The NBRIS internal web module was supported.
- All problems relating to the QuickBooks Accounting System were fixed in a timely manner.
- All website and hosting problems were fixed in a timely manner.

Network Support and Administration

- The Local Area Network was expanded to accommodate additional new staff. This expansion included structured cabling and installation of network switches.
- All network connectivity errors were fixed such as defective cables, surface mounts and switches.
- User accounts, mapped drives and permissions were created to facilitate new staff entering the Agency.
- The IT unit received a correspondent from the Ministry of Presidency indicating that all software in use by the Agency must be licensed. As such, the IT unit did a survey of software in use by the Agency and proceeded to obtain a quotation from the Massy Technologies to sum of thirteen million dollars. We are currently waiting for funds to complete this task.
- The internet connection assigned to junior staff network was upgraded to 5 mbps.
- Licenses were renewed for the Sonic Wall Firewall on the junior network and the relevant configuration and network policies were updated.
- Constant power outages and the absence of the generator for a significant period resulted in damage to many IT related equipment such as UPS and power supply units.
- Defective hardware was replaced for both T710 servers and both servers are fully functional. These servers were acquired since 2010 and efforts will be made to replace them in the future to facilitate the expansion of the Agency.
- Three new network shares were created to host data for EMCD and EMPD to facilitate the splitting of data across the divisions.
- Conflicts with the biometric Time Monitoring devices were resolved by the IT unit. This should be fully implemented in January 2017.
- Western Digital Network attached storage of 8 Terabytes was procured and configured to the network to enhance the backup process of the Agency's data.
- A Draft IT policy pertaining to the use of the Agency's computer systems was created and submitted to the Executive Director for review and recommendations.
- The Epaguyana cloud email account from Google was created for all Directors.
- Outlook messenger was installed on all computers on the LAN, as a means of instant messaging, announcements and direct file transfer.
- Assistance was given to the NBRIS consultant with problems relating to the LAN Module.
- Support was given to the payroll software.
- All Internet related problems were fixed in a timely manner.
- Hardware and software firewall was updated to latest firmware and software.
- Complete backups of the Agency's data and Virtual machines were done.

PC Support

- The IT unit repaired a number of desktops and laptops which were affected by hardware or software problems.
- Complete computer systems were deployed to all new staff entering the Agency.
- Several Computers were reloaded with new operating system and appropriate programs due to corrupt software or hardware failure.
- Defective monitors, mouse, keyboards, surge protectors, line conditioners and UPS were replaced.

1.0 GUIDING LEGISLATION

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

The EPA was established with the passing of the **Environmental Protection Act (EP Act)** on 05, June, 1996. As primary legislation, the Act prescribes the EPA’s functions which can be broadly classified as being *regulatory, coordinating, and promoting of public participation in environmental protection.*

The EPA enforces the EP Act (1996) and its amendments, and associated Regulations, to ensure that measures for environmental protection are integrated into development activities. It also coordinates the sustainable use and conservation of the country’s biological resources. Both of these functions are complex, spanning a range of inter-connected issues and requiring collaboration with private, public sector and non-governmental organizations. The promotion of the participation of the public in the process of integrating environmental concerns in the planning for sustainable development is another key function which requires dissemination of information to the public on environmental development projects, issues and problems, and on the EPA’s procedures and processes.

Education, Awareness and Capacity Building

Environmental education, awareness and capacity building are essential to public participation in the protection, conservation and sustainable use of the environment. As such, programmes are implemented strategically to address pressing environmental issues and highlight the key roles and responsibilities of the Agency for informed decision-making. Recognizing the importance of collaboration in this process, the Agency forms alliances with governmental and non-governmental organizations; private sector; youth, community and religious organizations and groups; and educational institutions.

Development of Education Materials

Twenty (24) information and education materials were developed or revised in 2016. Five (5) of these materials focused on Environmental Management; for (4) on Biodiversity Management and Conservation; two (2) on Climate Change (2); four (4) on Solid Waste Management; and nine (9) on EPA’s Work.

Thirty-nine (39) presentations were prepared for use in various workshops and outreach sessions during the year. These presentations focused on areas such as Solid Waste Management (11); Biodiversity Conservation (6); Environmental Management (3); Climate Change (6); Ozone Layer

Depletion (3); environmental education (5); and Youth Environmental Advocacy (5). Specific titles of presentations are as follows:

Outreach

Outreach is a key component of the education, awareness and capacity building programmes. Thirty-five (35) outreach activities were conducted to aid in fulfilling the Agency's mandate; nineteen (19) of these were relevant to specific environmental observances. The focus of outreach during 2016 was as follows:

Solid Waste Management

Ten (10) sessions on solid waste management were conducted with Environmental Health Officers in Region 5 and schools in Region 7. Schools in Region 7 were taught the skill of *Papier Mache* to aid them to present a 'trash to fashion' show applying this skill; the show featured eighteen (18) fashion pieces made with reused material e.g. plastic bags, disposable cups and plates, paper bags etc., that would normally be discarded as trash.

Environmental Club Development

The development of environmental clubs continued to be a focus of the education, awareness and capacity building programmes. Sessions geared to inform on how to establish and sustain an environmental club were conducted with three (3) primary schools, five (5) secondary schools and one (1) Technical Institute reaching an audience of ninety-two (92), one hundred eight (108) and twenty-five (25) students respectively

Climate Change

Climate Change is a cross-cutting programme and the importance of understanding and effectively addressing this issue cannot be underscored. As such, sessions were conducted with the Kuru Kuru Primary school, Dora secondary, Guyana School of Agriculture (GSA), Region 2, and Day Camps in collaboration in Caribbean Youth Environment Network (CYEN) and East Ruimveldt and Young and Thoughtful.

World Wetlands Day

"Wetlands" packages were distribute to fifteen (15) schools that have environmental clubs. In observance of World Wetlands Day, the Agency coordinated a tour for selected secondary schools to the Mangrove Reserve; and conducted seminars at the Guyana School of Agriculture (region 4) and the Bina Hill institute (Region 9). World Wetlands Day activities culminated with an outreach at Santa Rosa Secondary School (Region 1).

World Wildlife Day

To observe World Wildlife Day, the Agency collaborated with the Wildlife Management Authority to conduct a poster competition on the international 2016 theme, "*the future of wildlife is in our hands*", which targeted grade 7 students of thirty-one (31) secondary schools within Regions 1, 3, 4, 5, 6, 7, 9 and 10. The Agency also participated in an exhibition, coordinated by the Wildlife Management Authority which attracted five hundred and fifteen (515) students from schools in Regions 1, 3, 4, 9 and 10.

World Water Day

Under the 2016 international theme, 'Water and Jobs', the Agency organized and conducted a seminar for 5th form students of eight (8) secondary schools in Georgetown, to raise awareness on the importance of water-related jobs. Among the agencies making presentations at the seminar were the Guyana Geology and Mines Commission (GGMC), the Ministry of Agriculture (MoA), the Guyana Water Inc. (GWI) and the Environmental Protection Agency.

Earth Hour: Earth Hour

The Agency assisted the planning of an Earth Hour concert, which was spearheaded by WWF (Guyana). The event was held at the National Park, Car Park Tarmac on March 19, 2016. A contingent of twenty (20) EPA staff participated in the Earth Hour event.

World Environment Day

To mark its 20th anniversary year, the EPA coordinated and executed four (4) major activities in collaboration with the Ministry of Natural Resources. Among them were:

National Youth Forum: The first at the national scale, the Forum was held at the Arthur Chung Convention Centre and sought to raise youth awareness on the WED 2016 theme: "Fight against illegal trade in wildlife." The event attracted approximately two hundred and seventy-six (276) persons including thirty seven (37) schools drawn from the ten (10) Administrative Regions.

Dinner and Awards Ceremony: The Agency celebrated its 20th Anniversary with a Dinner and Awards Ceremony at the Pegasus Hotel, Georgetown, on June 05, 2016, World Environment Day. At this event, awards were presented to individuals and businesses in the categories of: Environmental Pioneers, Environmental Leadership, Sound Environmental Practice (Projects), and Media. The Agency also took the opportunity on this occasion to award its own staff for Congeniality, Long Service and Participation.

Hinterland Youth Seminar: The World Environment Day celebrations were also taken to Region 9, where a Hinterland Youth Seminar held at the Iwokrama Research Centre with wildlife clubs of the Region.

Community Cleanup Activities: Reinforcing the call for litter prevention, the Agency organized and implemented two community clean-up activities, at Annandale and Golden Grove on the East Coast of Demerara. These activities drew participation from the immediate communities, NDCs, public spirited individuals and staff of the Agency.

International Day for Preservation of the Ozone Layer:

Seventy-seven (77) primary and secondary school students were reminded of the importance of ozone layer protection and strides being made for its preservation during two (2) half-day workshops held under the theme "Ozone and Climate: Restored by a world united" in collaboration with the Ozone Action Unit, Hydro-meteorological Department, Ministry of Agriculture.

International Coastal Cleanup:

In collaboration with the Caribbean Youth Environment Network (Guyana Chapter), the 2016, International Coastal Clean-up activities were conducted. As a precursor to the Clean-up Activities, the Agency conducted awareness sessions with schools and facilitated discussions on television and radio. The Agency also provided support for the Clean-ups in Regions 4 and 6.

Capacity Building

Thirteen (13) capacity building activities were coordinated and executed during the year 2016. These activities were generally between 2-3 days in duration, took place at various locations and targeted teachers, environmental clubs, and youth groups.

Teacher Training: A three-day Environmental Education Training Workshop was conducted at Camp Alpha, Linden Soesdyke Highway, Region 10, with twenty-two (22) trainee teachers from the Cyril Potter college of Education. The training programme was developed and implemented by the staff of the staff of the Education, Information and Training Division of the Agency.

Environmental Camp:

The Agency facilitated three environmental camps, two in Region 4 and one in Region 10. This was done in collaboration with the Cavaliers Sports & Tour Club, Caribbean Youth Environment Network (CYEN) and the Young and Thoughtful Group. The camps attracted a total of seventy-four (74) young people from the various Regions.

Internal Seminars

Four (4) Seminars intended to enhance knowledge on various subjects of interest to Staff and the Agency were conducted during the year.

Training of Honorary Litter Prevention Wardens

A training team comprising the EIT Division, Litter Prevention Unit, EMCD and the Legal Unit of the Agency conducted training of officers of NDCs within Regions 2, 5, 6, 7 and 10 to become Honorary Litter Prevention Wardens. The two-day training workshop was supported by a module developed by the training team, to equip NDCs with the requisite knowledge and skills to effectively and efficiently execute the roles and responsibilities of an Honorary Litter Prevention Wardens.

Climate Change Workshop for Women

A two-day Climate Change Workshop for Women was conducted at Nabaclis, East Coast Demerara. Eleven (11) women from the Community Development Councils of the Haslington/ Nabaclis Neighbourhood Democratic Council (NDC) participated in the activity which highlighted the crucial role women play in addressing climate change.

Climate change training workshop for youths

Fifty (50) students of the Kuru Kuru Training Centre participated in a workshop on Climate Change which was facilitated by the EITD. The Workshop comprised two half-day sessions and engaged students through creative and interactive methodologies.

Environmental Clinics

Through a collaborative effort, the EITD and EMCD embarked on a series of community clinics aimed at sensitizing the general public and Regional bodies on the work of the Agency. This was aimed at strengthening participation of communities in environmental management and conservation. Among the objective of the clinics the conduct of community environmental management needs assessment; interface with relevant regional authorities and the general public; and use of media programmes to spread environmental awareness. In 2016, clinics were conducted at Kwakwani, Linden, in Region 10, and Supenaam Speed Boat Stelling, Suddie Market and Anna Regina Car Park in Region 2.

MEDIA

Media activities continued to be limited due to financial constraints. For the year, weekly newspaper articles were published *pro bono* only by the Guyana Chronicle while radio and television programmes were few. The Agency created and began to utilize a Facebook page to boost public awareness activities.

EXHIBITIONS

The Agency's participation in exhibitions was based on request from organisations and agencies that organize such events. Requests declined in 2016 to about two-thirds that received in 2015. The exhibitions in which the Agency participated in 2016 are shown in the table below.

The Administrative Division comprises the Administrative, Finance, Human Resources, and Information Technology (IT) Units and is responsible for the management of the resources of the Agency. To this end, materials, equipment and services were procured to meet the needs of the Agency; this was done primarily with allocated funding from Government's 2016 subvention.

Financial Management

In 2016, G\$267.773M was received as Government Subvention while Revenue generated by the Agency for the year was G\$32.913M. Details of the Subvention received and Revenue collected on a monthly basis are shown in the charts below.

Major financial management activities conducted in 2016 were as follows:

Financial Management

- Draft Financial Statements for 2015 were prepared and submitted to the Audit Office.
- EPA and Wildlife Financial Statements were consolidated.
- A Draft 2017 Budget was prepared and submitted to the Ministry of Natural Resources (MNR) and the Ministry of Finance.

Financial Reports

- Revenue and Expenditure Reports for the EPA Board were completed and submitted on a monthly basis.
- Financial Statements for the Wildlife Division were prepared and completed on a monthly basis.
- Financial Reports were prepared and submitted to the Ministry of Finance on a quarterly basis.

Payroll and Benefits Management

- Payrolls for EPA and the Wildlife Division were prepared and completed on a monthly basis.
- Payment of Statutory Deductions from Payroll NIS, PAYE for EPA and Wildlife Division were prepared and submitted to the respective Agencies.
- Bank Reconciliation Statements for EPA and the Wildlife Division were prepared and completed on a monthly basis.
- An Accounting and Financial Procedure Manual was drafted for submission to the Executive Director and the EPA Board.
- Financial Management support was provided for projects executed by the Agency.
- An internal Audit system was developed for proper Inventory Recording. The Agency now has a Goods Received Note System in Place.
- All Finance Staff were provided with QuickBooks Training.

Procurement and Asset Management

Administrative and logistical support were provided based on request and needs and within the available budget. Further, the evaluation and procurement of materials, equipment and services were efficiently managed.

Procurement and Management

Physical checks of the Agency's fixed assets were conducted by the Audit Office of Guyana against its Stock Records. During 2016. The Agency also conducted internal asset checks, updated its Asset Register and labeled additional assets procured.

The procurement process was managed for the purchase of capital items under the National Capital Expenditure 2016, as well as, items approved by the EPA's Board to be procured with resources from the Agency's Trust Fund. Stationery and dietary supplies were purchased as required to meet the Agency's needs.

Vehicle Maintenance

The Agency carried out regular maintenance of its fleet of vehicles to avoid extensive repairs and its associated costs and to fulfill transportation requirements and insurance, fitness, road license etc. were renewed in a timely manner.

All vehicles continued to be maintained in a timely manner; however, due to the aging fleet, the need for repair was constant resulting in a high maintenance cost to keep vehicles field ready. As such, an internal decision was made to allocate very aged field vehicles to shorter trips, in and around Georgetown, so as to reduce maintenance costs and to ensure safety of the Agency's staff when travelling to remote locations.

Building and Compound Maintenance

General aesthetics of the building and compound were enhanced through regular cleaning, brushing and maintenance. As such, Contracts were prepared and signed for the following works and services:

- Termite control;
- Disposal of sanitary units;
- Maintenance of the photocopier;
- Electrical repairs;
- Security Services;
- Service and repairs to air conditioning units; and
- General Cleaning of the Compound and its Environs.

In preparation for the new office building to be constructed, the existing storage bond needed to be relocated. As such, the Agency requested and received approval from National Procurement and Tender Administration Board for “Relocation of Storage Bond” and the works were initiated.

The Agency completed the planned building project “Construction of a Crusher Run Parking Lot” at the Entrance of the Agency’s Compound.

The Agency’s generator had malfunctioned and upon diagnosis was found to have accumulated rain water within the engine which led to excessive corrosion. The supplier was contracted to conduct repairs which were completed and the equipment is now operable.

