

# GREEN LEAF

## Multilateral Environmental Agreement (MEA) Unit established within the Biodiversity Management Division

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**Pg** In March, this year, the Environmental Protection Agency (EPA) established a Multilateral Environmental Agreements (MEAs) Unit, within its Biodiversity Management Division (BMD). This Unit replaces the Protected Areas Unit, whose functions have now been assumed by the Protected Areas Commission (PAC).

The hallmark achievement of the Protected Areas Unit, while under the BMD, was its support to the implementation of the German Development Bank (KfW) funded, Guyana Protected Areas System Project (GPAS), Phase I (2006-2011) and Phase II (2011-2015). Phase III of the GPAS Project, is currently being implemented by the PAC.

The new MEA Unit is dedicated to enabling the EPA to carry out its function to coordinate and maintain a programme to conserve and ensure the sustainable use of Biodiversity. This entails overseeing Biodiversity projects that are implemented through the MEAs to which Guyana is a Party.

Guyana has been a Party to the United Nations Convention on Biological Diversity (UNCBD) since 1994, and has been making steady progress towards its three main goals of conservation, sustainable use, and fair and equitable sharing of



the benefits that arise from biodiversity. Guyana has also signed on to other MEAs with synergies to the UNCBD.

Among the tasks of the new MEA Unit is to support the Executive Director, of the EPA, who is the Operational Focal Point of the Global Environmental Facility (GEF) in Guyana as well as the National Focal Point of the UNCBD. Support from the MEA Unit is in the form of guidance, approval and endorsement of GEF funded projects. The GEF is the main financing mechanism for projects for five (5) UN Environmental Conventions. These include, the Convention on Biodiversity, Convention on Climate Change Convention, Convention to Combat Desertification, Convention on Mercury, and the Convention on Persistent Organic Pollutants.

Along with its focus on Conventions, the MEA Unit also coordinates the implementation of Guyana's National Biodiversity Strategic Action Plan (2012-2020). This Strategy and Action Plan includes priority actions to be carried out by the EPA and various Sector Agencies. These include, the Protected Areas Commission, Guyana Forestry Commission, Guyana Geology and Mines Commission, Guyana Lands and Survey Commission, Ministry of Agriculture and the Ministry of Natural Resources.

Since its establishment, the MEA Unit has implemented the Mainstreaming Biodiversity Conservation into the Mining Sector Project; Project to Develop National Biosafety Legislation and the Equitable Access and Benefits Sharing of Genetic Resources Project.

### Editorial Note

'Progress is impossible without change...' ~ *George Bernard Shaw*. This quote very much applies to the work of the Environmental Protection Agency (EPA). Over the years, the EPA has had to undergo numerous changes to its structure and programme areas in an attempt at improving environmental management across Guyana. In its 20th year of existence, the Agency continues to strive for effectiveness in its work. With this in mind, the former Protected Areas Unit (PAU) within the Biodiversity Management Division (BMD) has a renewed focus, with its work now based on overseeing Multilateral Environmental Agreements in Guyana.

Additionally, recognising that the environment is dynamic, a major focus of the Agency's programme for the third quarter of 2016 was increasing awareness for public participation. In this regard, the Agency conducted numerous workshops, and participated in exhibitions and Day Camps, aimed at changing the attitudes and habits of Guyanese and stimulating positive actions toward the environment. As the Agency transitions into the final quarter of 2016, we implore everyone to 'be the change you want to see...' let's transform our hearts and our surroundings.

# Reaching and Teaching Youths through Camps

This quarter, the Agency continued its mission of the building capacity of youths to understand and cope with the impacts of pressing environmental issues, through interactions at environmental camps and workshops.

## East/ Cavaliers Summer Camp

Twenty-seven (27) eager young men ages of 5-17 years, were a part of a week-long summer camp at which the EPA was invited to deliver a presentation on the environment. At this event, which was hosted by the Cavaliers Sports and Tour Club, in association with the East Ruimveldt Football Club, the Agency seized the opportunity to gear the youths to display positive behaviours for a sustainable environment. Among the activities used to engage the participants were demonstrations on Climate Change and Waste Reuse.



