



# GREEN LEAF

## ENVIRONMENTAL CAMP 2012 – A RESOUNDING SUCCESS

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On July 17, 2012, thirty five (35) energetic and enthusiastic students and seven (7) teachers from Linden, Georgetown and the West Coast of Berbice, converged at Camp Somerville on the Soesdyke Linden Highway for EPA's Annual Environmental Camp. The camp was conducted from July 17- 20, 2012, under the World Environment Day (WED) theme: "*Green economy: Does it include you?*" and was facilitated by staff of the



Participants conducting a survey of soil organisms.

Participants engaged in an intense discussion on Fossil Fuels.



Education, Information and Training Division (EITD) of the EPA. This year the staff of the EITD, worked with Primary School students (mostly at the grade 6 level). The participants ranged from ages 10-12 and were drawn from Bel Air Primary, Sophia Primary, Graham's Hall Primary, Hope Town Primary, Mahaicony Primary, Bath Primary, One Mile Primary and Christianburg Primary.

### Editorial Note

The third quarter of the year 2012 was very eventful, with the Agency fully embracing its new position under the Ministry of Natural Resources and the Environment (MNRE). This quarter saw the EPA expanding its horizon and focusing on some pertinent issues that needed urgent attention. With guidance from the MNRE, the EPA expanded its focus to more tactfully and tenaciously address the issues of littering and improper garbage disposal through the 'Pick it Up Guyana', campaign. The Office of Pick it Up Guyana, now EPA's Sub-Office, is strategically located at the Jenman's Education Centre in the Botanical Gardens. The campaign aims to create a clean and healthy environment by promoting and encouraging positive change and actions for the environment. The programme is very holistic and uses diverse methodologies and strategies to foster attitudinal change at all levels of society. The campaign also seeks to provide an enabling environment for people to act and thus far, has provided recycling receptacles for office paper, aluminum cans and PET bottles to organizations/institutions, in collaboration with key stakeholders. The EPA will continue to make interventions at every level, as the Agency diligently seeks to take the necessary measures for the protection and management of the natural environment and the sustainable use of its natural resources.

### The camp focused on:

- fostering interaction and networking among youths;
- raising awareness of environmental issues associated with climate change; energy use; and waste management; and
- enhancing investigative, analytical and communication skills of participants.

Camp activities were very informative, action oriented and revolved around the theme for this year's World Environment Day (WED) observance.

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## ENVIRONMENTAL CAMP 2012 – A RESOUNDING SUCCESS



Participants enjoying some ring games

The sessions were designed to appeal to various aspects of a child's cognitive development and addressed some physical, social and physiological needs. Participants were encouraged to enhance their investigative, analytical and communication skills, while their creativity and spirit of team work were put to the test. Campers worked in units named after insects, a strategy to bring awareness to this aspect of earth's biodiversity. The units were; Grasshopper, Butterfly, Wasp, Honey bee and Dragonfly. The methods utilised to convey concepts included, storyline, outdoor surveys, scavenger hunt, nature walk, story telling, depiction through the arts, camp craft and games. The campers were

also treated to a fun filled camp fire that encouraged singing of folk songs and story telling. Generally, sessions were very interactive, informative and fun. The teachers were also adequately engaged in very informative Environmental Education sessions. The participants expressed satisfaction for the way the camp was organised and the information delivered by facilitators. They also made a commitment to be elements of change within their respective schools and communities. At the culmination of the camp, each participant was awarded a certificate of participation. Special prizes were also awarded to the best unit and the most outstanding camper from each unit.



Nature Walk

## Mining week 2012



Warishi race at Bartica Golden Beach

With the ever increasing demand for minerals and the rise in the price of gold in particular, mining has become a cornerstone industry and one of the largest income generators in Guyana. The Guyana Geology and Mines Commission (GGMC), the Sector Agency responsible for regulating the mining industry works closely with other Agencies such as the Environmental Protection Agency (EPA), to ensure that mining is done in a manner that is least harmful to the environment.

Since 2007, the Commission has celebrated an annual Mining Week which encompasses several activities including walks and exhibi-

tions to raise awareness on the operations of the mining industry.

This year's activities were focused on the theme ***"Investment and technological growth for sustainability in the mining sector"***.

Mining week 2012 commenced on Sunday, August 19 with the annual Mining Walk. The festivities continued later that day with the National Mining Fair at which organisations from the private and public sectors displayed mining equipment and provided information to members of the public. The most anticipated activity to end Mining Week was the annual Pork Knockers Day which took place on Saturday at Bartica Golden Beach.