Additional Support

Administrative support was provided for:

- Request for approval for the Construction works of the New Building; this is however pending at the NPTBA.
- Steel Frames were moved and taken to the Demerara Harbour Bridge for storage.
- Two Flag Poles were erected at the Entrance of the Agency’s Compound; the Agency successfully hoisted the national flag and its own flag in celebration of Guyana’s 50th Independence anniversary.
- The Agency celebrated its 20th Anniversary with a dinner and awards ceremony at the Guyana Pegasus.
- Soap liquid dispensers and air sanitation kits were installed in the washrooms of the Agency.
- Several Potted Plants were purchased and placed on the corridor of the upper flat of the Agency.
- Repairs and reinforcement works were carried out on the Security Hut at the back of the Agency’s Compound.
- Repairs were carried out on several damaged zinc sheets on the Agency’s roof.
- Several Scientific equipment were procured (GPS, Cameras, Noise Meter, EPAM, Radiation Kit, Air Quality machine and Soil Analyzer).

- Capital Items were procured (Desks, Office Chairs, Water Dispenser, and Photocopier machine).
- Several purchases were made for the Board of Directors (capital and non-capital items).
- Two “used” field vehicle engines were approved by NPTBA to replace written-off engines for two existing but non-functional vehicles.
- The Agency hosted its 2016 Christmas Party at the Guyana Marriott.
- Participated in the Agency’s Internal Occupational Safety and Health (OSH) Committee to identify and correct OSH hazards within the building.

Human Resources

Skilled and competent workers are recruited to conduct the work of the Agency with the aim of building a team of professionals that is empowered by knowledge and skills to perform competently and with excellence.

Staffing

At the end of 2016, there were ninety-nine (99) staff members were employed at the Agency comprising ninety-three (93) full time employees and six (6) seconded staff, five (5) from the Ministry of Natural Resources and one (1) from the Ministry of Presidency.

Vacancies, Appointments, Resignations

In 2016, the Agency continued to recruit staff to fill vacancies created in the Agency because of staff resignations. The Environmental Management Permitting Division experienced the highest rate of staff turnover with six (6) resignations, followed by the Administrative Division with five (5) resignations, and the Environmental Management and Compliance Division with four (4) resignations. The staff complement of the Education, Information and Training Division and the Biodiversity Management Division remained intact with the latter experiencing only one (1) vacancy during the year.

Despite the high rate of staff turnover, the Agency recruited staff to fill some of the vacancies created; making fifteen (15) appointments were during the year. Recruitment for other vacant positions were put on hold based on advice from the Ministry of Presidency, consequently, at the end of the year, ten (10) vacancies were still to be filled.

Approval was granted for four new positions to be included in the Agency’s structure, namely: Filing Clerk, Legal Assistant, Procurement Officer, Fleet Supervisor and Internal Auditor.

1.4 ORGANIZATIONAL STRUCTURE

Fig. 1 shows the Organizational Structure of EPA during 2015 which provided for both the Chairman of the EPA Board and the Executive Director of the EPA to the Minister of Natural Resources and the Environment which was renamed Department of Natural Resources, during 2015.

1.5 PROGRAMME AREAS

The EPA's mandate is implemented primarily through five (5) of its major Programmes: Biodiversity Management (BM); Environmental Management (EM); Cross-Sectorial; Education and Awareness; and Capacity Building (Fig. 2). The EM Programme comprises seven (7) components: Environmental Authorizations, Monitoring and Enforcement, Complaints and Response, Research and Development, Hazardous Wastes and Air Quality Management and Water Quality Management, and Litter

Prevention. The BM Programme has three components: Sustainable Use of Biodiversity, Biodiversity Conservation, and Wildlife Management.

Environmental Management

The EM Programme, is geared towards addressing pollution control and prevention. It focuses on bringing developmental projects into conformity with the goal of environmental sustainability through an environmental authorization process and environmental monitoring and enforcement. To more effectively discharge its role in environmental management, the EPA pursues capacity of development of stakeholders; development of Environmental Regulations; review and development of Environmental Standards, Guidelines and Codes of Practice. Further, the EPA manages Environmental Complaints with the goal of resolving them and in cases when this is not possible enforces against defaulters. The EPA also focuses on building its readiness for environmental emergencies.

Biodiversity Management

Having ratified the Convention on Biological Diversity (CBD) and its Protocols on Biosafety and Access and Benefits Sharing of Genetic Resources, Guyana, through its National Focal Point, the EPA, advances measures towards meeting its legislative, administrative and policy commitments under these agreements. Among these measures are the development of National Biodiversity Strategies, Action Plans and Programmes and Legislation to regulate the trans-boundary movement and use of Living Modified Organisms (LMOs) and Genetically Modified Organisms (GMOs). Under its Act, the EPA is also required to coordinate and maintain a programme for the conservation of biodiversity and its sustainable use. The requirements under the CBD, its Protocols and the EP Act are the primary foci of the BM Programme.

Cross-Sectorial Programmes

Currently, the Agency plays a role in a number of cross-sectorial 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.

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). This is accomplished through the Education and Awareness and Capacity Building Programmes of the EPA entailing close collaboration with the Environmental Management and the Biodiversity Management Programmes of the EPA as well as Sectorial Agencies and Non-Governmental Organizations. Serving a two-fold purpose these programmes promote 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.

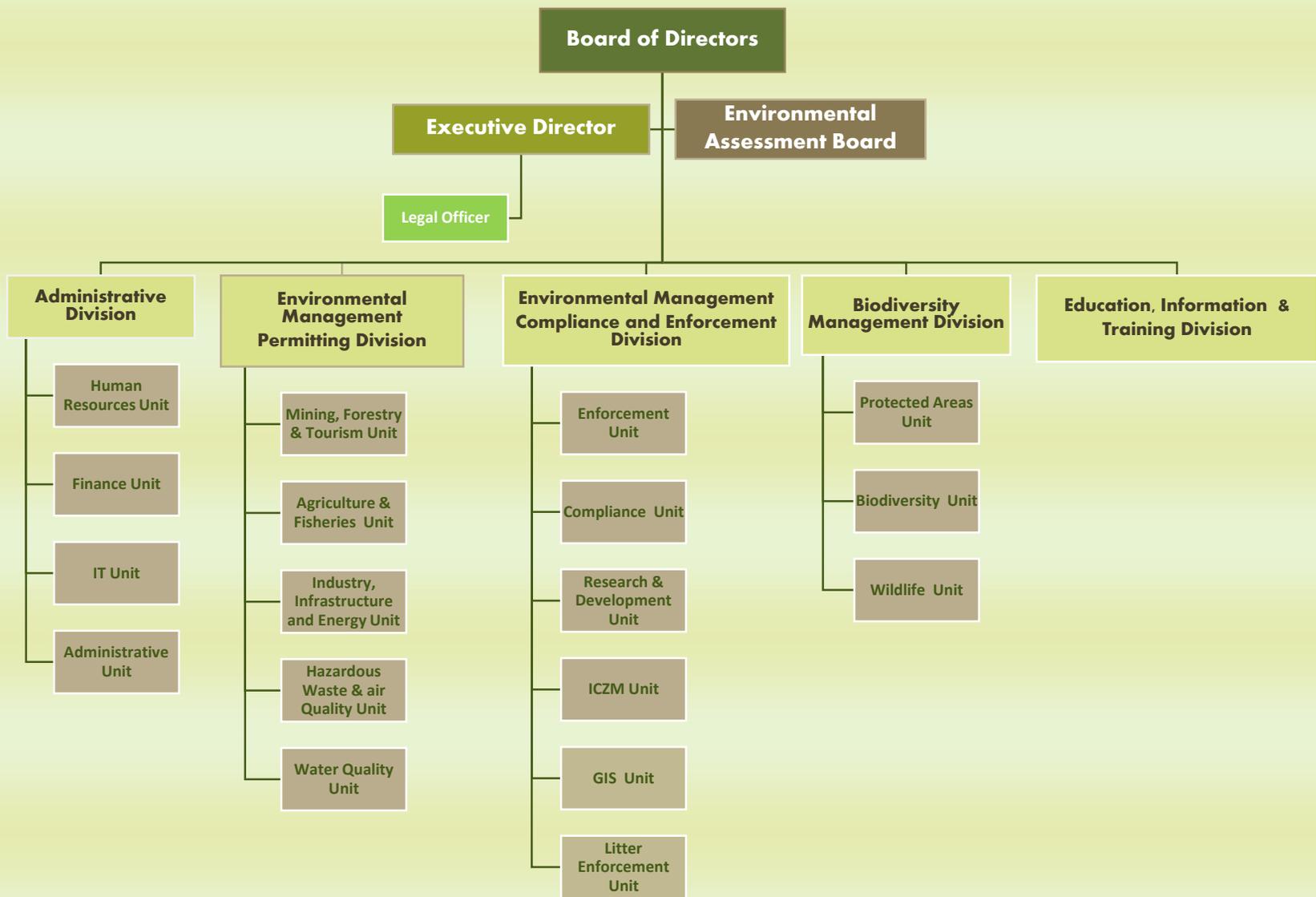


Figure 1: Organizational Structure

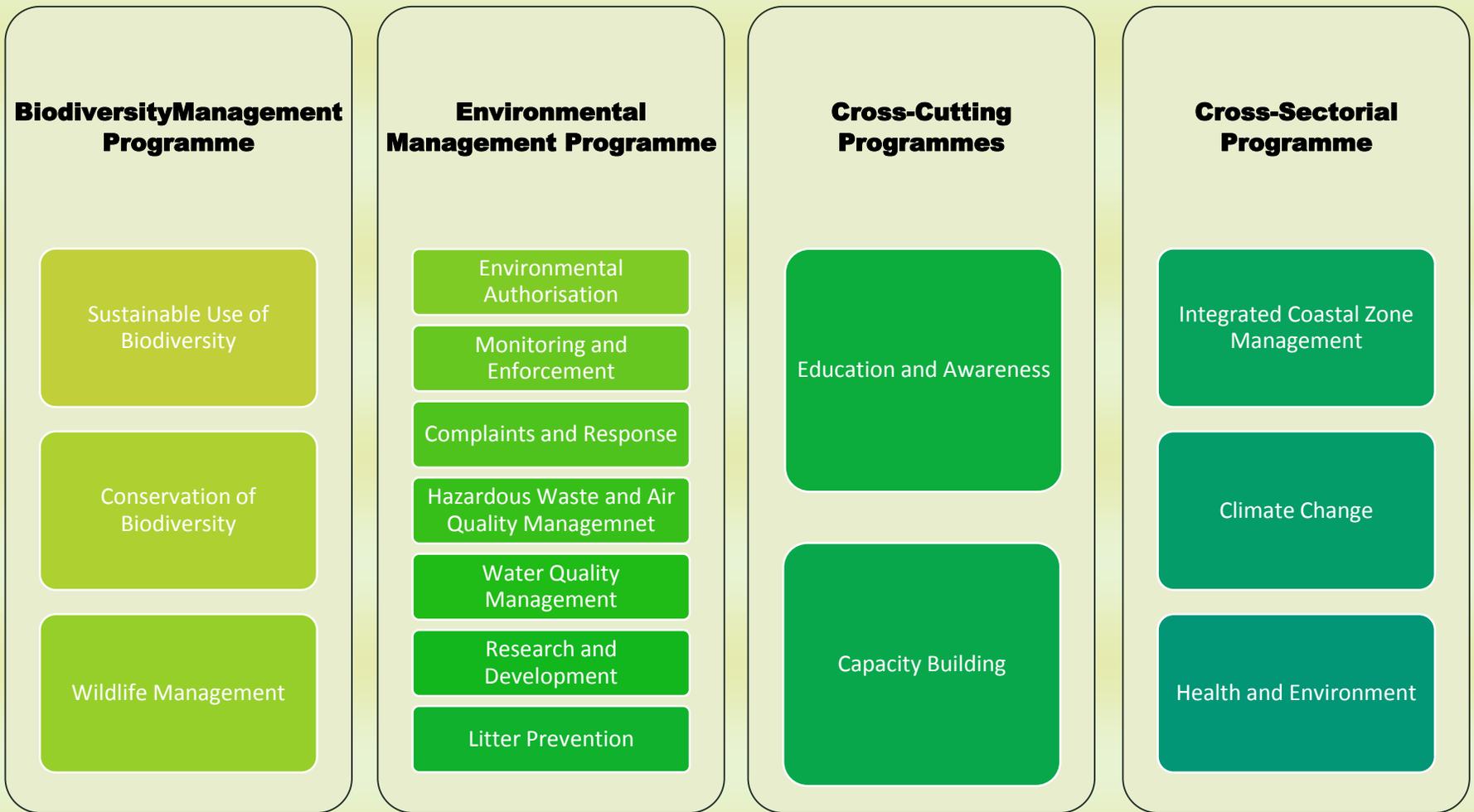


Figure 2 EPA's Programmes

2.0 ENVIRONMENTAL MANAGEMENT – PERMITTING

The Agency grants Environmental Authorisation of Projects through a process that is aligned with the EP Act, 1996, and associated Regulations. Projects in the EA process are assessed in terms of potential environmental impacts and are required to include measures to satisfactorily reduce and mitigate such impacts, prior to being authorised.

In 2016, the Agency continued to receive applications for environmental authorisation for new types of projects and activities. To strengthen its capacity to identify the impacts of these new types of projects, and suitable measures to prevent, reduce and mitigate their potential impacts, the Agency where possible, facilitated on-the-job training of staff and deepened research to strengthen the conditions of environmental authorisations. Much of the efforts to strengthen the authorisation process required the acquisition of baseline data, literature reviews and networking with regional counterparts to prepare authorisations, especially for oil and gas production, aerial spraying and Liquefied Natural Gas (LNG) projects. The Agency also remained proactive in the development of environmental standards, guidelines, codes of practices and regulations.

Cognizant of the value of stakeholders input in ensuring a robust assessment of the environmental impacts of proposed projects, the Agency continued its outreach to increase awareness of stakeholders of proposed projects to provide them the opportunity to contribute to environmental decision-making. During the year, the Agency engaged developers through symposiums and public media and facilitated mobilisation of the public for Sector and Public Scoping Meetings for large-scale projects in the oil and gas, forestry and mining sectors, which required an Environmental Impact Assessment and were undergoing the environmental authorisation process. Further, the Agency continued its collaboration with sector agencies, and pursued new networks to strengthen its environmental authorisation process and emergency response preparedness.

Amidst the constraints of insufficient staff and delays in receipt of relevant documents from developers, the Agency continued to pursue methods to improve its environmental authorisation process. During the year, several projects requiring an Environmental Management Plan (EMP) have experienced delays in the authorization process due to insufficient data and information which resulted in multiple revisions of the EMP. However, in spite of this, the Agency has worked during the year with consultants to improve the standards of EMP's.

Fifteen (15) professionals with varying expertise in environmental management were registered by the Agency, to provide a range of consultant services to developers applying for Environmental Authorisation.

2.1 Environmental Authorisations

This year, the Agency received five hundred and seventy seven (577) Applications for Environmental Authorisations (EAs), an eight percent (8%) increase compared with 2015. About twenty percent (20%) of the applications received, were for new projects, while ten percent (10%) were related to existing operations. Close to sixty-percent (60%) of the Applications received were for short-term Noise Permits. Over the year, the Agency managed thirteen (13) Applications for projects which require an Environmental Impact Assessment (EIA) and thirty (30) Applications for projects which require an Environmental Management Plan (EMP). One hundred and forty-two (142) site visits, were conducted during the year, to facilitate the environmental authorisation of the projects.

Over the last three years, there was little variation in the number of Applications received and EAs issued; with six hundred and twenty (620), five hundred and ninety-one (591) and five hundred and seventy-seven (577) being granted for 2014, 2015 and 2016, respectively. For both 2014 and 2015, four hundred and fifty-four (454) EAs were granted, while four hundred and fourteen (414) were issued in 2016, a decline by forty (40) applications when compared with the two preceding years. For 2014, 2015 and 2016, the percentage of EAs issued based on the applications received were 72, 76 and 71 respectively.

In 2016, three hundred and forty (340) Short-term Noise Permits, twenty-two (22) Environmental Permits, four (4) Construction Permits, sixteen (16) Operation Permits, seven (7) Letters of Authorisation, twenty-four (24) Renewals, and one (1) Variance Permit were prepared and granted.