EPA Officers and participants posing with one of the day's craft items

## CYEN Annual Environmental Day Camp

For the second consecutive year, the EPA was invited to facilitate one day of the **CYEN Annual Environmental Camp** for Georgetown. The camp was held at the Demerara Cricket Club and targeted children between the ages of 10-16. The EPA facilitated activities on environmental care, solid waste management and climate change which enabled the participants to see demonstrations of the recycling process and create their own environmental messages through posters with the theme *'It's easy being Green.'*



EPA Officers and participants posing with one of the day's craft items

## Linden Day Camp

Equipped with a suite of presentations and activities on biodiversity, biosafety, and solid waste management, the EPA conducted a fun-filled and informative Environmental Camp at Linden. Thirty-six (36) youths from the mining town participated in the Camp at the New Silvercity Secondary School. The youths were drawn from three youth groups in Linden, namely, the President Youth Awards Republic of Guyana; Youths for Change and Young and, Thoughtful Youth Group. The interactive and hands-on approach of the sessions were geared to stimulate critical thinking about current environmental issues.



Children designing some posters



Participants during a team-building exercise

## EPA'S Workshops Edition

### Women Climate Change Workshop

Recognising that women play an invaluable role in climate change adaptation, 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. The sessions included presentations and activities geared towards helping the women to better understand the issue of climate change, how it affects them and how women can be part of the solution. The women were challenged to be catalysts of change, firstly in their households and then communities. The participants expressed their gratitude for the timely information and were eager to effect change in their homes and communities. The women received certificates for successfully completing the workshop.



Participants depicting eco-friendly communities

### Solid Waste Management Workshop

The relationship between environment and health is inseparable. How we treat our environment can influence our health and our health can be a reflection of our environment, amongst other things. Improper waste disposal shifts that balance by creating insanitary conditions which can result in physical or even psychological ailments. The EPA believes that having knowledgeable and trained environmental /health workers is key to achieving a clean and healthy environment. As such, EPA Officers facilitated a Workshop with thirty-five (35) Environmental Health Assistants (EHAs) of Region 05 on September 08, 2016 at the Boardroom of the Regional Office, Fort Wellington. The Workshop aimed at boosting the capacity of the EHAs in dealing with solid waste issues in the Region by raising awareness on the elements of an effective Solid Waste Management system and how the current system in Region 05 can be improved. This is a preliminary step in many more interventions by the Agency to bridge the gap between environment and health.



EHAs at the workshop

## Engaging the Public through Exhibitions

Exhibitions are popular cost effective strategies to engage a wide cross-section of the public on a range of issues at one setting. The Agency capitalizes on these opportunities and participated in four (4) exhibitions during the quarter. These were: GGMC's Mining Week Expo which was held for two days under the theme 'Extracting Minerals; Underscoring Safety, Protecting the Environment.' The Ministry of Education's Youth Village, a one-day activity held under the theme 'The road to 2030: Eradicating Poverty and achieving sustainable production and consumption, and Exhibition and Craft Day organised by Civil Defence Commission under the theme 'Planting the seeds of DRR and preparedness.' The CDC's exhibition engaged 69 students between 5-12 years, on the subject of solid waste management and waste upcycling, fire safety, first aid and water and sanitation and the most recent expo was Rose Hall Town Career and Business Fair as part of 46th anniversary for township. This fair saw students and the general public as they learnt about the work of the Agency and its mandate and how they can protect the environment.



## Joining the Fight For Trash Free Seas

Joining volunteer efforts all around the World, the Environmental Protection Agency (EPA) in collaboration with the Caribbean Youth Environment Network (CYEN) on September 17, celebrated International Coastal Clean-up 2016. This year's observance was celebrated under the theme "*Fighting for Trash Free Seas*".

Leading up to September 17, officers from the EPA held a number of awareness sessions in Primary and Secondary schools across Georgetown. These sessions were aimed at highlighting the sad reality of marine litter in seas and coastal areas in Guyana and around the world. Sessions were also held to bring about positive change in students' attitudes and actions. Marine litter negatively affects our wildlife and the livelihoods of humans. It threatens tourism and recreational activities and complicates shipping and transportation by causing navigation hazards.