Mining Walk 2012

## Youths Learn About Water Conservation



Students completing activity booklet

The Environmental Protection Agency once more participated in the Annual Taxidermy Summer Camp organized by the National Museum. This

Camp is one of many activities held during the August holidays to keep children gainfully occupied. The Taxidermy camp is intended to teach young people about different aspects of biodiversity and conservation practices. Approximately 50 children

between the ages of 6-15 attended the camp daily. An interactive presentation about **Water Conservation** was delivered to participants of the Camp to teach about the importance of water to humans, the threats to our water supply and what can be done to conserve water. Participants were especially keen to find out how they can conserve water.

At the end of the presentation, students reinforced what they learnt during the presentation by completing the **"Thirstin's Wacky Water Adventure"** activity booklet. The activity booklet, contained a word search, word scramble, crossword puzzle and additional tips on how to conserve water. Outstanding participants were awarded prizes for their efforts. The EPA looks forward to continued partnership with the National Museum to teach the younger generation about their role in conservation of natural resources.

## More professionals trained in Biosafety



Participants of the Biosafety Clearing House Training

The third national training workshop under the Biosafety Clearing-House (BCH) Phase II Project was held on September 13 & 14, 2012, at the Centre for Information Technology, University of Guyana. The workshop, facilitated by Mr. Fred Phillips, BCH Regional Advisor, was a part fulfillment of Guyana's obligations to the Cartagena Protocol on Biosafety (CPB) and subsequently the Convention on Biological Diversity (CBD).

The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms (LMOs) resulting

from modern biotechnology. The CPB established the BCH as an online repository for information to assist parties in meeting their obligations under this Protocol.

Three (3) training workshops were designed to publicize the BCH, and to engage key stakeholders and potential users of the BCH.

The objective of the third workshop was to demonstrate how the information available on BCH could be utilized by national educational institutions and other key stakeholders.

Several key stakeholder institutions were represented at this third workshop including the University of Guyana- Faculty of Natural Sciences and the Centre for the Study of Biological Diversity (CSBD), Cyril Potter College of Education (CPCE), Guyana School of Agriculture (GSA), Guyana Livestock Development Authority (GLDA), the National Library and staff from the Environmental Protection Agency's Education, Information and Training, Environmental Management and Natural Resources Management Divisions.

The BCH Portal can be accessed at: <http://cbd.bch.int>.





## ‘Pick It Up’ Guyana – Changing Attitudes for a Cleaner and Healthier Environment

Guyana is pictured by many as a beautiful country – well known for its pristine rainforest and amazing wildlife. While this is true, the aesthetics of our environment has been a growing concern. Indeed, indiscriminate disposal of garbage or ‘littering’ in our streets and canals has become an issue of grave concern. After all, it is not just the aesthetics of our country that is at stake but also our own health. Illegal dumping of garbage contributes to an increase in health-related matters such as harboring of vectors of diseases such as mosquitoes and rats. The increased occurrence of flooding due to clogged drains and canals with plastic bottles and Styrofoam is also of grave concern.

stakeholders to reuse plastic bottles, aluminum cans and white paper. This will ultimately lead to a reduction in the amount of waste reaching our landfill.

### *A Call to all Guyanese*

Most importantly, ‘Pick it Up Guyana’ encourages the involvement of every Guyanese in working for a cleaner environment. This can be done simply by taking action, whether it be in homes, at community level, schools, workplaces and even



Participants at the recent coastal cleanup exercise

Over the years, there have been many initiatives undertaken by numerous groups seeking to address the ‘littering’ problem we are faced with today. Such initiatives are always welcomed and have helped to promote and encourage the need to take action for a clean environment. Promoting a greater appreciation and respect for our country’s environment is a priority of the new Ministry of Natural Resources and the Environment. Anti-Littering Campaign coined ‘Pick it Up Guyana’ was launched during World Environment Day celebrations earlier in the year in an attempt to combat the problem of irresponsible dumping of waste.

### *‘Pick it Up Guyana’*

Pick it Up Guyana seeks to promote a clean and healthy environment for every Guyanese by encouraging attitudinal change to waste disposal practices. The campaign has a strong education and awareness component which targets citizens of all walks of life. Several projects also serve to address the provision of more receptacles in public places coupled with an improved collection and disposal system. ‘Pick it Up Guyana’ has also embarked on several collaborative efforts with various

supporting national events. Cleanup activities such as the recently held Coastal Cleanup at the Kingston Seawall Area is an example of collaborative effort for a clean environment. Approximately 250 volunteers came out to support this cleanup event organized by the EPA in collaboration with ‘Pick it Up Guyana’. The activity was a great success and like other volunteer cleanup events in the past, sends a clear message – many Guyanese **DO** care about the environment. With so many hands, the intended stretch from Kingston Bandstand to Camp Street was completed within two hours.