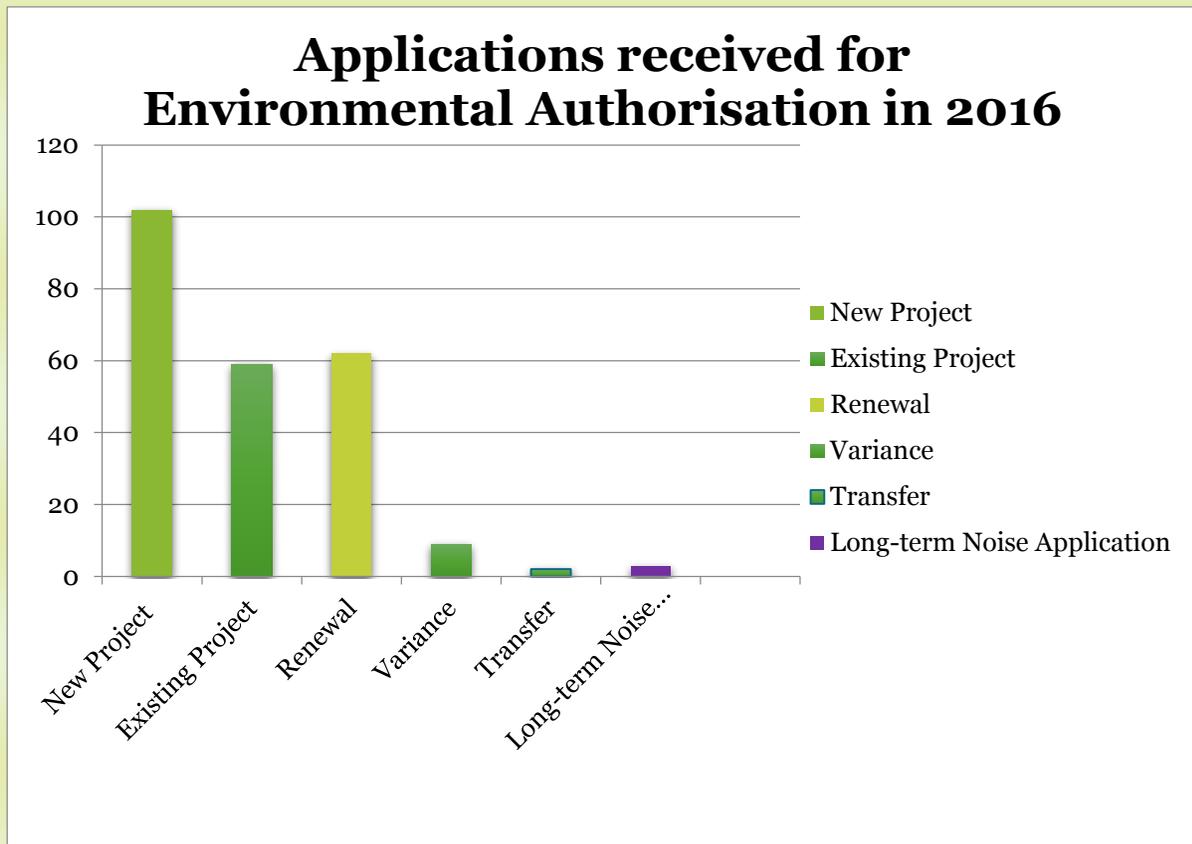


Figure 3: Applications received for Environmental Authorisation in 2016¹

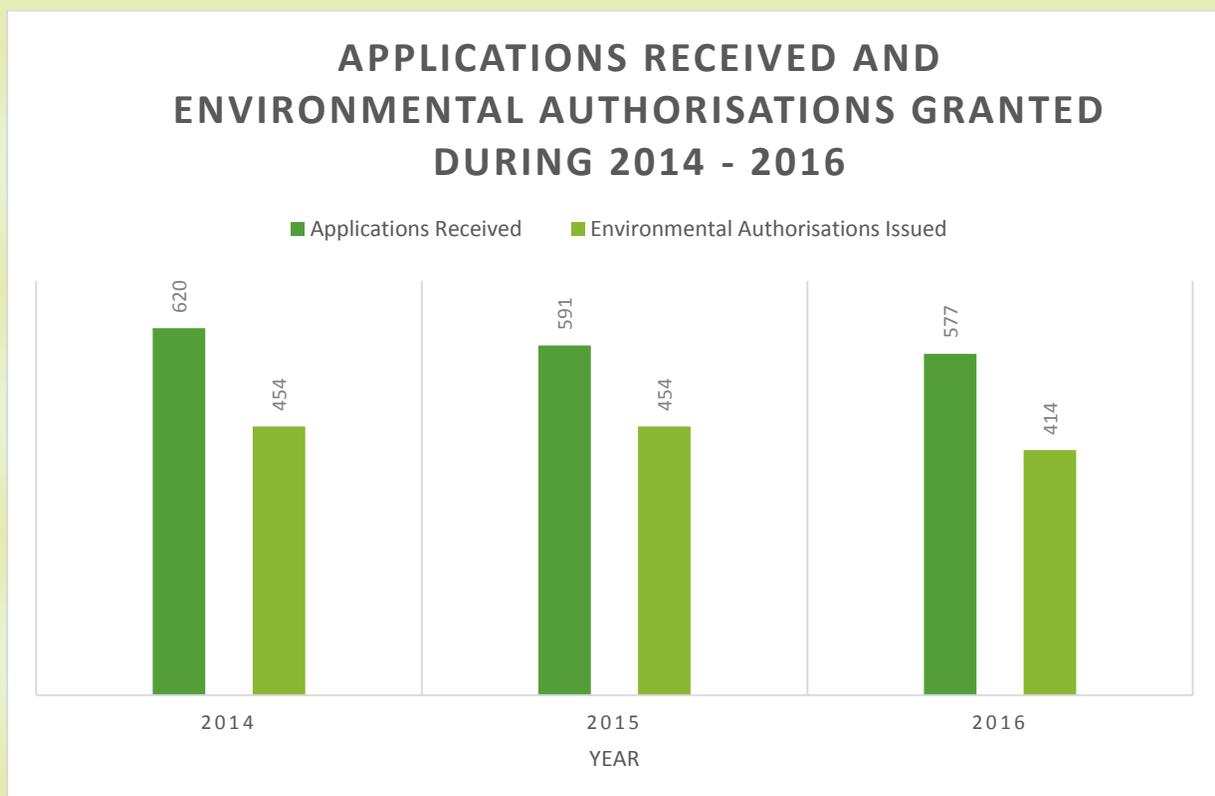


Figure 2: Applications received and Environmental Authorisations granted during 2014 – 2016

¹ Fig. 1 includes all the Applications received for 2016, excluding the 340 Applications for Short-Term Noise Permits

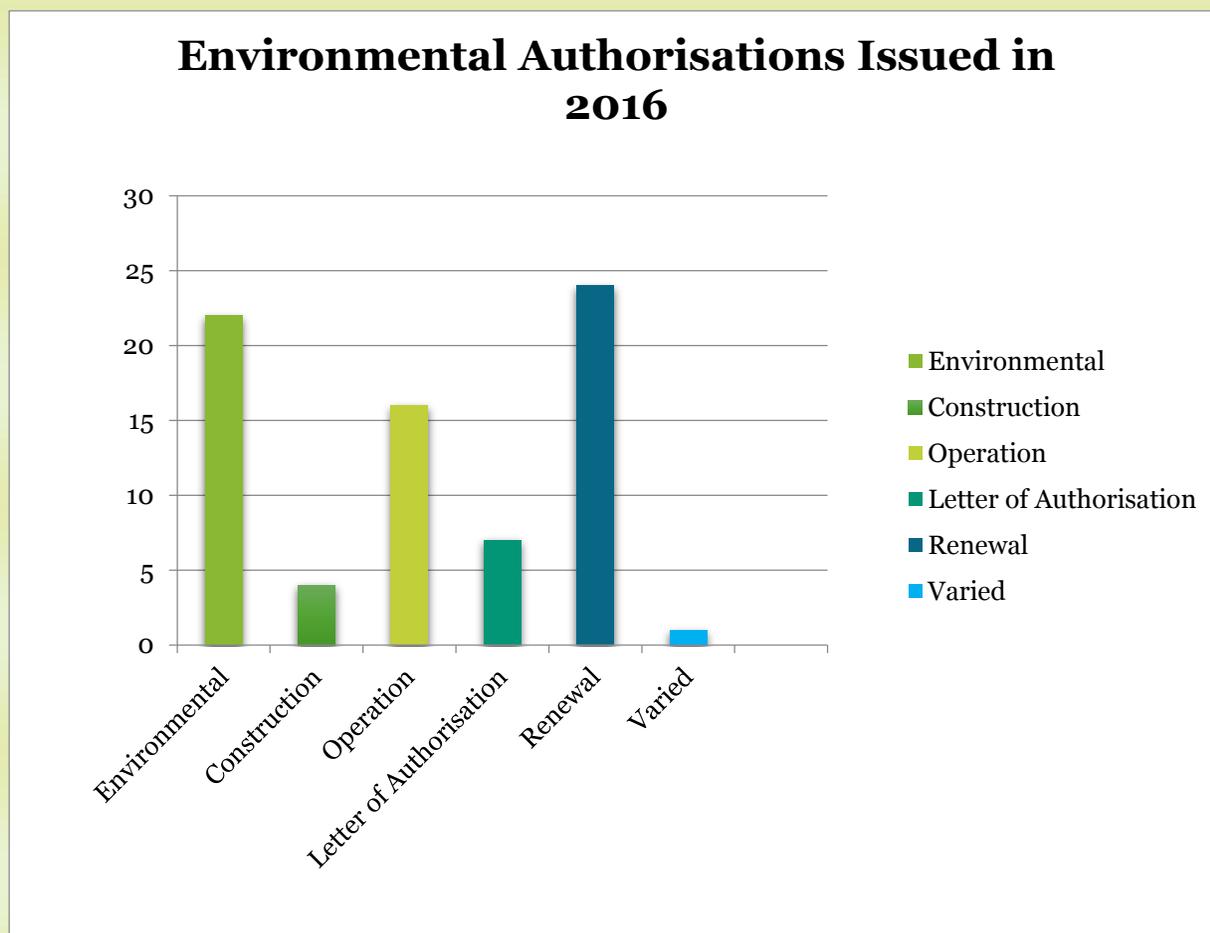


Figure 3: Environmental Authorisations Issued in 2016²

Water Quality Management

The Agency provided technical inputs for the *Code of Practice for Water Manufacturers and Filling Premises*. It also facilitated the review of *Interim Guidelines for Industrial Effluent Discharge into the Environment* in collaboration with the Guyana National Bureau of Standards (GNBS). Also, Guidelines were developed for the management of water resources in the mining and forestry sectors, and for wastewater treatment options. In addition, drafts were prepared for a Monitoring Protocol for the Dakoura Watershed in Linden, and for EPA's Water Sampling Protocol.

Hazardous Wastes/Materials & Air Quality Management

Authorization of projects and activities with hazardous materials/wastes components continued. Among these, were scrap metal yards; facilities that store and export used lead-acid batteries (ULABs); and persons/companies removing and disposing of asbestos. Also research and development continued to enhance and advance progress in hazardous waste and air quality management with the following being achieved in 2016:

- An Environmental Guideline: *Storage of Waste/Used Oil and Tactical Responses to Oil Spills* was completed and the existing *Asbestos Guidelines* was amended;
- Environmental Protection (Transit and Export of Hazardous Wastes) Regulations, 2016 was drafted and finalised;
- Standard Operating Procedure (SOP) was drafted/developed for:
 - Processing of Notification Documents and the Issuance of Movement Document for the Trans-boundary Movement of Hazardous Waste.

² Fig. 3 includes all the Environmental Authorisations issued for 2016, excluding the 340 Authorisations for Short-Term Noise Permits

- Use of the Multi Rae Pro used to measure Volatile Organic Compounds (VOCs), Carbon Monoxide, Hydrogen Sulphide, Nitrogen Dioxide, Nitric Oxide and Radiation;
- A proposal was developed to seek funding to conduct a National Air Quality Scoping to support the development of National Ambient Air Quality Standards as required by the Environmental Protection (Air Quality) Regulations, 2000; and
- A Baseline Air Quality Monitoring and Assessment was conducted in Linden to gain an understanding of the current air Quality status of the Town, since the installation of the dust collectors at the kilns at Bosai.

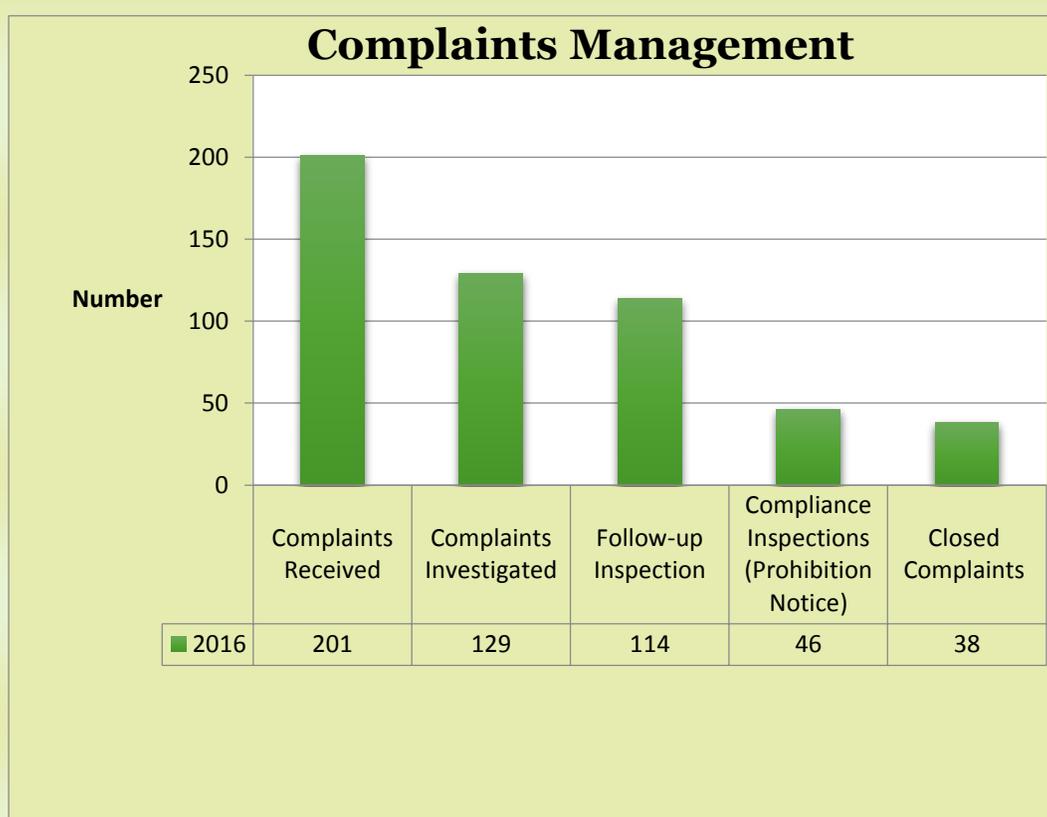
3.0 ENVIRONMENTAL MANAGEMENT AND COMPLIANCE

3.1 Complaints Management

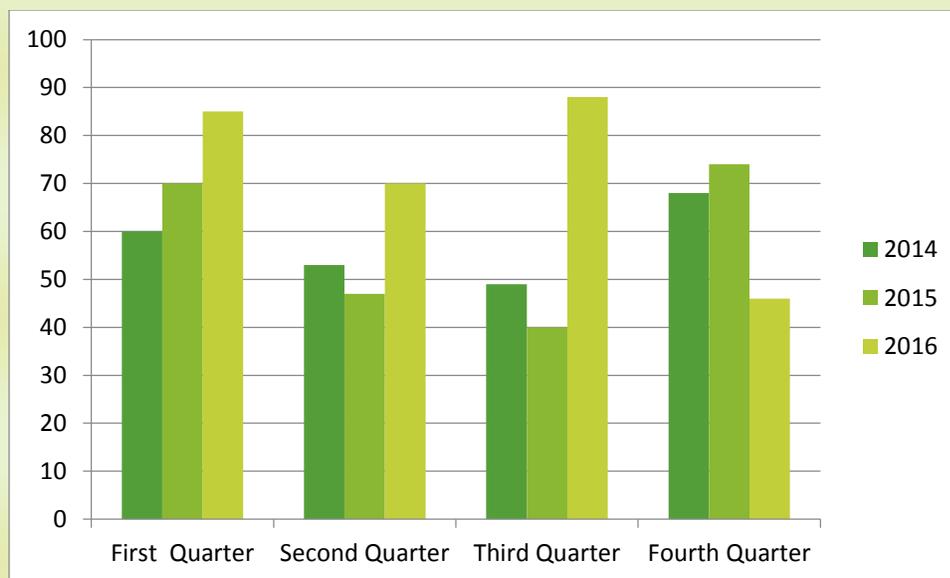
For the year, the Agency received two hundred and one (201) complaints, a nineteen percent (19%) increase over 2015. Complaints received related to odour nuisance from livestock operations, fumes, and noise and dust nuisance from the operation of workshops in Regions 3, 4, and 6.