Renewing their support for clean and healthy seas and coastal waterways around the world, over two hundred volunteers from governmental and non-governmental organizations, environmental and community groups, civil society and schools braved the inclement weather to join efforts for a clean environment. Volunteers wasted no time in getting into action. On September 17, equipped with garbage bags, gloves and data collection sheets for recording the types and total trash collected, participants dove into action cleaning the Georgetown Seawall between the Marriot Hotel and Camp Streets. Large amounts of plastic bottles and bags, glass bottles, cigarettes butt, and food wrappers were removed. The data collected would be sent to Ocean Conservancy for analysis. The formal report of all cleanup exercises conducted around the world for ICC will be sent to participating countries for informed decision-making.



## Keeping Ozone Protection Vibrant

"International Day for the Preservation of the Ozone Layer" is celebrated annually on September 16, globally. To commemorate this observance, the Agency organized two workshops in Linden for Primary and Secondary Schools to raise awareness on this year's theme 'Ozone and Climate: Restored by a world united' with the tagline 'Working towards reducing global-warming HFCs under the Montreal Protocol'. Three secondary schools with a total of 23 students and eight Primary schools with a total of 45 were engaged in various interactive presentations, videos and activities that raised awareness on what is ozone, actions for ozone protection, Ultraviolet radiation and damages to the Ozone layer. Students pledged their participation and support in protecting the ozone layer by printing their hands and writing their names around a pictorial representation of the earth. Although the Montreal Protocol which addresses protection of the ozone layer has been one of the most successful environmental treaties, the EPA and Hydromet still find it relevant to sustain awareness. The goal is not only to prevent recurrence of such catastrophic environmental damage but to inspire similar actions against other pervasive environmental issues such as climate change.

The Agency also extends gratitude to Ms. Odessa Shako from the Hydro meteorological Service, National Ozone Action Unit (NOAU) who assisted with the execution of these programmes.



# Kids Corner

## Backyard Adventures

### Nature Jar

*Every toddler and preschooler love to find things. This activity uses that natural curiosity and combines it with some fresh air. You can do this on a nearby beach, park, forest or even your own backyard!*

1. Gather your materials. All you need is a glass jar and somewhere to discover nature!
2. Start finding things to put in your jar. Shells are pretty cool! Put a layer of sand or grass in first and then put larger things on top. With older children set out a mini scavenger hunt (find 3 rocks, 5 leaves, 4 shells...), toddlers will have a blast just picking things up and popping them in the jar.
3. Try to find all different shells, parents can help point out what color they are, some may be more interested in rocks! You might be surprised what they can find.
4. Keep going until they decide they are satisfied with their jars.
5. Pop the lid on and take the nature home with you to recount your day later!



**\* Recounting an activity is a great thing to do with your child, it is actually a very important skill and is important for early literacy, so sit down even with toddlers and pull out your jar and talk about what you did at the beach/park/or even your own backyard!**

### Find and Count Bug Hunt

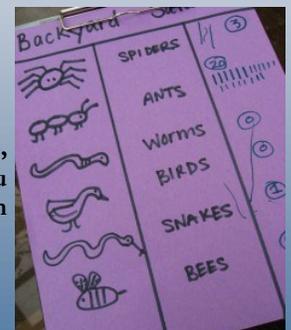
Math and science all together is an everyday activity, but when it's fun it's even better. We have all been a little cranky around here and when that happens one of the best ways to shake off the fuss is to go outside! So make a quick check list and gather up your children and go off to find creepy crawlers and tally up what you've found!

1. Gather your materials. You will need a clip board, a marker and a piece of paper. If you want grab a magnifying glass and a plastic jar if you want to collect what you find.
2. Make a simple check list with bugs you normally find in your yard. It's okay if you don't find some of the things on your list but if you come up completely empty handed that would be a huge bummer. So take their suggestions but fill in some gaps if all they suggest are caimans, jaguars and anacondas! Unless you have those in your yard.
3. Draw pictures as well as spelled out the words.



4. Out you go! Start searching!
5. Make little check marks for the bugs/ creatures you find. Take turns.
6. Together count up your discoveries.

