

GREEN LEAF

Food wastage in the spotlight for WED 2013 celebrations

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June 05 marks a special day for environmental advocacy and environmental awareness worldwide. Every year on this day, World Environment Day (WED) is celebrated with focus on a particular theme to draw attention to specific issues that affect the environment.

This year, WED was celebrated under the theme: **‘Think. Eat. Save. Reduce your footprint.’** This theme is intended to raise awareness of the impact food choices have on the environment, and provide relevant information for persons to make informed decisions with regards to their food choice and consumption habits. Since food wastage is directly linked to the wasting of resources due to the inputs in the food production process, this theme is very relevant for us today.

Green Walk 2013

The Environmental Protection Agency (EPA), under the Ministry of Natural Resources and the



Participants during the Green Walk

Environment organized and executed a number of activities countrywide to raise awareness about the issue of food wastage and to promote actions to curb this issue.

On June 02, the EPA held the annual Green Walk, commencing at the Umana Yana and ending

at the National Park. Like the previous year, the Green Walk was graced with the presence of top government officials and other dignitaries, including the Honourable Prime Minister, Mr. Samuel Hinds, the Honourable Minister of Natural Resources and the Environment, Mr. Robert Persaud, the Chairman of the EPA Board of Directors, Mr. Ronald Webster and the EU Ambassador to Guyana, Mr. Robert Kopecky.



Felix Austin Police College displaying their spoils

Over 1000 persons from 24 contingents participated in this year’s Walk, representing Government agencies, NGOs, youth groups, the private sector and environmental clubs. Participating contingents displayed colourful and creative banners depicting their interpretation of the WED theme. Communication skills were also put to the test as chants filled the atmosphere. The Walk culminated with a brief ceremony and prizes

Editorial Note

As Guyana continues to experience economic growth and diversification of its economic sectors, the demand on the Environmental Protection Agency (EPA) becomes greater. After 17 years of relentless service to the Guyanese populace, a new horizon beckons for the EPA. The Agency has over the years expanded and adopted new approaches and technologies to better fulfill its mandate. In an effort to enhance efficiency and effectiveness and bridge the gaps between economic development and environmental sustainability, the structure of the EPA has been expanded once more. Complementing the work of the Environmental Management Division is the newly established Compliance Division.

The Agency has also successfully executed and is continuing to execute a number of projects with funding from International Donor Agencies such as KfW, GEF and IDB. In addition, the Agency continues to pursue an extensive education and awareness programme, which has made significant strides over the years. As we enter the second half of the year, let us remember that our environment sustains us therefore, we should strive to conquer our challenges and promote its integrity.

Food wastage in the spotlight for WED 2013 celebrations

were awarded for: Best Banner, Best Chant, Uniformity, and Largest Contingent. Marian Academy copped the first prize for Largest Contingent and Best Banner, while the Felix Austin Police College received the first prize for Uniformity and Best Chant. Honourable mention must be made of Graham's Hall Green Ambassadors, who secured second prize in each category and Vreed-en-Hoop Primary, who participated for the first time and received the third prize for Uniformity.



Participants along with EPA staff at the end of the Linden Ride

World Environment Day Ceremony and Exhibition

A WED Ceremony and Exhibition was incorporated into WED celebrations this year. At this event, held on June 05, artistic pieces with positive environmental messages were performed. These included musical items and dramatic pieces by students from Winfer Gardens Primary, Marian Academy and West Demerara Secondary School. In attendance at this event were over 260 persons including members of the government, the diplomatic corps, the private sector, various groups and members of the public.

Speaking at the ceremony were H.E. President Donald Ramotar, Minister Robert Persaud, the Minister of Natural Resources and the Environment, H.E. D. Brent Hardt, the US Ambassador, and Ms. Khadeja Musa, the UNDP Resident Representative.

Youth Forum

In Berbice, presentations were made to 218 Grades 7 and 8 students of the Corentyne Comprehensive Secondary School on the WED theme and climate change. Students were made

aware of the connection between food wastage and climate change and what they need to do to alleviate this problem. This event was enhanced by the students, who treated the gathering by performing songs and an environmental themed acrostic.