Two hundred and eighty-nine (289) inspections were conducted in 2016, surpassing the target of two-hundred and forty one (240) set for the year and is the highest since 2014. The number of complaints inspections done this year, increased by twenty-five percent (25%) over 2015. One hundred and twenty nine (129) of the inspections conducted were for new complaints, one hundred and fourteen (114) were follow-up inspections, and forty-six (46) were related to compliance with Prohibition Notices and matters in Court. There was a twenty-two percent (22%) and sixteen percent (16%) increase in new and follow-up inspections compared with 2015.

Thirty-eight (38) complaint cases were closed for the year, as a result of satisfactory compliance with the Agency's recommendations. The number of closed complaints also exceeded that of the past two years with a two-hundred and sixteen (216%) increase over 2015.



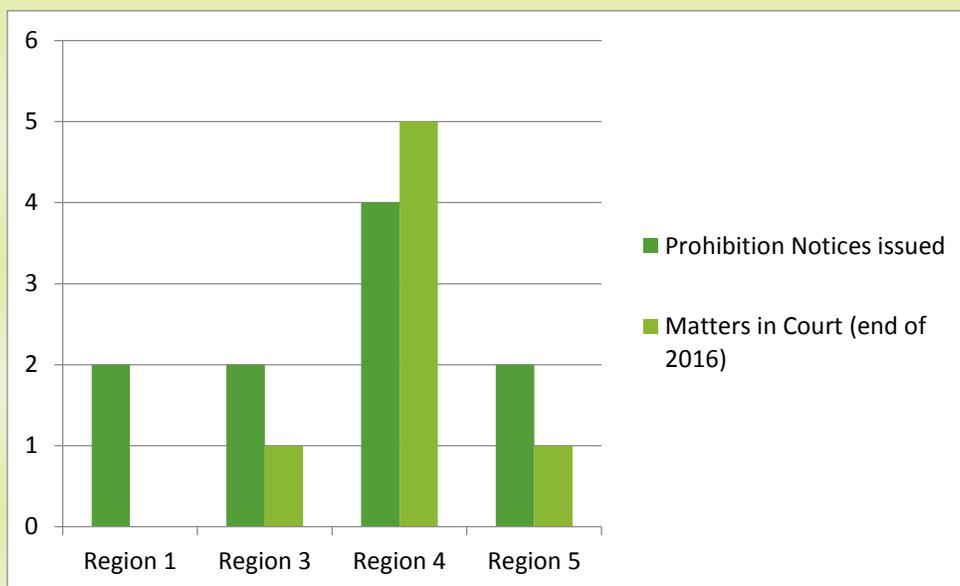
Graph 1: Showing Complaints Managed by the Division in 2016



Graph 2: Graph showing comparison of complaints investigated for the period 2014-2016

Ten (10) Prohibition Notices were issued for the period while no injunctions were issued.

The year commenced with twelve (12) matters in Court; seven (7) remained at the end of the year. The Agency recommended withdrawal of three (3) matters in Court due to compliance with its recommendations. These cases achieved compliance as a result of continuous compliance assistance provided to the defaulters by the Agency; one (1) other matter is nearing compliance requirements for withdrawal from Court.



Graph 2: Showing Enforcement matters engaging EMCD's attention in 2016

3.2 Litter Enforcement

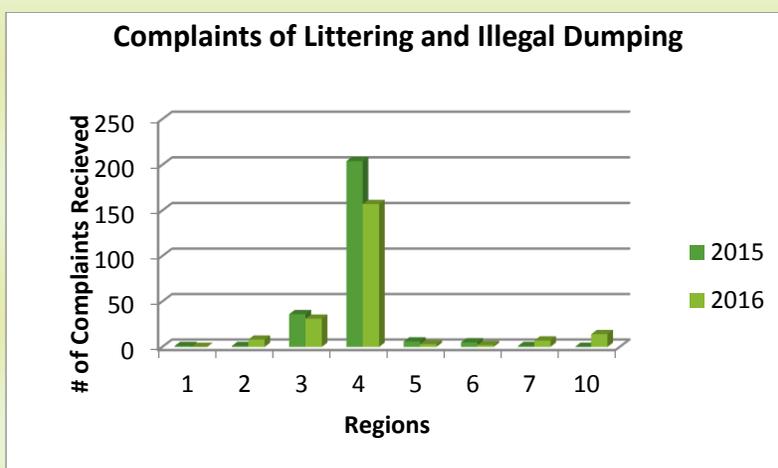
In litter enforcement, the Agency's approach is to collaborate with stakeholders of the Local Organs (NDCs) to implement the Litter Enforcement Regulations through investigation of litter issues and dumpsites, community interaction and enforcement.

During the year, the Agency collaborated with nine (9) NDCs within Regions 3 and 4, and 6 Regional Democratic Councils, thirty-four (34) NDCs and Indigenous Communities within Regions 1, 2, 5, 6, 7 and 10. The Agency also collaborated with the Ministry of Natural Resources, Guyana School of Agriculture (GSA), National Agriculture Research Extension (NARE) and the Guyana Livestock Development Authority (GLDA) to address litter issues and implement the Litter Enforcement Regulations via community interactions, dumpsite investigations and enforcement.

To increase stakeholders', including relevant municipalities and NDCs' capability and implementation support of the Litter Enforcement Programme, ninety-eight (98) members of the Local Authorities and other partner Agencies of Regions 02, 05, 06, 07 and 10, were provided training towards their assuming the role of Honorary Litter Prevention Wardens. The training

equipped stakeholders with comprehensive knowledge and skills to effectively and efficiently execute the roles and responsibilities of an Honorary Litter Prevention Warden as provided by the Litter Enforcement Regulations, 2013.

Complaints/Reports of Littering and Illegal Dumping

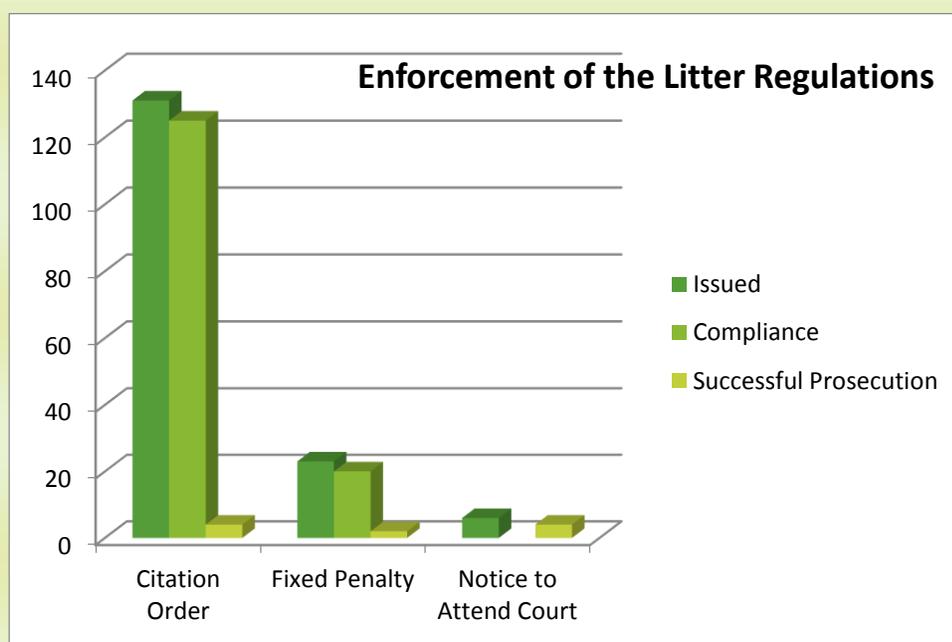


Graph showing the number of complaints received from the various Regions for the year 2016

For the year, two-hundred and twenty-two (222) complaints related to litter offences were received, a little over ten percent less than in 2015. Complaints emanated from Regions 2, 3, 4, 5, 6, 7 and 10 with over seventy percent of the complaints coming from Region 4.

An analysis of all the complaint cases received indicated that eighty percent (80%) related to *Littering A Public Place* and twenty percent (20%) to *Littering A Private Place*. Sixty-three (63%) of the offences received were related to domestic waste while two percent were recurring complaints. For the year, twenty-eight (28) complaints were referred to the Local Authorities including NDCs and the Mayor and City Council (M&CC).

Citations, Fixed Penalty and Notice to Attend Court



Enforcement analysis of the Litter Enforcement Regulations, 2013

Citation Orders:

One hundred and thirty one (131) citation orders (Clean-up and Litter Removal Order) were issued during the year, a decrease by over thirty percent compared to 2015 when two-hundred (200) citation orders were issued. Citation orders were issued within Regions 2, 3, 4, 5, 7 and 10, with the majority (42.7%) being issued within Region 4, including Georgetown.

A compliance rate of over ninety-eight percent (98%) - one-hundred and twenty-nine (129) cases - was recorded for citation orders issued in 2016, a ten percent (10%) increase over 2015.

Compliance for four (4) cases was achieved through the Court and the Agency secured successful prosecution against offenders.

Fixed Penalty

A total of twenty three (23) fixed penalties were issued within Regions 2, 3, 4, 7 and 10, 69.3% less than 2015 (75 fixed penalties were issued). A compliance rate 97% was recorded for issued fixed penalties, 35.7% higher than 2015.

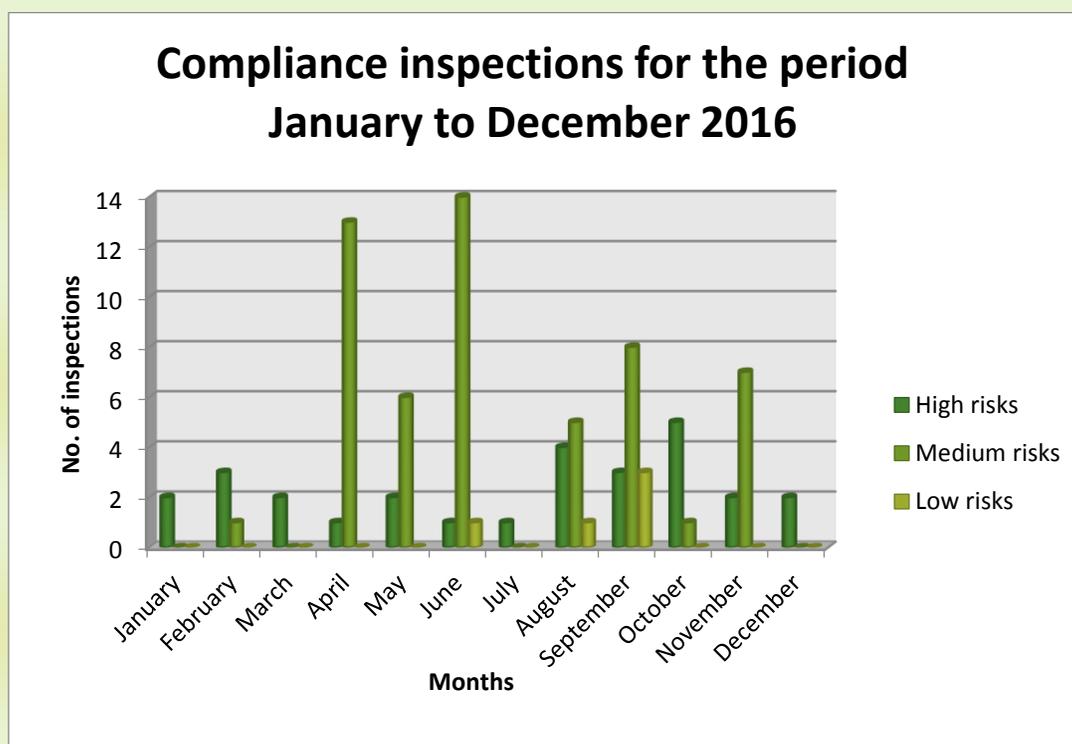
Compliance for two cases was pursued in Court where the Agency secured successful prosecution against offenders.

Notice to Attend Court

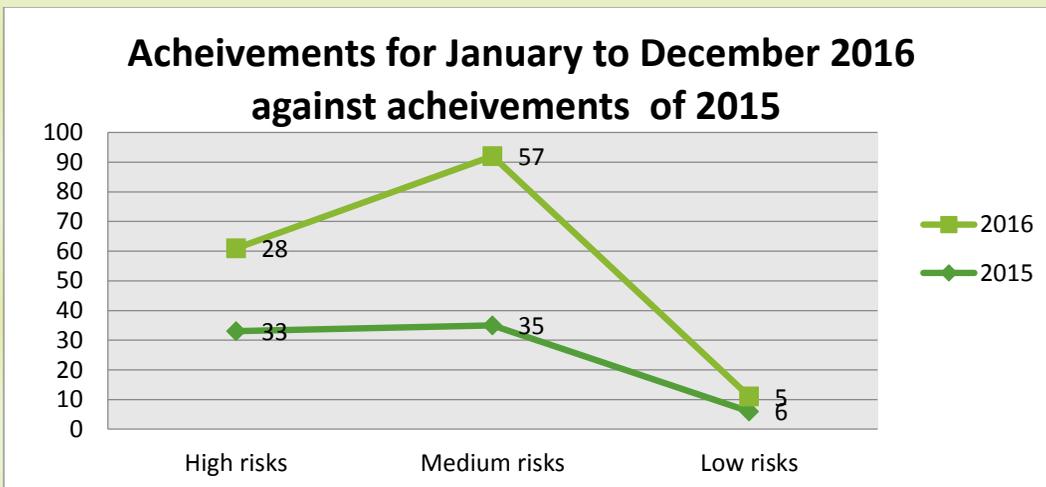
Six (6) Notices to attend Court were issued for litter offences, with charges varying from fifty thousand to one hundred thousand dollars (\$50,000 -\$100,000) within Regions 3 and 4. An analysis of the Notices issued indicate that four (4) were successfully prosecuted, one (1) was struck out, and one case is active.

2.0. Compliance Monitoring

Ninety- eight (98) compliance and monitoring inspections were conducted in 2016. Based on associated environmental risk, twenty-eight (28) high-risk projects were inspected, fifty-seven (57) medium-risk and five (5) low-risk projects were monitored during the course of the year. Among the high-risk projects inspected were mining operations and one off-shore petroleum exploration project which were largely compliant with Environmental Permits issued, as well as, the Environmental Regulations. However, it was noted that these high-risk operations and medium-risk projects such as sawmills and lumberyards with processing, continue to struggle with waste management. As such, the Agency provided continuous support to Permit Holders found non-compliant to enable them to improve their level of compliance. Additionally, a *Guideline for Construction and Operation of Oil-Water Separators* was drafted to assist Permit Holders who encounter difficulties in managing oily waste.



Graph 3: Showing Inspections conducted for 2016



Graph 4: Showing achievements of 2016 compared to 2015

Twenty-eight (28) high-risk projects were monitored as compared to thirty-three (33) projects inspected in 2015. It was a challenge for the Agency to meet the target of thirty-five projects set for 2016, due to human resource and financial constraints. Despite this, the Agency exceeded its overall target of eighty-five (85) projects set for 2016 and surpassed the number of projects inspected in 2015.