**\* The best learning for young children are experiences they can do, and if they are resistant to something at the table, get outside! You will both be happier and the lesson whatever it is will make a much larger impact than anything you had to force or cajole!**



## Building Staff Capacity

To effectively execute its mandate, the Agency recruits staff to fill vacant positions as they arise. During the third quarter of 2016, two (2) young professionals joined the EPA:

- Elysha Patterson, Administrative Assistant, EMCD
- Sherry Ferrell, Human Resources Officer, ADMIN

A number of staff also attended workshops and meetings to enhance their technical skills to better contribute to the work of the Agency. These included:

- Mr. Kemraj Parsram, Director, EMCD, attended the Regional Policy Dialogue (RPD) on Environmental Licensing and Enforcement the Region in Montego Bay, Jamaica, during July 26 -29, 2016.
- Mrs. Aminah Damon McPherson, Legal Officer, attended the Regional Consultation to Review the Draft Caricom Environment and Natural Resources Policy Framework and First Action Programme in St. Vincent and the Grenadines during July 25-27, 2016.
- Mr. Frank Grogan attended a Regional Workshop for the

Development of the State of the Convention Area Report (SOCAR), in Kingston, Jamaica from August 15-17, 2016.

- Ms. Karen Alleyne attended the Esso Exploration Oil Spill Response Planning Workshop during 18-19 August, 2016 in New Orleans, USA

The Agency also benefitted from the expertise of Dr. Kazuko Tsukuki of the Japan International Cooperation Agency (JICA) who was attached to the Education, Information and Training Division. Dr. Tsuzuki completed her six months stint on September 21, 2016.

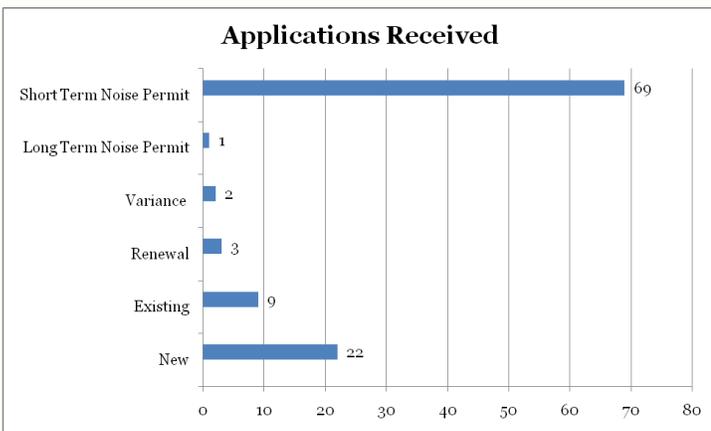
A number of other staff also represented the Agency at local workshops with both governmental and non-governmental organizations. These workshops sought to strengthen the Agency's involvement and inputs in different sectors of the environment during this period.

Staff from all the Divisions continued to benefit from swimming training, a skill the Agency sees as a necessity for officers development and safety in the field.

## Environmental Authorisations

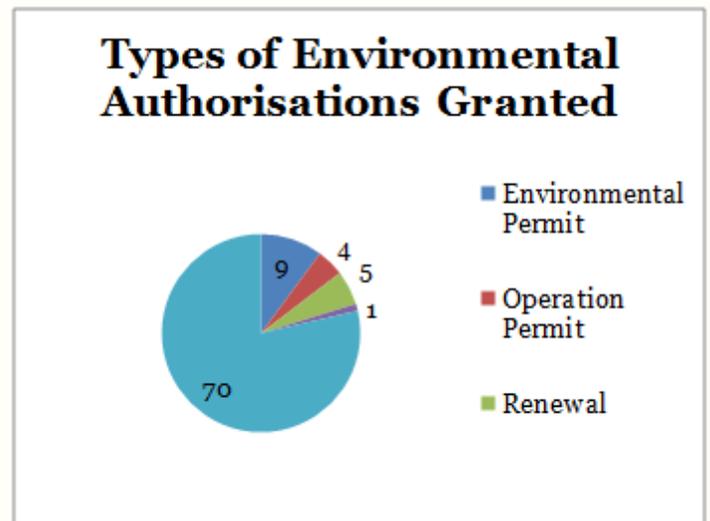
A total of one hundred and six (106) Applications for Environmental Authorisation were received for the period July to September, 2016. Twenty-two (22) of the Applications were for New Projects, nine (9) for Existing Projects, three (3) for Renewals, two (2) for variance, one (1) for Long-Term Noise and sixty-nine (69) Applications for Short-Term Noise Permits.