Ride for the Environment

Rides for the Environment were also organized in Linden and Anna Regina for the fourth and third years, respectively on June 16 and 29. The Rides had an overall

turnout of over 60 persons. Prizes were awarded for the Youngest and Oldest Participants and also the Largest Contingent participating in the Rides.

Environmental Camp

The Agency has also planned an Environmental Camp for departing Grade 6 students from Primary Schools of Regions 3, 4, 5 and 6. The objective is to further raise awareness about the World Environment Day theme and to involve participants in learning about the environment through experiential and practical approaches. Participants are expected to acquire much knowledge about the different environmental issues facing the world today and be self-motivated to take action for the environment. The Camp is scheduled for July 15 - 18 at Camp Somerville on the Linden/Soesdyke Highway.

It has been noted that there has been increasing support for WED activities organised by the EPA over the years. The Agency commends the general public for their support of these activities and encourages persons to coordinate and execute programmes within their schools/communities to promote positive environmental action countrywide.

2013 IDB celebrations highlight "Water and Biodiversity"

Biodiversity or **biological diversity** is the variety of life on Earth - the different species, their genetic make-up and the ecosystems in which they interact. Biodiversity is important to the comfortable existence that we enjoy daily. Medicine, food, clothing, livelihoods, even oxygen and water are linked to biodiversity.

On May 22, the world celebrated International Day for Biological Diversity (IDB) under the theme, "**Water and Biodiversity**", which complements the UN International theme, "**The International Year for Water Cooperation**", and highlights the importance of ecological systems and other forms of biodiversity to water quality.

The Environmental Protection Agency, which is Guyana's focal point for the Convention on Biological Diversity, planned and executed a number of activities to mark IDB 2013.

Youth Forum

The Agency's fourth annual Youth Forum was a tremendous success, due in part to students conducting research and conveying this information through various media, including model displays, posters, skits, poems and presentations. Held at the Egbert Benjamin Centre in Linden, the Youth Forum was attended by sixty students and six teachers from the secondary schools within the mining town. The schools' displays were centred on the following topics: **Biodiversity's dependence on water, Biodiversity and the Water**

2013 IDB celebrations highlight “Water and Biodiversity”

Cycle, Water pollution and its impacts on biodiversity, Water wise practices, Green Initiatives for water protection and conservation in Guyana and Biodiversity in Guyana.

Importantly, at the end of the forum, all participants made a ‘pledge’ to learn more about biodiversity and to do their part in helping to protect Earth’s living treasures.

Art Competition



From left: Kelli Grandsoult, Omali Tyrell and Serena Hope

Both visual and performed arts are excellent ways to tell stories about the importance and threats facing our natural environment. Activities such as art allow children to use their imagination and aid in the development of their psychomotor skills.

Through art, children can express their views on the environment. It was on this basis that the EPA planned its second annual IDB Art Competition for selected primary schools in Georgetown and its environs.

A total of 52 entries were received and the winners were: 1st place, Omali Tyrell from Green Acres Primary School; 2nd place, Kelli Grandsoult from Eccles Primary School; and 3rd place, Serena Hope from St. Pius Primary School. Students and teachers from participating schools were also treated to a tour of the Victoria - Belfield Mangrove Reserve on May 24.

Exhibitions

Visual art is often the most practical and effective method of relaying a message to any target audience. With the assistance of

the National Library and the National Museum, two exhibitions depicting the theme for IDB 2013 were held for one week at the respective venues. Students and teachers on tour, as well as patrons of both venues, benefitted not only from the replicas, collage and books on display, but information packages containing leaflets and bookmarks about the IDB theme.



Students viewing the Black Caiman exhibit.

Documentary night

Guyana is a country rich in biological resources, and the opportunity was taken to showcase, via video, one of the many fascinating creatures found here. Attendees at the Agency’s IDB Documentary Night and Award Ceremony on May 22 were treated to an intriguing video on the black caiman, one of the giants of Guyana’s rivers. Winners of the Art Competition were also awarded their prizes at this event.