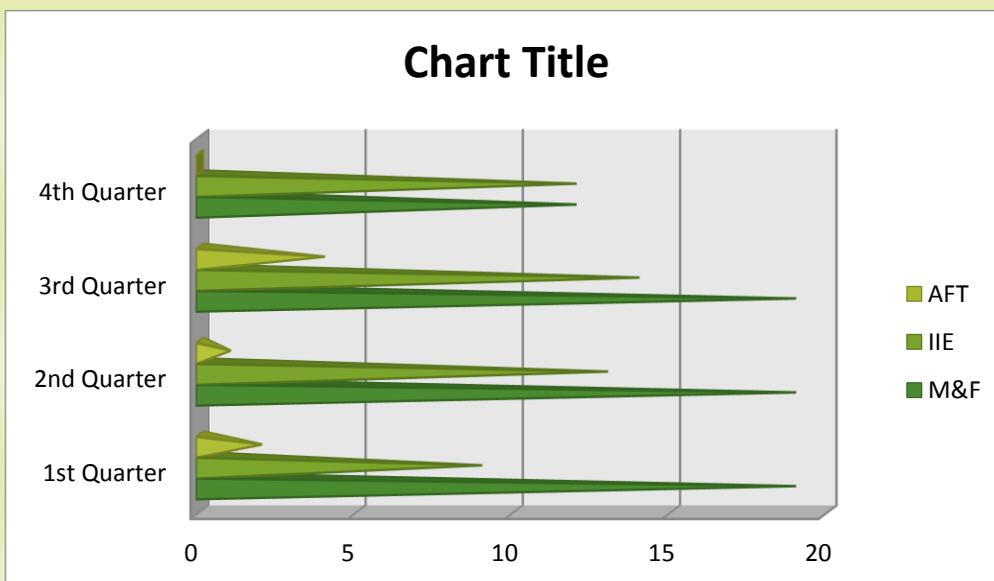
2.1. Collaboration

Through a collaborative effort with industry, the Agency conducted air quality monitoring in Communities in Linden and also carried out complaint inspections against permitted and non-permitted facilities in the industry, infra-structure and energy sectors.

Together with the Guyana Forestry Commission, the Agency conducted inspections of forestry related issues, such as non-compliance with Environmental Regulations of facilities and provided assistance to enable quick movement towards compliance.

2.2 Annual Self-Monitoring Reports

One hundred and twenty-eight (128) annual reports were received for the period 2016, representing over ninety-eight percent (98%) compliance and an increase of sixty-eight (68) reports received compared to 2015.



Graph 5: Number and Type of Annual Reports received for 2016

Permit holders within the Mining and Forestry (M&F) sectors submitted the highest number of self-monitoring reports amounting to fifty-three percent (53%) of Annual reports received. The Industry, Infrastructure and Energy (IIE) projects submitted thirty-seven percent (37%) of the total number of reports received. The Agency continues to work with Permit holders in the Agriculture, Fisheries and Tourism Sectors which recorded the lowest amount of submissions.

Research and Development

- **Compliance and Enforcement Regulations** - The Agency continued to collaborate with the World Wildlife Fund for Nature (Guyana) on the development of Environmental Protection Enforcement and Compliance Regulations. A final revised draft of the Regulations was submitted and the Agency was able to complete all training and other project related activities in December, 2016. This project is now completed as it relates to funding from WWF, the Agency awaits the enactment of these Regulations.
- **State of Environment Report** - The Agency in collaboration with the Ministry of Natural Resources and the UNDP, implemented a Project to develop a State of the Environment Report 2016. This document presents data on the current status of Guyana's natural environment and is intended to be a tool to guide developmental activities in specific areas.
- **Industrial Effluent Guidelines** - In collaboration with the Guyana National Bureau of Standards (GNBS), the Agency continued the revision of *Industrial Effluent Guidelines*. Extending this collaboration, the Agency and the GNBS jointly garnered support from the Inter-American Development Bank (IADB) to develop a proposal to gather baseline water quality data to improve the revision process.
- **Coastal Resource Map** – The Agency continued its preparation of a Coastal Resource Map for Guyana with data sourced from Topographic scans of Guyana's Sea Coast from Guyana Lands and Surveys Commission, Turtle nesting Sites from Guyana Marine Turtle Conservation Society, and areas with Mangroves from the Guyana Forestry Commission.
- Other updates on the Map are being done based on ground assessment of land use, vegetation and mangrove status, soil type, biodiversity, infrastructural works and photographs. Baseline datasets used on the map include those from various agencies and include data on Roads, Offshore Oil Drilling and Dredges, Sea and River Defenses, Mangrove Areas, Rice Mills, Turtle Nesting Sites, Schools, Protected Areas, Land Use, Gas Stations, Aqua Farms, Sawmills, Lumberyards, Tourist Resorts and Sites etc.
- **Coastal Assessments** - Coastal assessments for the development of a coastal resources map continued with assessments being carried out in Regions 3, 4, 5 and 6. Data collected included fishing grounds, commercial and recreational areas, sawmills, rice mills, livestock operations and other activities occurring on the coast that impact on the natural environment. The status of coastal resources such as mangroves density etc. was also assessed.
- **ICZM Strategic Plan** - A draft strategic plan was developed for the Integrated Coastal Zone Management which will aid in streamlining work in this area. A draft Communications Strategy was also crafted to guide public awareness of ICZM.
- **Digitization of location of complaints** - Three-hundred and fifty-three (353) locations were digitized including locations of pollution complaints, new projects and compliance inspections.
- **Mapping of locations linked to littering fines** - Thirty-eight (38) locations where fines and penalties were instituted were plotted with the data submitted up to May 2016. Additionally, sixty-eight (68) complaints for littering were mapped.
- **Mapping of Research Projects** - The mapping of research projects submitted to the EPA has commenced. This will aid visualizing of locations in Guyana where various types of research was conducted. In addition, the map will portray the type of research done so as to provide a source for baseline information when doing follow-up projects.

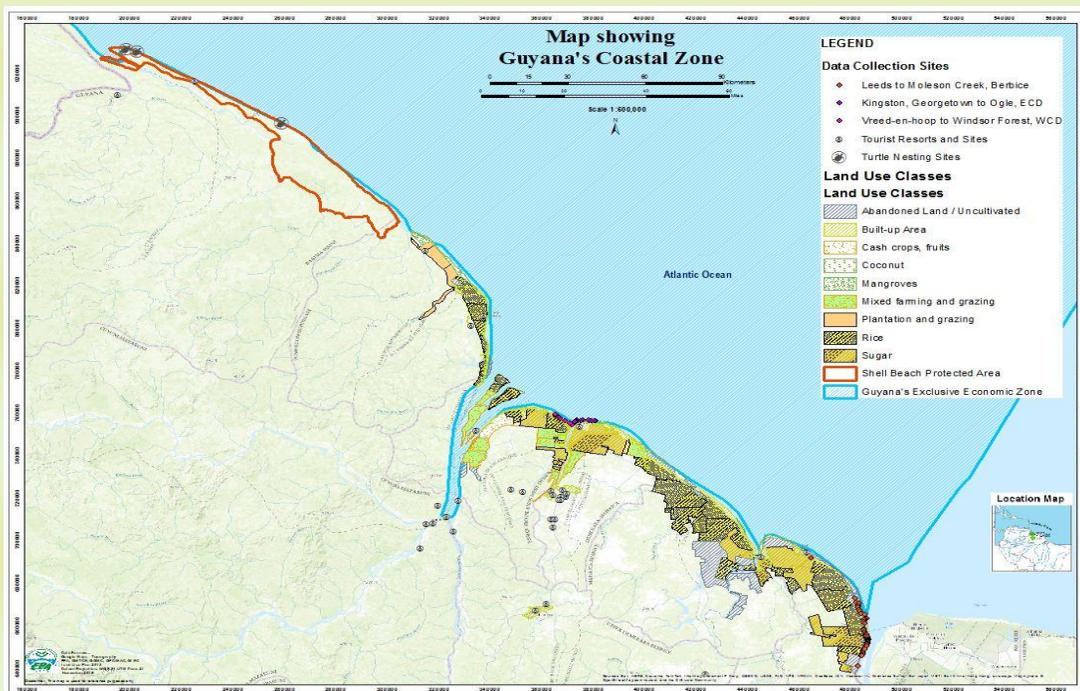


Fig. 1: Map showing Coastal Resources of Guyana

BIODIVERSITY MANAGEMENT

In keeping with its mandate under the Environmental Protection Act (1996), the Agency coordinates and maintains a programme for the conservation and sustainable use of biological diversity in Guyana. It also is the national focal point for the United Nations Convention on Biological Diversity (CBD), and designs, sources funding, executes and implements projects that assist in achieving the general objectives and programmes of the Convention.

Conservation of Biodiversity

Establishment of the Multilateral Environment Agreement Unit

A Multilateral Environmental Agreement Unit (MEAU) was established to support and coordinate activities and projects related to biodiversity multilateral agreements being implemented within the Agency. This Unit was staffed with persons previously focused on work on Protected Areas, however, this area of work is now the responsibility of the Protected Areas Commission.

Guyana Protected Areas System (GPAS) Project- Phase II

Through a Separate Agreement signed on September 10, 2009, by the Government of Guyana and Government of Germany (represented by the German Development Bank – KfW), EUR 5M was committed to support the GPAS Project Phase II – Conservation of Tropical Forests. This Project was officially closed in 2015. Financial closure of the Project was effected in 2016, with the Agency submitting the project's financial audits.

A Project Mission was conducted this year on GPAS II and GPAS III Projects. KfW representatives, (Ms. Veronica Garcia del Arco and Dr. Jens Mackensen) visited Guyana during in 2016, to discuss the commencement of GPAS III and the closure of GPAS II. The GFA Consulting Group, contracted by KfW to produce a Situation Analysis Report, met with the Agency to discuss the details of the project design for GPAS III.

The KfW Mission also met with the Agency to discuss the Audit Reports submitted by the Audit Office of Guyana. Following the meeting, the Agency submitted several supporting documents to KfW in relation to the KfW Audits and the transfer of funds under GPAS Phase II, Tranche II.

Financial Audit

The audit of Financials for the period ending December 2015 was completed and submitted to KfW Germany. The Report indicated that the financial statements present fairly in all material with respect to the cash received and payments made by the German Development Bank (KfW) to the Environmental Protection Agency (EPA) in accordance with Generally Accepted Accounting Principles. The report also met the requirements stated in KfW's ToR for Audit of the Disposition Fund.

Further, supplements to the Audit Reports for the periods ending December 2012/2013 and 2014, were submitted to KfW in September 2016. The Supplements were requested by KfW in accordance with the KfW ToR for Audit of the Disposition Fund, within the Project Agreement.

National Biodiversity Action Plan

The Agency distributed the NBSAP 2012-2020, and the Fifth National Report to the Convention of Biological Diversity (CBD) to one hundred (100) key stakeholders, inclusive of government, academia, the media, non-governmental organizations (NGOs) and civil society.

The Agency requested updates from stakeholder agencies on their progress in achieving priority actions stated in the NBSAP. Additionally, agencies were requested to suggest indicators to monitor the progress on achievement of the priority actions and attainable targets, where missing from the NBSAP. With inputs from the technical division of the Agency, a comprehensive list of indicators was compiled for the achievement of priority action SO 4.4, of the NBSAP, to develop indicators for monitoring its implementation.

Following a workshop hosted by the CARICOM Secretariat in June 2016, on Integrated Environmental Assessment Tools for Enhanced MEA implementation, the Agency was approached by CARICOM, in partnership with the UNEP Regional Office for Latin America and the Caribbean (ROLAC), to partake in a project to aid implementation of the NBSAP. The proposed project aims to identify synergies with biodiversity MEAs and SDGs and mainstream these across sector agencies in attaining objectives of the NBSAP, and to develop and identify financing mechanisms for the implementation of the NBSAP. A draft Small-Scale Funding Agreement with a proposed timeline of 3.5 months with an identified allocation of US \$20, 000 was reviewed by the Agency, in collaboration with the UNEP ROLAC Office. The proposal was approved by the Ministry of Natural Resources and subsequently Department of Environment and the Agency is awaiting next steps and contract signing from UNEP ROLAC.

Global Environment Facility Small Grants Programme

The Agency is a member of the National Steering Committee (NSC) for the Global Environment Facility Small Grants Project (GEF SGP). As such, it attended meetings and consultations in support of the review of the draft GEF Country Programme Strategy and Baseline Assessment Report for the 6th Operational Phase (2015-2018), as well as provided comments for the finalization of the Strategy.

The Agency also supported the NSC in the review and provided comments on the concept notes and project proposals for the following national small grants projects:

- Cacique Foundation Sustainable Modern Farming in RiverView Community
- Orealla Horticultural Farming in Orealla Community
- Upper Corentyne Fishermen's Association Replacement of Ice Making Machine, No. 63 Village
- Cassava/Coconut Intercropping and Processing Plant, St. Cuthberts Mission

- Organic Pineapple Farming Project, Kuru Kururu

Global Environment Facility Funded Projects

Facilitation of the GEF Projects National Approval Process

The Agency facilitated the review and endorsement of the project identification form (PIF) of two (2) GEF STAR Allocation Projects:

- “Strengthening the enabling framework for small and medium-scale gold mining in Guyana and uptake of practices to reduce biodiversity loss, mercury use, deforestation and forest degradation” (GEF Allocation US \$4,974,970; Co-financing US \$29,662,745; Total Allocation US \$34,637,715; Expected Duration: 84 months; Implementing Agency: UNDP)
- “Mainstreaming Low-emission Energy Technologies to build Guyana’s Green Economy – Total financing” (GEF Allocation; US \$1,971,188; Co-financing US \$9,800,000; Total Allocation US \$11771,188, Duration: 48 months; Implementing Agency: UNDP)

The Agency also facilitated review and endorsement for submission to the GEF Secretariat, project identification forms and expression of interest for four (4) other GEF funded projects as indicated in the table below:

Project	GEF Allocation US\$	Co-financing US\$	Total Allocation	Endorsement Date	Implementing Agency
Reducing Marine Litter in the Caribbean Sea, through the Sustainable Management of Plastics in the Wider Caribbean Region	-	-	-	Expression of Interest February 25, 2016	Ministry of Communities
A supply Chain Approach to Eliminating Mercury in Guyana’s AGM Sector: El Dorado Gold Jewellery – Made in Guyana	\$3,100,000	-	\$3,100,000	Endorsement of PIF August 08, 2016	Conservation International
Caribbean Regional Fund on Waste Water Management (CReW+) – Up-scaling and enhancing the Caribbean Regional Fund for Wastewater Management through an integrated approach of innovative technical solutions and financing mechanisms	\$50,507,659	\$285,481,075	\$335,988,734	Endorsement of PIF April 01, 2016	Ministry of Communities
Developing Organizational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries	\$1,945,250	\$9,130,000	\$11,075,250	Endorsement of PIF September 22, 2016	Ministry of Agriculture

GEF Project Implementation

Notification was received from the UNDP, of one (1) approval from the GEF Secretariat for the medium-sized project, "Strengthening Technical Capacities to Mainstream and Monitor Rio Conventions Implementation through Policy Coordination" (GEF Allocation US \$1,199,750; Co-financing \$1,276,100; Total Allocation \$2,475,850, 48 months). Approvals from all parties for project execution were attained by the Implementing Agency on June 30, 2016. A Project Inception Meeting was held with key stakeholders in October, 2016.

The Agency participated in the Caribbean Constituency Meeting, held in Grenada on October 16-17, 2016. Updates on status of GEF 6 Projects in Guyana, planned and approved were presented at the meeting.

The Caribbean Constituency's Alternate on the GEF Council for the next cycle from Guyana, Ms. Ndibi Schwers, was identified by the Department of the Environment and communicated to the GEF Secretariat, on December 21, 2016. A welcome email was received on December 22, 2016, from the Secretariat.

Other

Preparation of the CARICOM Biodiversity Outlook – The Agency provided information for preparation of this document and the draft document was reviewed and comments submitted to the Secretariat. It was indicated that the document is under substantial revision and the final draft will be forwarded for review again.