The Division continues to process the other Applications received during this period to determine whether these projects will be required to conduct an Environmental Impact Assessment (EIA) or prepare an Environmental Management Plan (EMP).



The Division conducted eleven (11) site visits for New Projects, sixteen (16) site visits for Existing Operations, and twelve (12) for Renewal of project and one (1) for Audit of Environmental Authorization.

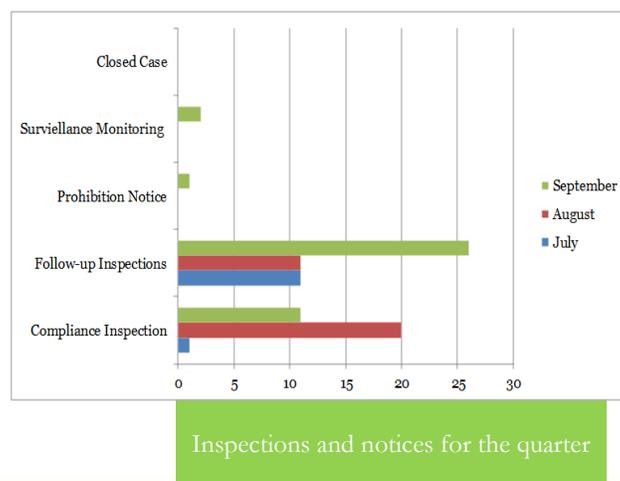
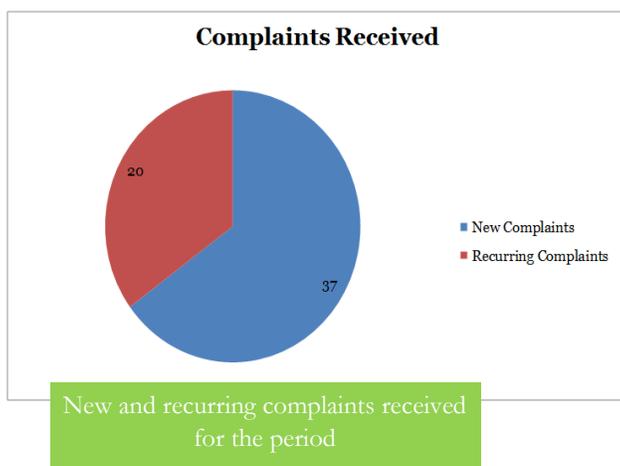
The Agency granted eighty-three (87) Environmental Authorizations during this period. Nine (9) Environmental Permits, four (4) Operation Permits, five (5) for Renewals of Environmental Authorization, and sixty-nine (69) Short-Term Noise Permits.



## Complaints and Response Management

The Environmental Management and Compliance Division (EMCD) received a total of fifty-seven (57) complaints for the month of July to September. Thirty-seven (37) new complaints and twenty (20) recurring complaints were received. The Division conducted thirty-two (32) Compliance Inspections and forty-eight (48) Follow-up complaint inspections. One (1) Surveillance Monitoring exercises was conducted for this period. One (1) Prohibition Notice was issued for the quarter and no complaint cases were closed.

For the month of July, sixteen (16) complaints were received in relation to: dust, noise, odour and smoke nuisances, while in August, twenty-seven (27) complaints were received in relation to dust, noise, odour, and smoke and dust nuisances. Additionally, in September, fourteen (14) complaints were received in relation to dust, noise, odour, and smoke and dust nuisance.



## Upcoming Activities

The EPA initiates and undertakes activities on a continuous basis to pursue its mandate.. Having successfully achieved the set goals for the third quarter of the year, planning and coordination have already begun towards its planned objectives for the next quarter.