In addition to these activities, the Agency’s staff appeared on the Guyana Today Show to inform the general public about IDB 2013 and to discuss the activities that were planned. A Panel Discussion was organised, for experts in the field to share their views on the pertinent issue of biodiversity conservation. It was aired on the Close - up Show.

The Agency takes this opportunity to express gratitude to all those who made the IDB 2013 activities possible and looks forward to continued cooperation in the future.

World Plant Day 2013



In commemoration of World Plant Day, observed on May 18, the Environmental Protection Agency conducted several public awareness activities. Visits were made to three primary schools along the East Coast of Demerara: Golden Grove Primary, LBI Primary, and Enterprise Primary. During these visits, posters, bookmarks and flyers created on World Plant Day facts as well as Integrated Coastal Zone Management (ICZM) were distributed to students. A brief presentation was made at each school to Grade 5 students about the importance of trees and ICZM and its relevance to World Plant Day. The Agency also

participated in a World Plant Day exhibition that was organized by NCERD in collaboration with the Guyana Mangrove Restoration Project (GMRP) at the Mangrove Visitor Centre at Cove and John. The exhibition consisted of a presentation which was delivered by the ICZM



Officer on the topic *“Promoting trees in building Green Economies”*. During the presentation, students and others present were enthusiastic to display their knowledge on ICZM and World Plant Day when asked questions. Moreover, the public awareness activities that were coordinated by the Agency were well received.

EPA establishes Compliance Division

Under the Environmental Protection Act, No. 11 of 1996, the Environmental Protection Agency (EPA) was established to ensure the effective management of the natural environment so as to ensure conservation, protection and sustainable use of Guyana's natural resources, and additionally to establish, monitor and enforce environmental regulations. The Agency became operational in 1998 and has over the years, undergone several organisational changes as it seeks to maintain effective management of the environment.

Initially, the Agency comprised three divisions: *Operations Division (OD)*, *Education, Training and Information Division (EITD)*, and *Administrative Division (AD)*. The OD focused on three broad areas of activities: *Quality Control, Monitoring and Enforcement*, and *Natural Resources Management*, while the EITD coordinated awareness and educational programmes.

Over the years, the Agency has gone through organisational changes which resulted in the establishment of the *Natural Resources Management Division (NRMD)* with three functional units: *Biodiversity, Protected Areas*, and *Wildlife*. Also, the *Operations Division* which previously incorporated some of these functions was renamed the *Environmental Management Division (EMD)*. This Division has undergone structural change over the years, eventually comprising the following sectoral areas: *Monitoring and Enforcement (M&E)*, *Agriculture, Fisheries and Tourism (AFT)*, *Industry, Infrastructure and Energy (IIE)*, and *Mining and Forestry (M&F)*.

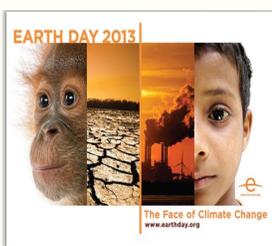
The latest change to the structure in EMD sees it expanding to include a **Permitting Division** and **Compliance Division**. This change was proposed in December 2011 and became reality in June 2013. The Permitting Division's primary focus is on Environmental and Operation Authorisations and the management of the EIA process. Within the Permitting Division, projects under the following sectors will be addressed:

1. **Energy and Mining.**
2. **Agriculture and Forestry.**
3. **Industry, Infrastructure and Tourism.**
4. **Research and Development.**

The Compliance Division will undertake monitoring and enforcement functions. The Compliance Monitoring Unit activities will include environmental audits, compliance assistance, complaint investigations, technical assistance, and follow-up actions. The Enforcement Unit will deal with the legal aspects by addressing violations discovered from audits or complaint inspections which may require civil enforcement or criminal enforcement.

It is expected that this change will enhance management of the associated programme areas, and contribute to the improvement of the overall efficiency in environmental management.