Biodiversity Research

Twenty-one (21) Applications for Research Permits were received from students, professionals, and institutions worldwide. (See Figure Xa).

For the year, twenty-three (23) Research Permits were granted and fifteen (15) Export Permits issued. Further, one (1) application was cancelled and two applications (2) were postponed to 2017. The majority of Research Projects were concentrated in interior locations, such as, Iwokrama and Rupununi in Regions 8 and 9, respectively. Research Permits granted were for research conducted on flora, fauna and filming in 2016 are shown in (See Figure Xb).

Figure Xc shows a comparison of the research applications received and Permits issued in 2014, 2015 and 2016. It is clear that there has been a decrease in applications received over the past three (3) years and a corresponding decrease in Permits issued.

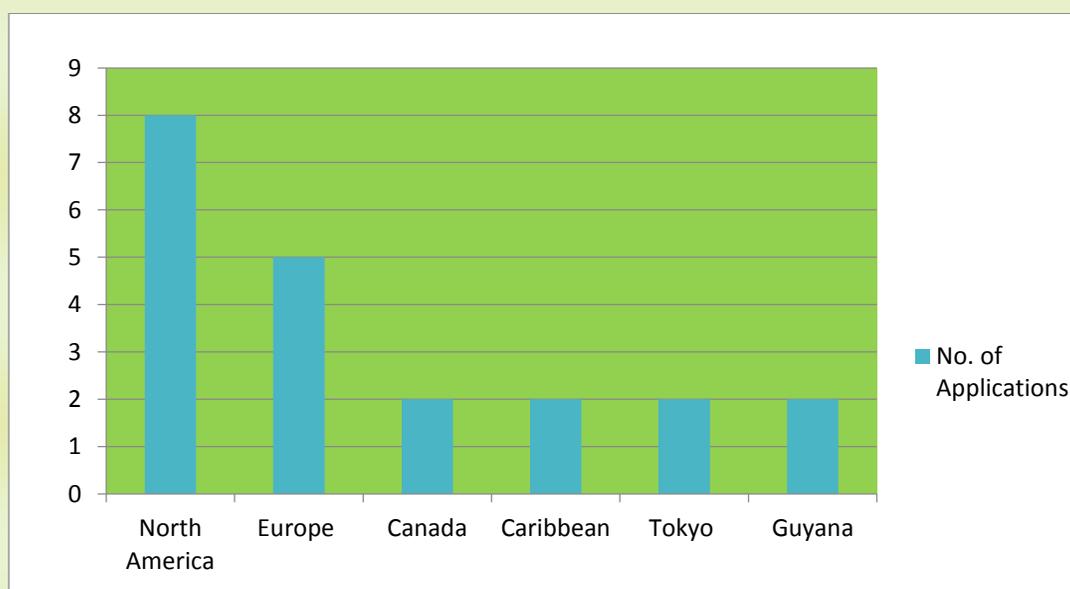


Figure Xa: Location from which Applications were received.

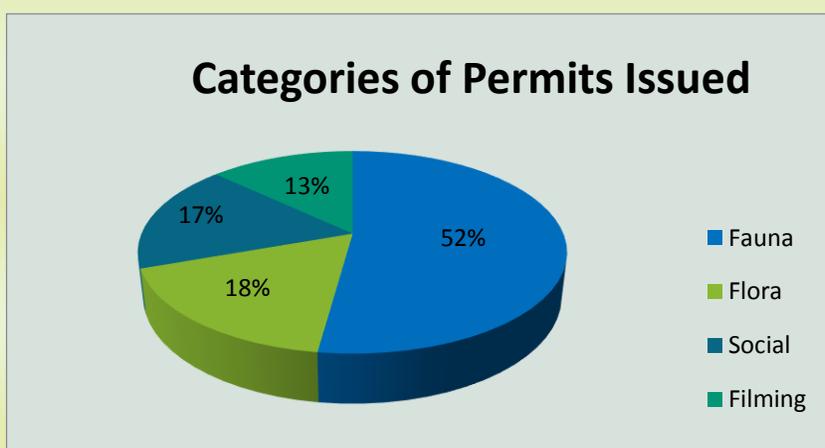


Figure Xc: Categories of Research Applications Permitted by the Agency, during the reporting period

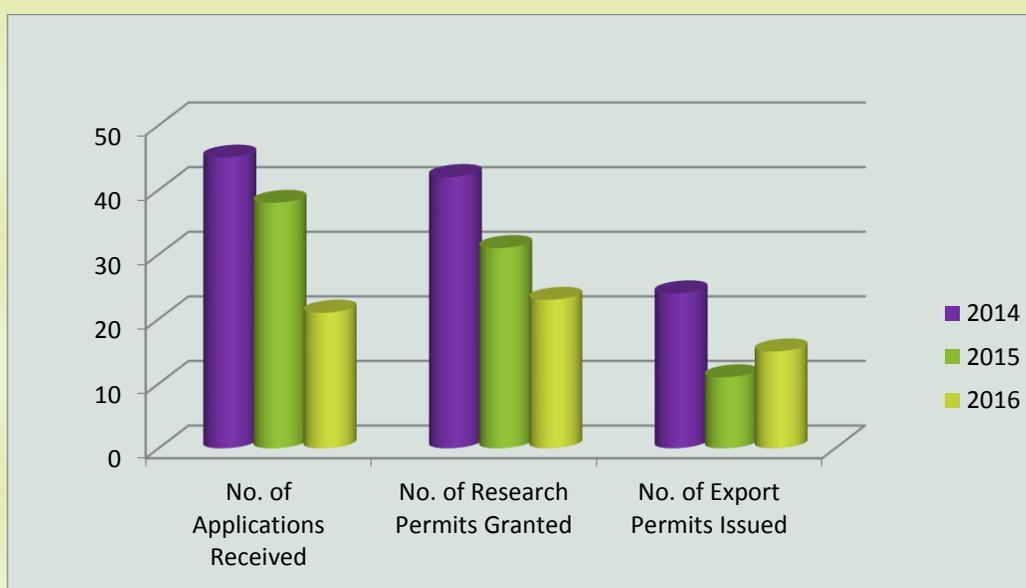


Figure Xc: No. of Applications received and Permits issued.

Monitoring and Enforcement

The monitoring and enforcement aspect of the Research process has been maintained over the year, by local counterparts from the University of Guyana, when possible; three (3) local counterpart reports were received this year. The Agency conducted monitoring visits at Iwokrama, Yupukari, Shulinab and Dadanawa, in Region 9 to monitor compliance of current permitted research activities and community owned research.

The Agency continued to maintain linkages with relevant sector agencies and organizations such as, the Ministry of Indigenous Peoples’ Affairs (MolPA), the Protected Areas Commission (PAC), the Guyana Forestry Commission (GFC) and Local Communities to ensure researchers’ adherence to the National Biodiversity Research Guidelines and the Terms and Conditions of Research Permits. The Agency continued 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. For the reporting period, eleven (11) preliminary reports were received from researchers.

Revenue Generation

A total of six thousand five hundred and fifteen United States dollars (US\$6,515.00) was generated from application, late application, and permit fees.

Advancing the Nagoya Protocol in the Caribbean Region

In terms of Access and Benefits Sharing of Genetic Resources (ABS), the following was achieved in 2016:

- Approval was received from the Ministry of Natural Resources to procure the services of a legal consultant to finalize the ABS Regulations.
- An Inception meeting on the ABS Project was conducted at the EPA with key stakeholders. It included a session that allowed for comments towards updating the draft ABS Regulations.
- A video was produced to create awareness on ABS and to meet the project's objectives of dissemination of messages to a wide and diverse set of stakeholders in the most appropriate manner. The collection of footage for the video was facilitated by the Agency and shooting was done at Iwokrama, Fairview, Wowetta, Bourda Market, Parliament Building, City Hall and the High Court. Interviews were also done with the Senior Councilors of the hinterland communities and translation of the script for the video was done in five (5) of the indigenous languages (Patomona, Awkawio, Mukushi, Wai Wai and Wapishana).
- The Agency participated in the Inception Workshop and ABS-Clearing House (ABS-CH) Workshop held in Trinidad and Tobago and Jamaica, during the periods April 24 to 27, 2016 and July 20 to 23, 2016, respectively.

Implementing National Bio-safety Framework in the Caribbean Sub Region (Regional Bio-safety Project)

The Administration of the project was handed-over at the start of 2016 and achievements during the year are as follows:

- A budget re-phrasal was done to facilitate the remaining national project activities which included the revision of the Bio-safety Policy and re-imburement of funds to the Agency.
- The last consignment of laboratory equipment was delivered to the National Agricultural Research and Extension Institute (NAREI), as such, an inventory was prepared and submitted to the Regional Project Manager. Also, a Memorandum of Understanding (MoU) between NAREI and UWI outlining parties' responsibilities was drafted by the project but is yet to be endorsed.
- As it relates to capacity-building, training workshops were held in areas such as risk communication, use of technical guidelines for decision – making for GMOs, and importance of border control and plant quarantine, with participation from relevant stakeholders such as the GRA, Plant Quarantine Officers and the EPA.
- Project closure documents (Project Financials and Terminal Report) were prepared and submitted to the Regional Manager.
- The Bio-safety Bill and Regulations were approved by the EPA Board.

Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector (Mainstreaming Biodiversity Project)

The Mainstreaming Biodiversity project started the year with the commencement of the '*Prioritization of Hotspots*' and '*Capacity Building for EPA Officers*' Consultancies.

The '*Prioritisation of Hotspots*' consultancy sought to prioritise mining hotspots for monitoring and enforcement based on biodiversity parameters. While the consultancy faced logistical difficulties

resulting in several no-cost extensions, it was successful in being able to prepare and submit a comprehensive Prioritisation Report, to the Agency.

The *'Capacity Building of EPA Officers'* consultancy delivered training for twenty-four (24) officers of the Agency on the various Acts and Regulations governing the mining sector in Guyana. A checklist for the monitoring of mining was also developed as part of the consultancy.

Bench equipment was procured by UNDP for the Guyana Mining School and Training Centre Inc. The equipment was handed over to the GGMC by the Minister of Natural Resources in an event which received media coverage.

During the last quarter of the year, the Project aimed to complete the remaining consultancies:

- *'Support to enhancing the Capabilities of the Guyana Mining School and Training Centre Inc'*;
- *'Support to uptake of Biodiversity-friendly Practices by Miners'*;
- *'Support to Strengthening of Monitoring and Enforcement of Mining Regulations'*;
- *'Legal Review to Support Monitoring and Enforcement of Mining Regulations'*

A Project Assistant (Mr. Osbert Ellis) was hired to facilitate administration of the project and a Project Steering Committee (PSC) meeting was held to discuss project activities completed to date, the budget and the Project's 2017 Annual Work-plan.

Support to the Preparation of the Third National Bio-safety Report on the Implementation of the Cartagena Protocol on Bio-safety to the CBD.

The tendering process for the consultancy for the Project was prolonged owing to no bids being received in the 1st bid opening. Following the NPTAB's recommendation to go the route of selective tendering, the consultancy was awarded, the contract signed, a draft report prepared and presented at a National Stakeholders' Workshop; and the Final 3NR was submitted to the Agency in September, 2016. The Department of Environment (DoE) approved the 3NR and it was submitted to the Convention on Biological Diversity (CBD) Secretariat via the Biodiversity Clearing House (BCH) in November, 2016.

Conservation and Sustainable Use of Wildlife

The Agency continued efforts to coordinate, develop, and maintain a programme of activities for the sustainable use and conservation of Wildlife in Guyana.

Wildlife Conservation and Management Regulations

Activities were carried out in 2016 as part of the implementation of the Wildlife Management and Conservation (WMC) Regulations as follows:

- In collaboration with the Wildlife Management Authority World Wildlife Day, 2016, was commemorated with school outreach programs and a presentation to EPA staff.
- A presentation on the World Environment Day 2016 Theme, "Zero Tolerance for illegal wildlife Trade" - "Go wild for Wildlife" was delivered at the Youth Forum held at the Arthur Chung Convention Centre
- Guidelines were prepared to address cruelty to Iguana while in captivity and several visits were conducted at strategic locations in Regions 4, 5 and 6, as part of the implementation of the guidelines.
- The Agency reviewed the Wildlife Management and Conservation Regulations, 2013, and compiled comments for proposed amendments, as a preparatory step towards future implementation of the Wildlife Conservation and Management Bill.

- Assistant Professor, Anthony Cummings of the University of Dallas Texas met with the Agency to share information about a mobile phone application that he has developed for use by members of the public to report incidence of challenges related to big cats.
- The Agency participated in a training session on wildlife camera trapping and research methodologies, organized by PANTHERA. At the session, the Agency also delivered a presentation titled “Understanding and developing a communication mechanism for the effective management of wildlife in Guyana.”
- PANTHERA met with the Agency to discuss the Memorandum of Understanding between the two entities, the continuation of PANTHERA’s sustainable wildlife project.
- The Agency attended a meeting at the Ministry of Natural Resources to discuss the PANTHERA mission in Guyana. Subsequently, the Agency reviewed and provided comments on a MOU between PANTHERA and the Ministry of Natural Resources.
- Dr van Vliet, Wildlife and Livelihood Expert from CIFOR presented to the Agency her plans to conduct a preliminary assessment of bush meat trade in Guyana, and her proposed project on sustainable hunting in the framework of a large Afrique Caraïbes-Pacific program, called WILDMEAT, to be financed by the European Commission
- The Agency informed that sport fishing of Arapaima was illegal during a meeting with the Director of the Guyana Tourism Authority (GTA) and the Head of the Wildlife Management Authority.

- A number of wildlife complaints were investigated during the year including:
 - Possession of a large number of Scarlet Macaws (*Ara macao*);
 - Presence of jaguars (*Panthera onca*) in four Communities (Lima Sands, Tapakuma , Whyaka Mainstay and Lake Capoey)in Essequibo Region No. 2 ,
 - Smuggling of birds, from North-West District Region No.1;
 - Harvesting of Manatee in the Abary River for sale; and
 - Illegal hunting and collecting sea turtles at Santa Rosa Region No. 1.

5.0 EDUCATION, INFORMATION AND TRAINING

Education, Awareness and Capacity Building

Environmental education, awareness and capacity building are essential to public participation in the protection, conservation and sustainable use of the environment. As such, programmes are implemented strategically to address pressing environmental issues and highlight the key roles and responsibilities of the Agency for informed decision-making. Recognizing the importance of collaboration in this process, the Agency forms alliances with governmental and non-governmental organizations; private sector; youth, community and religious organizations and groups; and educational institutions.

Development of Education Materials

Twenty (24) information and education materials were developed or revised in 2016. Five (5) of these materials focused on Environmental Management; for (4) on Biodiversity Management and Conservation; two (2) on Climate Change (2); four (4) on Solid Waste Management; and nine (9) on EPA’s Work.

Thirty-nine (39) presentations were prepared for use in various workshops and outreach sessions during the year. These presentations focused on areas such as Solid Waste Management (11); Biodiversity Conservation (6); Environmental Management (3); Climate Change (6); Ozone Layer Depletion (3); environmental education (5); and Youth Environmental Advocacy (5). Specific titles of presentations are as follows:

Outreach

Outreach is a key component of the education, awareness and capacity building programmes. Thirty-five (35) outreach activities were conducted to aid in fulfilling the Agency’s mandate; nineteen

(19) of these were relevant to specific environmental observances. The focus of outreach during 2016 was as follows:

Solid Waste Management

Ten (10) sessions on solid waste management were conducted with Environmental Health Officers in Region 5 and schools in Region 7. Schools in Region 7 were taught the skill of *Papier Mache* to aid them to present a 'trash to fashion' show applying this skill; the show featured eighteen (18) fashion pieces made with reused material e.g. plastic bags, disposable cups and plates, paper bags etc., that would normally be discarded as trash.