Activities scheduled for October - December, 2016, include the following:

Activity	Region (s)	Target Group	Date
<b>Sector scoping - Esso Exploration and Production Guyana Limited (EEGL)</b>	4	Representatives from various sectors	October 05-06, 2016
<b>Climate Change training</b>	2	Guyana School of Agriculture	October 17, 2016
<b>Honorary Litter Prevention Wardens' Training</b>	2, 5, 6, 7, 10	Environmental Health Assistants	October 10 - November 18, 2016
<b>Public scoping - Esso Exploration and Production Guyana Limited (EEGL)</b>	2, 3, 4, 5, 6...	General Public	October to December
<b>Sector scoping &amp; Public Scoping respectively, - Rong-An Inc.</b>	4, 6 & 10	Representatives from various sectors	October 7, 28 & 29 2016
<b>Training of Agencies in the Legislative Framework for biodiversity conservation and mining</b>	4	Biodiversity Stakeholder Agencies	TBA

# WILDLIFE SPOTLIGHT



## **Cane toad (*Rhinella marina*)**

The cane toad (*Rhinella marina*), also known as the giant neo-tropical toad or marine toad, is a large, terrestrial true toad which is native to South and mainland Middle America, but has been introduced to the Caribbean, as well as northern Australia. It is a member of the genus *Rhinella*, but was formerly in the genus *Bufo*, which includes many different true toad species found throughout Central and South America.

### **Appearance**

These toads are very large; the females are significantly longer than males, reaching an average length of 10–15 cm (3.9–5.9 in), with a maximum of 24 cm (9.4 in). Larger toads tend to be found in areas of lower population density. They have a life expectancy of 10 to 15 years in the wild, and can live considerably longer in captivity, with one specimen reportedly surviving for 35 years.

The skin of the cane toad is dry and warty. It has distinct ridges above the eyes, which run down the snout. Individual cane toads can be grey, yellowish, red-brown, or olive-brown, with varying patterns. A large parotid gland lies behind each eye. The ventral surface is cream-coloured and may have blotches in shades of black or brown. The pupils are horizontal and the irises golden. The toes have a fleshy webbing at their base, and the fingers are free of webbing.

Typically, juvenile cane toads have smooth, dark skin, although some specimens have a red wash. Juveniles lack the adults' large parotoid glands, so they are usually less poisonous. The tadpoles are small and uniformly black, and are bottom-dwellers, tending to form schools. Tadpoles range from 10 to 25 mm (0.39 to 0.98 in) in length.

### **Habitat**

Marine toads inhabit open grassland and woodland, and have displayed a "distinct preference" for areas modified by humans, such as gardens and drainage ditches. In their native habitats, the toads can be found in subtropical forests, although dense foliage tends to limit their dispersal.

### **Diet**

Most frogs identify prey by movement, and vision appears to be the primary method by which the cane toad detects prey; however, the cane toad can also locate food using its sense of smell. They eat a wide range of materials; in addition to the normal prey of small rodents, reptiles, other amphibians, birds, bats and a range of invertebrates, they also eat plants, dog food, and household refuse.

### **Interesting Fact (Defense)**

The skin of the adult cane toad is toxic, as well as the enlarged parotid glands behind the eyes, and other glands across their backs. When the toads are threatened, their glands secrete a milky-white fluid known as bufotoxin. Components of bufotoxin are toxic to many animals; even human deaths have been recorded due to the consumption of cane toads.

Bufotenin, one of the chemicals excreted by the cane toad, is classified as a class-1 drug under Australian law, alongside heroin and cannabis. The effects of bufotenin are thought to be similar to those of mild poisoning; the stimulation, which includes mild hallucinations, lasts for less than an hour. As the cane toad excretes bufotenin in small amounts, and other toxins in relatively large quantities, toad licking could result in serious illness or death.

In addition to releasing toxin, the cane toad is capable of inflating its lungs, puffing up, and lifting its body off the ground to appear taller and larger to a potential predator.

## THE GREEN LEAF

The Green Leaf is published quarterly by the Environmental Protection Agency, Guyana.

This publication is intended to promote awareness on the work of the Environmental Protection Agency.

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### **About Our Logo...**

Our logo is the Passion Fruit leaf. Yellow Passion Fruit (*Passiflora edulis flavicarpa*) is native to the Amazon. The passion fruit plant produces beautiful flowers and a sweet - tart fruit. It was named by the Spanish missionaries in South America. Passion Fruit is widely grown throughout the tropics and subtropics. The leaves are used in traditional medicine to settle dry nerves. They are also used for colic, diarrhea, dysentery and insomnia.