EPA encourages students to be a positive face of climate change



The Environmental Protection Agency (EPA), the lead agency for the environmental management and protection and the sustainable use of Guyana's biodiversity, has over the years coordinated and executed a number of activities for various environmental observances. Hence, on March 22, 2013,

the EPA joined millions of people around the world in celebration of Earth Day 2013. Earth Day, now in its 43rd year, has grown astronomically and echoes the sentiments of people everywhere who are working in unison to make a difference. This year, the EPA championed the call for Guyanese to recognize the devastating realities of Climate Change and the need for unified action. It was also a time to acknowledge the new inventions and technologies which were as a result of climate change.

Under the theme: *"The Face of Climate Change"*, the EPA in its efforts to raise awareness on this global phenomenon and stimulate attitudinal change, coordinated and executed a number of activities under the Ministry of Natural Resources and the Environment.

These included climate change outreach sessions to Grade 6 students of 18 selected primary schools (government & private) in Georgetown and its environs; a total of 931 students benefitted from these interactive sessions.



In addition, radio tips focusing on simple actions to save the earth were distributed to the radio stations and an Earth Day newspaper feature along with the Earth Message by the Hon. Minister Robert Persaud were also featured. In addition, the EPA launched a National Earth Day Quiz competition in the newspapers. The Agency wishes to extend gratitude to the Ministry of Education and all persons who participated in these sessions. We also encourage you to pay homage to the planet that sustains you and mobilize our friends, families and communities for a clean and healthy environment.

Kids Corner

World Environment Day 2013



"The world is a fine place and worth fighting for."
~Ernest Hemingway.

June 05 is a day for awareness and action about and for the environment. World Environment Day began in 1972 as a day for people from all walks of life to come together to ensure a cleaner, greener and brighter outlook for themselves and future generations. The theme for WED 2013 is **"Think. Eat. Save. Reduce your food print"**.

- Every year 1.3 billion tonnes of food is wasted.
- At the same time, 1 in every 7 people in the world go to bed hungry and more than 20,000 children under the age of 5 die daily from hunger.

Can you believe it?! Well, yes it is true so the best you can do is **"Think before you eat and help save our environment!"**



My Plate

"Think. Eat. Save." For a healthy body, healthy future and healthy planet earth, while saving lives in the process.

Avoid large portion sizes

- Use a smaller plate and glass.
- Vegetables and fruits should take up half of your plate.



Biodiversity Fun - Spot It



The animal kingdom is a wild, wacky place where animals have to be clever in order to survive. Camouflage is an amazing technique used by animals. This is the ability of

animals to mimic plants, ground cover, or even other animals in order to hide or hunt. Here are examples of animals that are particularly gifted in the art of invisibility:



- Polar bears are snowy white like the snow in its environment.
- Desert animals are sand coloured.
- Animals that live in trees are green.
- Animals that live on rocks match the colouration of the rocks.
- Animals that live near the soil are soil coloured.
- Patterns, like stripes or spots, can also help camouflage an animal.
- A chameleon can even change its colour to blend in with its environment.
- Animals that stand out are often colored very brightly, this is because in the animal world a bright color means danger or poison.

Take a look at some animal photos, which animals are camouflaged and which stand out from their surroundings?

To start, try to spot the animals in these pictures.



Can you name all the hidden animals?

Environmental Authorisations

The Environmental Management Division (EMD) grants Environmental Authorisation for various projects submitted to the Agency. This is done after a site visit is conducted to assess the potential or current environmental impact of the project. Large projects are usually required to submit an Environmental and Social Impact Assessment (ESIA) or Environmental Management Plan (EMP). Noise permits for various events and operations are also granted by the Agency.

For the period, April to June, 2013, a total of fifty-six (56) applications for Environmental Authorisation were received. Twenty (20) of the applications were for new projects, nine (9) for existing projects, ten (10) for renewal of Environmental Authorisations, one (1) for the variance of Environmental Authorisation and one (1) for Transfer of Environmental Authorisation.

Fifteen (15) applications for Noise Permits were received for this period.