Environmental Club Development

The development of environmental clubs continued to be a focus of the education, awareness and capacity building programmes. Sessions geared to inform on how to establish and sustain an environmental club were conducted with three (3) primary schools, five (5) secondary schools and one (1) Technical Institute reaching an audience of ninety-two (92), one hundred eight (108) and twenty-five (25) students respectively

Climate Change

Climate Change is a cross-cutting programme and the importance of understanding and effectively addressing this issue cannot be underscored. As such, sessions were conducted with the Kuru Kuru Primary school, Dora secondary, Guyana School of Agriculture (GSA), Region 2, and Day Camps in collaboration in Caribbean Youth Environment Network (CYEN) and East Ruimveldt and Young and Thoughtful.

World Wetlands Day

"Wetlands" packages were distributed to fifteen (15) schools that have environmental clubs. In observance of World Wetlands Day, the Agency coordinated a tour for selected secondary schools to the Mangrove Reserve; and conducted seminars at the Guyana School of Agriculture (region 4) and the Bina Hill institute (Region 9). World Wetlands Day activities culminated with an outreach at Santa Rosa Secondary School (Region 1).

World Wildlife Day

To observe World Wildlife Day, the Agency collaborated with the Wildlife Management Authority to conduct a poster competition on the international 2016 theme, "*the future of wildlife is in our hands*", which targeted grade 7 students of thirty-one (31) secondary schools within Regions 1, 3, 4, 5, 6, 7, 9 and 10. The Agency also participated in an exhibition, coordinated by the Wildlife Management Authority which attracted five hundred and fifteen (515) students from schools in Regions 1, 3, 4, 9 and 10.

World Water Day

Under the 2016 international theme, 'Water and Jobs', the Agency organized and conducted a seminar for 5th form students of eight (8) secondary schools in Georgetown, to raise awareness on the importance of water-related jobs. Among the agencies making presentations at the seminar were the Guyana Geology and Mines Commission (GGMC), the Ministry of Agriculture (MoA), the Guyana Water Inc. (GWI) and the Environmental Protection Agency.

Earth Hour: Earth Hour

The Agency assisted the planning of an Earth Hour concert, which was spearheaded by WWF (Guyana). The event was held at the National Park, Car Park Tarmac on March 19, 2016. A contingent of twenty (20) EPA staff participated in the Earth Hour event.

World Environment Day

To mark its 20th anniversary year, the EPA coordinated and executed four (4) major activities in collaboration with the Ministry of Natural Resources. Among them were:

National Youth Forum: The first at the national scale, the Forum was held at the Arthur Chung Convention Centre and sought to raise youth awareness on the WED 2016 theme: "Fight against

illegal trade in wildlife.” The event attracted approximately two hundred and seventy-six (276) persons including thirty seven (37) schools drawn from the ten (10) Administrative Regions.

Dinner and Awards Ceremony: The Agency celebrated its 20th Anniversary with a Dinner and Awards Ceremony at the Pegasus Hotel, Georgetown, on June 05, 2016, World Environment Day. At this event, awards were presented to individuals and businesses in the categories of: Environmental Pioneers, Environmental Leadership, Sound Environmental Practice (Projects), and Media. The Agency also took the opportunity on this occasion to award its own staff for Congeniality, Long Service and Participation.

Hinterland Youth Seminar: The World Environment Day celebrations were also taken to Region 9, where a Hinterland Youth Seminar held at the Iwokrama Research Centre with wildlife clubs of the Region.

Community Cleanup Activities: Reinforcing the call for litter prevention, the Agency organized and implemented two community clean-up activities, at Annandale and Golden Grove on the East Coast of Demerara. These activities drew participation from the immediate communities, NDCs, public spirited individuals and staff of the Agency.

International Day for Preservation of the Ozone Layer:

Seventy-seven (77) primary and secondary school students were reminded of the importance of ozone layer protection and strides being made for its preservation during two (2) half-day workshops held under the theme “Ozone and Climate: Restored by a world united” in collaboration with the Ozone Action Unit, Hydro-meteorological Department, Ministry of Agriculture.

International Coastal Cleanup:

In collaboration with the Caribbean Youth Environment Network (Guyana Chapter), the 2016, International Coastal Clean-up activities were conducted. As a precursor to the Clean-up Activities, the Agency conducted awareness sessions with schools and facilitated discussions on television and radio. The Agency also provided support for the Clean-ups in Regions 4 and 6.

Capacity Building

Thirteen (13) capacity building activities were coordinated and executed during the year 2016. These activities were generally between 2-3 days in duration, took place at various locations and targeted teachers, environmental clubs, and youth groups.

Teacher Training: A three-day Environmental Education Training Workshop was conducted at Camp Alpha, Linden Soesdyke Highway, Region 10, with twenty-two (22) trainee teachers from the Cyril Potter college of Education. The training programme was developed and implemented by the staff of the staff of the Education, Information and Training Division of the Agency.

Environmental Camp:

The Agency facilitated three environmental camps, two in Region 4 and one in Region 10. This was done in collaboration with the Cavaliers Sports & Tour Club, Caribbean Youth Environment Network (CYEN) and the Young and Thoughtful Group. The camps attracted a total of seventy-four (74) young people from the various Regions.

Internal Seminars

Four (4) Seminars intended to enhance knowledge on various subjects of interest to Staff and the Agency were conducted during the year.

Training of Honorary Litter Prevention Wardens

A training team comprising the EIT Division, Litter Prevention Unit, EMCD and the Legal Unit of the Agency conducted training of officers of NDCs within Regions 2, 5, 6, 7 and 10 to become Honorary Litter Prevention Wardens. The two-day training workshop was supported by a module developed by the training team, to equip NDCs with the requisite knowledge and skills to effectively and efficiently execute the roles and responsibilities of an Honorary Litter Prevention Wardens.

Climate Change Workshop for Women

A two-day Climate Change Workshop for Women was conducted at Nabaclis, East Coast Demerara. Eleven (11) women from the Community Development Councils of the Haslington/ Nabaclis Neighbourhood Democratic Council (NDC) participated in the activity which highlighted the crucial role women play in addressing climate change.

Climate change training workshop for youths

Fifty (50) students of the Kuru Kuru Training Centre participated in a workshop on Climate Change which was facilitated by the EITD. The Workshop comprised two half-day sessions and engaged students through creative and interactive methodologies.

Environmental Clinics

Through a collaborative effort, the EITD and EMCD embarked on a series of community clinics aimed at sensitizing the general public and Regional bodies on the work of the Agency. This was aimed at strengthening participation of communities in environmental management and conservation. Among the objective of the clinics the conduct of community environmental management needs assessment; interface with relevant regional authorities and the general public; and use of media programmes to spread environmental awareness. In 2016, clinics were conducted at Kwakwani, Linden, in Region 10, and Supenaam Speed Boat Stelling, Suddie Market and Anna Regina Car Park in Region 2.

MEDIA

Media activities continued to be limited due to financial constraints. For the year, weekly newspaper articles were published *pro bono* only by the Guyana Chronicle while radio and television programmes were few. The Agency created and began to utilize a Facebook page to boost public awareness activities.

EXHIBITIONS

The Agency’s participation in exhibitions was based on request from organisations and agencies that organize such events. Requests declined in 2016 to about two-thirds that received in 2015. The exhibitions in which the Agency participated in 2016 are shown in the table below.

Exhibitions in which the Agency participated in 2016	
❖ National Youth Forum & Exhibition	❖ Rose Hall Town Career Fair
❖ GuyExpo	❖ Lion’s club career fair
❖ GGMC Mining Exhibition	❖ Ministry of Education Youth Village
❖ CDC Exhibition & Craft Day	❖ GEF Inception workshop and Exhibition

6.0 ADMINISTRATION

The Administrative Division comprises the Administrative, Finance, Human Resources, and Information Technology (IT) Units and is responsible for the management of the resources of the Agency. To this end, materials, equipment and services were procured to meet the needs of the Agency; this was done primarily with allocated funding from Government’s 2016 subvention.

Financial Management

In 2016, G\$267.773M was received as Government Subvention while Revenue generated by the Agency for the year was G\$32.913M. Details of the Subvention received and Revenue collected on a monthly basis are shown in the charts below.

Major financial management activities conducted in 2016 were as follows:

Financial Management

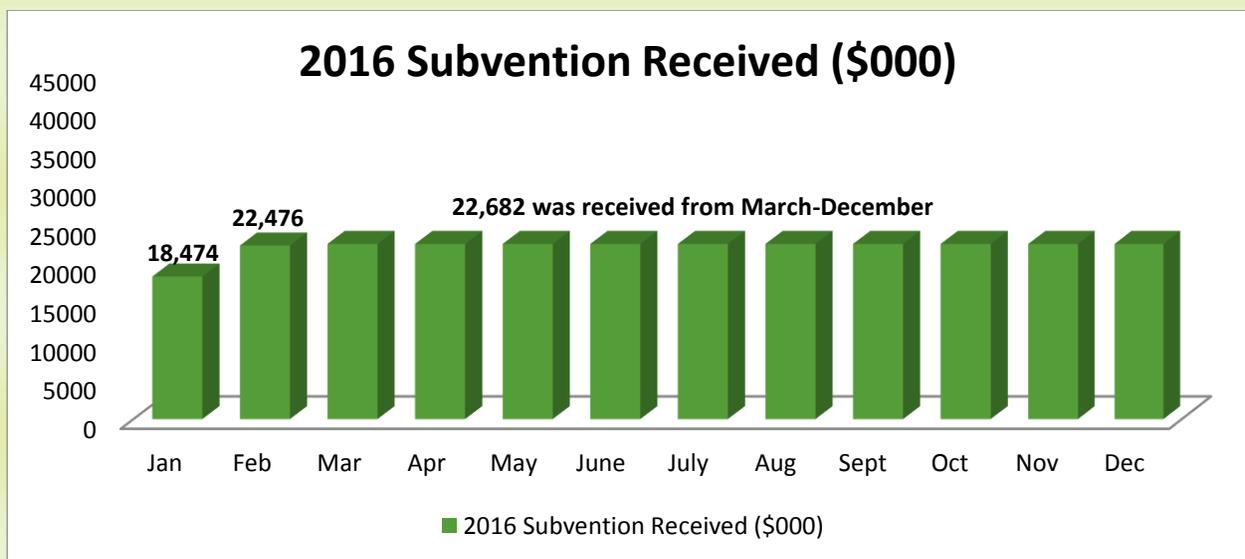
- Draft Financial Statements for 2015 were prepared and submitted to the Audit Office.
- EPA and Wildlife Financial Statements were consolidated.
- A Draft 2017 Budget was prepared and submitted to the Ministry of Natural Resources (MNR) and the Ministry of Finance.

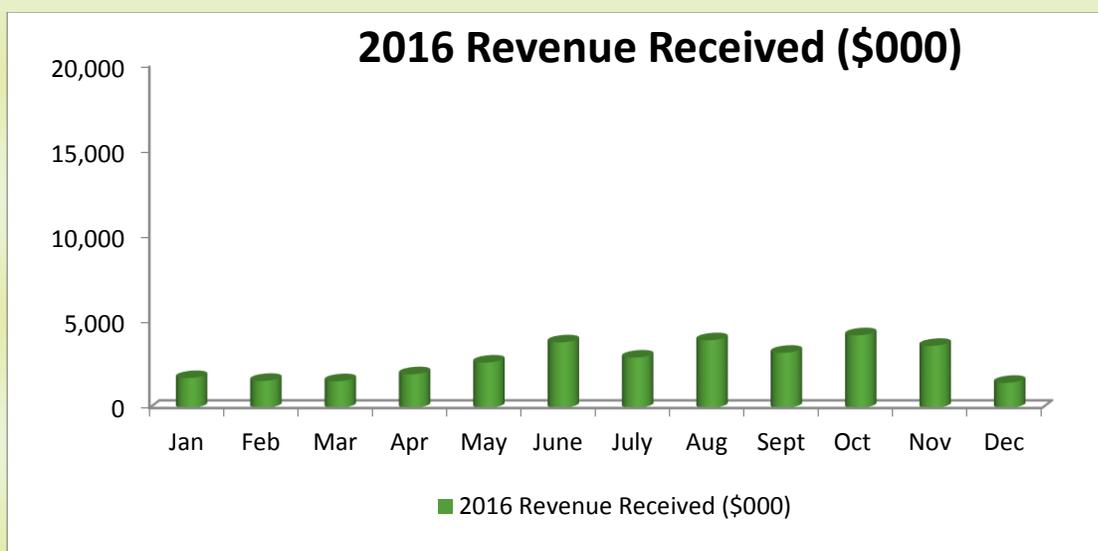
Financial Reports

- Revenue and Expenditure Reports for the EPA Board were completed and submitted on a monthly basis.
- Financial Statements for the Wildlife Division were prepared and completed on a monthly basis.
- Financial Reports were prepared and submitted to the Ministry of Finance on a quarterly basis.

Payroll and Benefits Management

- Payrolls for EPA and the Wildlife Division were prepared and completed on a monthly basis.
- Payment of Statutory Deductions from Payroll NIS, PAYE for EPA and Wildlife Division were prepared and submitted to the respective Agencies.
- Bank Reconciliation Statements for EPA and the Wildlife Division were prepared and completed on a monthly basis.
- An Accounting and Financial Procedure Manual was drafted for submission to the Executive Director and the EPA Board.
- Financial Management support was provided for projects executed by the Agency.
- An internal Audit system was developed for proper Inventory Recording. The Agency now has a Goods Received Note System in Place.
- All Finance Staff were provided with QuickBooks Training.





Procurement and Asset Management

Administrative and logistical support were provided based on request and needs and within the available budget. Further, the evaluation and procurement of materials, equipment and services were efficiently managed.

Procurement and Management

Physical checks of the Agency's fixed assets were conducted by the Audit Office of Guyana against its Stock Records. During 2016. The Agency also conducted internal asset checks, updated its Asset Register and labeled additional assets procured.

The procurement process was managed for the purchase of capital items under the National Capital Expenditure 2016, as well as, items approved by the EPA's Board to be procured with resources from the Agency's Trust Fund. Stationery and dietary supplies were purchased as required to meet the Agency's needs.

Vehicle Maintenance

The Agency carried out regular maintenance of its fleet of vehicles to avoid extensive repairs and its associated costs and to fulfill transportation requirements and insurance, fitness, road license etc. were renewed in a timely manner.

All vehicles continued to be maintained in a timely manner; however, due to the aging fleet, the need for repair was constant resulting in a high maintenance cost to keep vehicles field ready. As such, an internal decision was made to allocate very aged field vehicles to shorter trips, in and around Georgetown, so as to reduce maintenance costs and to ensure safety of the Agency's staff when travelling to remote locations.

Building and Compound Maintenance

General aesthetics of the building and compound were enhanced through regular cleaning, brushing and maintenance. As such, Contracts were prepared and signed for the following works and services:

- Termite control;
- Disposal of sanitary units;
- Maintenance of the photocopier;
- Electrical repairs;
- Security Services;
- Service and repairs to air conditioning units; and
- General Cleaning of the Compound and its Environs.

In preparation for the new office building to be constructed, the existing storage bond needed to be relocated. As such, the Agency requested and received approval from National Procurement and Tender Administration Board for “Relocation of Storage Bond” and the works were initiated.

The Agency completed the planned building project “Construction of a Crusher Run Parking Lot” at the Entrance of the Agency’s Compound.

The Agency’s generator had malfunctioned and upon diagnosis was found to have accumulated rain water within the engine which led to excessive corrosion. The supplier was contracted to conduct repairs which were completed and the equipment is now operable.

Additional Support

Administrative support was provided for:

- Request for approval for the Construction works of the New Building; this is however pending at the NPTBA.
- Steel Frames were moved and taken to the Demerara Harbour Bridge for storage.
- Two Flag Poles were erected at the Entrance of the Agency’s Compound; the Agency successfully hoisted the national flag and its own flag in celebration of Guyana’s 50th Independence anniversary.
- The Agency celebrated its 20th Anniversary with a dinner and awards ceremony at the Guyana Pegasus.
- Soap liquid dispensers and air sanitation kits were installed in the washrooms of the Agency.
- Several Potted Plants were purchased and placed on the corridor of the upper flat of the Agency.
- Repairs and reinforcement works were carried out on the Security Hut at the back of the Agency’s Compound.
- Repairs were carried out on several damaged zinc sheets on the Agency’s roof.
- Several Scientific equipment were procured (GPS, Cameras, Noise Meter, EPAM, Radiation Kit, Air Quality machine and Soil Analyzer).
- Capital Items were procured (Desks, Office Chairs, Water Dispenser, and Photocopier machine).
- Several purchases were made for the Board of Directors (capital and non-capital items).
- Two “used” field vehicle engines were approved by NPTBA to replace written-off engines for two existing but non-functional vehicles.
- The Agency hosted its 2016 Christmas Party at the Guyana Marriott.
- Participated in the Agency’s Internal Occupational Safety and Health (OSH) Committee to identify and correct OSH hazards within the building.