The Division conducted twelve (12) site visits for new projects, five (5) verification visits for existing projects/operations and one (1) visit for renewal of Environmental Authorisation. Compliance/renewal audits were also conducted for fifteen (15) operations that were issued with an Environmental

Authorisation.

The Agency granted thirty-one (31) Environmental Authorisations during this period. Ten (10) Environmental Permits for new projects, and four (4) Operation Permits for new projects; one (1) for an existing operation; one (1) Construction Permit; and, fifteen (15) 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).



Equipping Staff for Excellence

The Agency continues to build the capacity and enhance the technical skills of officers through a number of workshops and meetings. Staff benefitted from training during the second quarter of 2013 as follows:

- Ms. Savitri Itwaru, EO II, Ms. Felicia Adams, EO II, Ms. Anzaleen Hoosein, EO II, Ms. Latoya Farinha, EO II, Ms. Monique Williams, EO I and Mr. Junior Paul Chanderpaul, Field and Data Management Technician attended a six - day “Emergency Planning and Management” course organized by the University of Guyana. This course was held at the University of Guyana, Turkeyen Campus during April 15 – 20, 2013.
- Ms. Faneza Alli, EA, Admin. Division, Ms. Radhika Mootoo, EA, EMD and Ms. Kerean Geer, EA, ED’s, Office attended a one - day Minute Taking and Memo Writing Workshop on April 24, 2013. This workshop was organized by the Arthur Lok Jack, Graduate School of Business, UWI, and was held at their sub-office in Church Street, Georgetown.
- Ms. Geeta Singh, Director, EMD, Ms. Tashana Redmond, SEO, EMD, Ms. Karen Alleyne, SEO, EMD, and Mr. Andrew Gupta, EO I, EMD attended a lecture on “Introduction to Hydropower Concepts”. This lecture was organized by the Guyana Energy Agency (GEA), and was held on April 19, 2013 at Cara Lodge.
- Mr. Rae Smith, EO II, NRMD and Mr. Rayner Mc Andrew, EO I, NRMD attended a training course on Environment and Natural Resources Economics on May 20, 2013 at School of Earth and Environmental Sciences, University of Guyana.
- Ms. Geeta Singh, Director, EMD, Mr. Colis Primo, SEO, EMD, Ms. Karen Alleyne, SEO, EMD and Ms. Stacy Lord, EO II, NRMD attended a Proposal Writing and Development Workshop, organized by the Arthur Lok Jack Graduate School of Business, University of West Indies from June 10-11, 2013, at the CIDA Building, Main and New Market Streets, Georgetown.
- Ms. Sonia Gumbs-Luke, SEO, EMD attended the Draft Integrated Disaster Risk Management Plan (DIRMP) Workshop, which was organized by the Civil Defence Commission and was held on June 11, 2013 in the Commission’s Boardroom.
- Ms. Tashana Redmond, SEO, EMD, Ms. Sonia Gumbs-Luke, SEO, EMD and Ms. Diana Fernandes, EO II, NRMD attended a Land Use Workshop which was held during June 17-18 at the Grand Coastal Hotel.

Upcoming Activities



The EPA initiates and undertakes activities on a continuous basis to ensure that the concept of environmental stewardship reaches across Guyana. Having successfully achieved the set goals for the second quarter of the year in this regard, planning and coordination have already begun to guarantee a varied and participatory approach to events planned for the next quarter.

The interesting mix of activities planned for July - September 2013 includes the following:

Activity	Theme	Target Group	Date
Environmental Camp	“Think. Eat. Save. Reduce your footprint.”	Departing Grade 6 Students	July 15 to 18
Mining Week	To be announced	General public	To be decided
Taxidermy Camp	To be announced	Selected schools	July 8 to 22 July 25 to August 5
Zoo Camp	To be announced	Selected schools	July 22 to August 16
International Coastal Cleanup	Fighting for Trash Free Seas	General public and Environmental Clubs	September 21
Workshop for International Ozone Day	Save O ₃ ur Sky: Ozone Friendly Planet, Our Target	Primary schools	September 16

In the present world, environmental issues are ever increasing. This means that all levels of society need to be involved in the fight to preserve our environment. At the centre of this fight are youths, who make up the highest proportion of the current population and who have the greatest impact and influence.