Human Resources

Skilled and competent workers are recruited to conduct the work of the Agency with the aim of building a team of professionals that is empowered by knowledge and skills to perform competently and with excellence.

Staffing

At the end of 2016, there were ninety-nine (99) staff members were employed at the Agency comprising ninety-three (93) full time employees and six (6) seconded staff, five (5) from the Ministry of Natural Resources and one (1) from the Ministry of Presidency.

Vacancies, Appointments, Resignations

In 2016, the Agency continued to recruit staff to fill vacancies created in the Agency because of staff resignations. The Environmental Management Permitting Division experienced the highest rate of staff turnover with six (6) resignations, followed by the Administrative Division with five (5) resignations, and the Environmental Management and Compliance Division with four (4) resignations. The staff complement of the Education, Information and Training Division and the Biodiversity Management Division remained intact with the latter experiencing only one (1) vacancy during the year.

Despite the high rate of staff turnover, the Agency recruited staff to fill some of the vacancies created; making fifteen (15) appointments were during the year. Recruitment for other vacant

positions were put on hold based on advice from the Ministry of Presidency, consequently, at the end of the year, ten (10) vacancies were still to be filled.

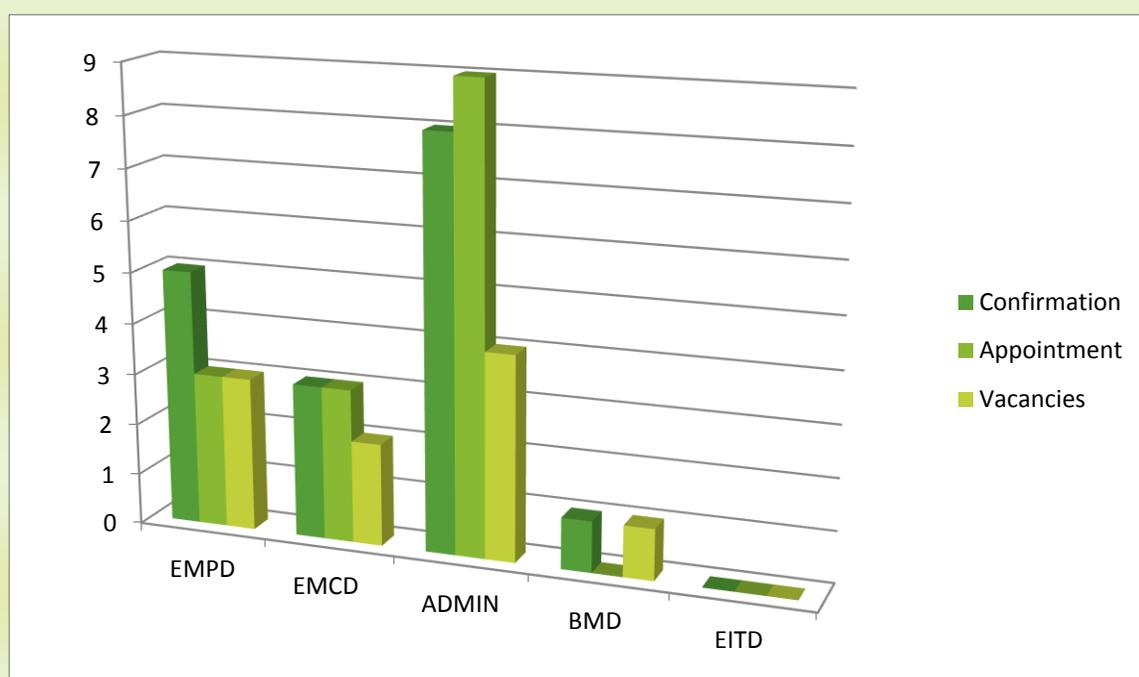
Approval was granted for four new positions to be included in the Agency's structure, namely: Filing Clerk, Legal Assistant, Procurement Officer, Fleet Supervisor and Internal Auditor.

Resignations	Positions								
	EO	SEO	SAC	LPW	HR Office r	HR Assistant	Executive Assistant	Admin. Assistant	Office Assistant
15	4	1	1	3	1	1	2	1	1

Note:

- EO – Environmental Officer
- SEO – Senior Environmental Officer
- SAC – Senior Accounts Clerk
- LPW – Litter Prevention Warden

Divisional Confirmation, appointment & Vacancies for 2016



Volunteers, Work Study and Secondment

The Agency accommodated one (1) volunteer from Japan International Corporation Agency (JICA), within the Educational, Information and Training Division (EITD).

The Agency also received one (1) Environmental Officer on secondment from the Ministry of Presidency, whom was placed within the Environmental Management Permitting Division (EMPD).

Promotions

Two (2) staff were promoted from the position of Environmental Officer I to Environmental Officer II after satisfactorily performing in the former position for a period of two years.

Information Technology

During the year IT services were provided to staff of the Agency in keeping with needs and as far as could be accommodated by the Agency's financial resources. Among the services provided were:

- The Complaints and Permits Database and its SQL backend were backed-up and maintained. Queries and data sets were generated based on the requirements of the EMP and EMC Divisions respectively.
- A terms of reference for the restructuring of the Agency's Database systems was submitted to the Executive Director; this project is awaiting funds.

- New documents, downloads and vacancies were uploaded to www.epaguyana.org website.
- The GEFGUYANA.ORG country website was updated and maintained.
- New sections and download Categories were created for the Website as per the needs of the Agency.
- The NBRIS internal web module was supported.
- All problems relating to the QuickBooks Accounting System were fixed in a timely manner.
- All website and hosting problems were fixed in a timely manner.

Network Support and Administration

- The Local Area Network was expanded to accommodate additional new staff. This expansion included structured cabling and installation of network switches.
- All network connectivity errors were fixed such as defective cables, surface mounts and switches.
- User accounts, mapped drives and permissions were created to facilitate new staff entering the Agency.
- The IT unit received a correspondent from the Ministry of Presidency indicating that all software in use by the Agency must be licensed. As such, the IT unit did a survey of software in use by the Agency and proceeded to obtain a quotation from the Massy Technologies to sum of thirteen million dollars. We are currently waiting for funds to complete this task.
- The internet connection assigned to junior staff network was upgraded to 5 mbps.
- Licenses were renewed for the Sonic Wall Firewall on the junior network and the relevant configuration and network policies were updated.
- Constant power outages and the absence of the generator for a significant period resulted in damage to many IT related equipment such as UPS and power supply units.
- Defective hardware was replaced for both T710 servers and both servers are fully functional. These servers were acquired since 2010 and efforts will be made to replace them in the future to facilitate the expansion of the Agency.
- Three new network shares were created to host data for EMCD and EMPD to facilitate the splitting of data across the divisions.
- Conflicts with the biometric Time Monitoring devices were resolved by the IT unit. This should be fully implemented in January 2017.
- Western Digital Network attached storage of 8 Terabytes was procured and configured to the network to enhance the backup process of the Agency's data.
- A Draft IT policy pertaining to the use of the Agency's computer systems was created and submitted to the Executive Director for review and recommendations.
- The Epaguyana cloud email account from Google was created for all Directors.
- Outlook messenger was installed on all computers on the LAN, as a means of instant messaging, announcements and direct file transfer.
- Assistance was given to the NBRIS consultant with problems relating to the LAN Module.
- Support was given to the payroll software.
- All Internet related problems were fixed in a timely manner.
- Hardware and software firewall was updated to latest firmware and software.
- Complete backups of the Agency's data and Virtual machines were done.

PC Support

- The IT unit repaired a number of desktops and laptops which were affected by hardware or software problems.
- Complete computer systems were deployed to all new staff entering the Agency.
- Several Computers were reloaded with new operating system and appropriate programs due to corrupt software or hardware failure.
- Defective monitors, mouse, keyboards, surge protectors, line conditioners and UPS were replaced.

APPENDIX I: EPA STAFF LIST AT THE END OF DECEMBER, 2015.

	NAME OF OFFICER	DESIGNATION
	Office of the Executive Director	
1.	Indarjit Ramdass	Executive Director (ED)
2.	Kerean Geer	Executive Assistant to ED
3.	Mr. Ravi Saesnarine	Driver to ED
	ADMINISTRATIVE DIVISION	
4.	Dhanraj Persaud	Administrative Director (AD)
5.	Faneeza Alli	Executive Assistant to AD
6.	Ryan Tiwari	IT Specialist
7.	Antonio Valenzoela	Network Administrator
8.	Bharat Sasenarine	Technical Support Officer
9.	Sherry Ferrell	Human Resources Officer
10.	Radhika Ramphal	Human Resources Assistant
11.	Surendra Boodhoo	Finance Officer
12.	Tarmattie Lall	Senior Accounts Clerk
13.	Colita Mohamed	Senior Accounts Clerk
14.	Charlotte Elliot	Senior Accounts Clerk
15.	Hollee Ragnauth	Accounts Clerk
16.	Dadre Bayley	Accounts Clerk
17.	Vanshanie Ramlall	Accounts Clerk
18.	Joshua Muridall	Administrative Officer
19.	Niketa Chintaman	Administrative Assistant
20.	Eric Hinds	Driver
21.	Michael Bacchus	Driver
22.	Kamal Ramdayal	Driver
23.	Shem Sam	Driver
24.	Joel Williams	Driver
25.	Kevin Jones	Driver
26.	Kumardev Samaroo	Office Assistant
27.	Keshav Rampersaud	Office Assistant
28.	Abdul Rahim	Office Assistant
29.	Winifred Perreira	Cleaner
30.	Cheryl Lowrie	Cleaner
31.	Kevin Durant	Handyman
32.	Aminah McPherson - Damon	Legal Officer
	Environmental Management Permitting Division	Designation
33.	Dr. Hansranie Seebaran	Director
34.	Urmila Singh	Executive Assistant
35.	Ruth Trotman	Filing Clerk
36.	Sonia Gumbs-Luke	Senior Environmental Officer
37.	Teijvarti Persaud	Senior Environmental Officer
38.	Karen Alleyne	Senior Environmental Officer
39.	Camille Adams	Senior Environmental Officer
40.	Makini Hackette	Environmental Officer II
41.	Frank Grogan	Environmental Officer II
42.	Ronn Sullivan	Environmental Officer II
43.	Savitri Itwaru	Environmental Officer II
44.	Dulcie Abrahams	Environmental Officer II
45.	Gregoria Vaughn	Environmental Officer II
46.	Melinda Franklin	Environmental Officer II
47.	Junior Toney	Environmental Officer II
48.	Khadija Ali	Environmental Officer II
49.	Malicia Hall	Environmental Officer II
50.	Sharmin Joseph	Environmental Officer II
51.	Saudia Sadloo	Environmental Officer II
52.	Delon Earle	Environmental Officer II
53.	Kathia David	Environmental Officer
54.	Rhea Khanai	Environmental Officer
55.	Junior Paul Chanderpaul	Field & Data Management Tec.

	<i>Environmental Management Compliance and Enforcement Division</i>	Designation
56.	Kemraj Parsram	Director
57.	Colis Primo	SEO, Research and Development
58.	Chandra Anastasia	Environmental Officer II, ICZM
59.	Tashana Redmond	Senior Environmental Officer
60.	Felicia Adams	Senior Environmental Officer
61.	Odessa Duncan	Senior Environmental Officer
62.	Ladonna Kisson	Environmental Officer II
63.	Dwayne Bancroft	Environmental Officer II
64.	Browne Denroy	Environmental Officer II
65.	Gwenetta Fordyce	Environmental Officer 1 1
66.	Mahendra Budhram	Environmental Officer 1 1
67.	Darshani Seeram	GIS Environmental Officer II
68.	Nadia Nasir	GIS Technician
69.	Joel Gravesande	Engineer
70.	Surjipaul Singh	Field & Data Management Tec.
71.	Faneeza Alli	Executive Assistant
72.	Elysha Patterson	Administrative Assistant
	<i>Education, Information and Training Division</i>	
73.	Sharifah Razack	Director
74.	Fareena Alli	Executive Assistant
75.	Candacie Thompson	Senior Environmental Officer
76.	Deuel Hughes	Environmental Officer II
77.	Gracelyn Trim	Environmental Officer II
78.	Whoopi Liverpool	Environmental Officer II
79.	Dillon Charles	Environmental Officer
	<i>Biodiversity Management Division</i>	
80.	Asma Sharief	SEO, Protected Areas Unit
81.	Karen Small	SEO, Wildlife Unit
82.	Stacy Lord	SEO, Biodiversity Unit
83.	Shanace Odwin	Environmental Officer II
84.	Vidyanand Mohabir	Environmental Officer II
85.	Diana Fernandes	Environmental Officer II
86.	Rae Smith	Environmental Officer II
87.	Rayner McAndrew	Environmental Officer II
88.	Zahir Ali	Environmental Officer II
89.	Oswin David	Environmental Officer
90.	Alisha Rambarran	Executive Assistant
	<i>Litter Prevention Wardens (EMCD)</i>	
91.	Jasmine Adams	
92.	Prudence Archer	
93.	Shonella Charles	
94.	Joycelyn Gibbons	
95.	Carl Foo	
96.	Carla Payne-Thomas	
97.	Eshwar Samaroo	
98.	Avinah Persaud	
99.	Tethram Persaud	

Meeting Name	Location	Date	No. of Staff Participating
The First Caribbean Waste-to-Energy (WTE) Technology Expo and Conference	Grenada	January 20-23, 2016	2
Integrating Coastal Eco-system based Adaptation into National Policy	Grenada	February 22 – 26, 2016	2
Regional Consultation to Review the Draft CARICOM Environment and Natural Resources Policy Framework and First Action Programme	St. Vincent and the Grenadines	July 25 – 27, 2016	1
Regional Policy Dialogue (RPD) on Environmental Licensing and Enforcement in the Region	Jamaica	July 26 – 29, 2016	1
Regional Workshop for the Development of the State of the Convention Area Report (SOCAR),	Jamaica	August 15 – 17, 2016	1
Esso Exploration Oil Spill Response Planning Workshop	New Orleans, USA	August 18 – 19, 2016	1
Meeting on the Global Environmental Facility Caribbean Constituency	Grenada	October 17 – 19, 2016	1
workshop on the approach and tools for disaster risk management and climate change adaptation to achieve sustainable development	Cuba	October 17 -21, 2016	1
Meeting to convene a One Health Regional Inter-Sectoral strategic planning workshop to develop a draft five year strategic plan for one health in the Caribbean	Trinidad	October 18 – 19, 2016	1
Workshop on Risk Communication, facilitated by the International Centre of Genetic Engineering and Biotechnology (ICGEB)	Tobago	October 25 – 27, 2016	2
Learning Route “Best local practices in Disaster Risk Management as measures for adaptation to climate change	Columbia	October 29 – November 5, 2016	1
The third meeting of the Scientific, Technical and Advisory Committee (STAC) to the protocol concerning Pollution from land based sources and activities (LBS) in the wider Caribbean	Florida, USA	October 31 – November 2, 2016	2
Seventh meeting of the Scientific, Technical and Advisory Committee (STAC) to the protocol concerning specially protected Areas and Wildlife (SPAW)	Florida, USA	November 2 – November 4, 2016	1
ExxonMobil Training: "University of Spill Management	Paradis, Louisiana, USA	December 6 – 8, 2016	1
The Regional preparatory workshop of the ACTO member countries to the 13 th conference of parties to the convention on biological biodiversity	Brasilia, Brazil	November 10 – 11, 2016	1