Creating and sustaining a positive relationship between youths and nature is essential to creating a new generation of environmental stewards. In order to make this involvement more meaningful, adults and supervisors have a critical role. When youths share outdoor experiences with adults in their lives, they have stronger connections to the natural environment. Noticeable among the upcoming activities are various camps. Camps go a far way in helping to connect youths and nature and develop a sense of caring within youths about the environment.

Multiple studies have shown that when youths interact with nature, there are many benefits to be derived.

Being outdoors gives youths a chance to value nature and see it as an important part of our world. As future leaders, youths develop the courage and skills to handle challenges and problems in the environment, and are encouraged to build a sense of caring the Earth. Youths, especially young children who have positive interactions with nature, are more likely to become better informed adult consumers and savers who are environmentally alert.

As a whole, when youths are connected with nature, it guarantees longevity and continuity of the environment and all its associated processes and components. It is time that youths take their rightful place and protect the environment so that future generations of youths can reap the benefits of this generation of youths.



WILDLIFE SPOTLIGHT

Did you know?

The Giant Anteater (*Myrmecophaga tridactyla*)



The **giant anteater** (*Myrmecophaga tridactyla*), also known as the **ant bear**, is a large, insectivorous mammal native to Central and South America. This species is mostly terrestrial, in contrast to other living anteaters and sloths which are arboreal or semi-arboreal. The anteater can be found in multiple habitats including grassland and rainforest. It forages in open areas and rests in more forested habitats.

The giant anteater's coat is mostly grey and salted with white. Its forelimbs are white, with black bands around the wrists, while its hind limbs are dark. Thick black bands with white outlines stretch from throat to shoulder, where they end in triangular points. The body ends in a brown tail. The coat hairs are long, especially on the tail, which make the tail look larger than it actually is.

Giant anteaters can be identified by their large size, elongated muzzle and long tail. They have a total body length of 182–217 cm (5.97–7.12 ft). Males weigh 33–41 kg (73–90 lb) and females weigh 27–39 kg (60–86 lb), making the giant anteater the largest extant species in its suborder.



The head of the giant anteater, at 30 cm (12 in) long, is particularly elongated, even when compared to other anteaters. It has a tubular snout which takes up most of its head and ends in its mouth. Its neck is usually thicker than the back of its head, unlike other mammals. A small hump can be found at the back of its neck.

Its eyes and ears are relatively small. It has poor eyesight, but its sense of smell is 40 times more sensitive than that of humans. The giant anteater detects termite mounds and anthills with its keen sense of smell and tears them open with its strong claws. What we call an anteater's nose is actually an elongated jaw with a small, black, moist nose, like a dog's nose. Giant anteaters have a two-foot-long tongue and huge salivary glands that produce copious amounts of sticky saliva when they feed. Termites, ants, and their eggs stick to the tongue as it flicks in and out and the insects are scraped off by the flexing of the lower jaw and swallowed. Anteaters have a very muscular stomach that grinds up the insects and powerful digestive juices to break down their prey. They may eat as many as 30,000 ants in a day. They will also eat ripe fruit if they find it on the ground.

Giant anteaters can mate throughout the year. During courtship, a male consorts with an estrous female, following and sniffing her. Male and female pairs are known to feed at the same insect nest. While mating, the female lies on her side as the male crouches over her. A couple may stay together for up to three days and mate several times during that period. Gestation lasts around 190 days and ends with the birth of a single pup, which typically weighs around 1.4 kg (3.1 lb). Females give birth standing upright. The young will ride on its mother's back for up to a year and remain with the mother for up to two years, or until she becomes pregnant.



Anteaters are not aggressive but they can be fierce. A cornered anteater will rear up on its hind legs, using its tail for balance, and lash out with dangerous claws against predators like jaguars and panthers. The IUCN classifies giant anteaters as near threatened.

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 edgy nerves. They are also used for colic, diarrhea, dysentery and insomnia.

THE GREEN LEAF

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

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