The EPA and ‘Pick it Up Guyana’ wishes to thank all those volunteers who participated in this recent cleanup exercise and encourage others to come on-board to help make our environment as beautiful as any true Guyanese would want it to be.

**We all have a role to play – together we can ‘pick it up’ for a cleaner, healthier Guyana!**

# KIDS CORNER

## Coastal Cleanup

### What is a coastline?

A coastline or seashore is the area where land meets the sea or ocean.

### How are coastlines formed?

The main agents responsible for deposition and erosion along coastlines are waves, tides and currents. The formation of coasts is also heavily influenced by their lithology. The harder the material the less likely it is to erode or wear away. Different types of rocks create different-shaped coastlines.

### Types of coasts?

- A **cliffed coast or abrasion coast** is one where marine action has produced steep declivities known as cliffs.
- A **flat coast** is one where the land gradually descends into the sea
- A **graded shoreline** is one where wind and water action has produced a flat and straight coastline

### Fast Facts:

- In the past 21 years, volunteers with the International Coastal Cleanup have cleared millions of pounds of litter from 211,460 miles (340,312 kilometers) of coastline worldwide. That distance is the equivalent of going around the Earth eight times!
- In 2006, 358,617 volunteers cleaned 34,560 miles (55,619 kilometers) of shoreline, collecting 7 million tons of trash!
- In the 2007 cleanup, nearly half a million people in 70 countries pitched in.

EVERY PIECE OF TRASH YOU REMOVE  
REVEALS SOMETHING BEAUTIFUL



*International Day for the preservation of the Ozone layer was observed under the theme: 'Protecting the atmosphere for generations to come'*

See if you can unscramble these words associated with ozone science and ozone depletion.

RACNEC .....

EOZNO .....

TRFEIRREGAN .....

KSCUONBL .....

RAYLE .....

ECHORLNI .....

OSLARESO .....

ITONELPDE .....

ULAEILBRM .....

SASESNUGLS .....

ESRTSOTAH .....

TXEGINSUISREH .....



Answers: cancer, ozone, refrigerant, sun block, layer, chlorine, aerosol, depletion, umbrella, sunglasses, stratosphere, extinguishers

How much time will it take for these items to decompose in the ocean?



Fishing Line



Cigarette Filter



Aluminum Can



Glass Bottle



Banana Peel



Milk Carton



Styrofoam



Plastic Beverage Bottle

UNDETERMINED

MANY years

A few years

A few months

A few weeks

## ENVIRONMENTAL AUTHORISATIONS

The Environmental Management Division (EMD) grants Environmental Authorization for various projects submitted to the Environmental Protection Agency (EPA). 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.

A total of thirty one (31) Applications for Environmental Authorization, were received for the period July to September 10, 2012. Nine (9) applications for new projects, eight (8) for existing projects, ten (10) for renewal of Environmental Authorizations, and four (4) for the variance of Environmental Authorizations were received during this period.

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

Thirty-two (32) applications for Noise Permits were received and issued for the period under review.

The Division conducted ten (10) site visits for new projects and eight (8) verification visits for existing projects/operations. One (1) Compliance/Renewal audit was also conducted for an operation that was issued with an Environmental Authorization.

The Agency granted twenty (20) Environmental Authorizations during this period. Sixteen (16) Environmental Permits and two (2) Construction Permits were granted for new projects, while thirteen (13) Operation Permits were granted to existing projects.

The Division continues to process other applications to determine whether projects will be required to conduct Environmental Impact Assessment (EIA) or prepare an Environmental Management Plan (EMP).



## EQUIPPING STAFF FOR EXCELLENCE

During the third quarter of the year Officers of the Agency participated in a number of workshops and meetings which helped to enhance technical skills and make environmental management at the Agency more effective. Some of the sessions from which Officers benefitted include:

- Ms. Karen Alleyne, SEO, EMD, attended Workshop on National Inventories and Reporting of the Basel Convention for Central America and Mexico, which was held during July 17-20, 2012 in San Salvador, El Salvador.
- Ms. Stacy Lord, EO II, attended the Caribbean Regional Training Workshop for Biosafety Clearing House (BCH) National Focal Points, which was held from July 17-20, 2012 in St. John's, Antigua.
- Ms. Marle Reyes, SEO, EMD, attended a Symposium on July 18, 2012, entitled "Utilizing Sustainable Practices to Preserve the Environment," organized by the Guyana National Bureau of Standards.
- Ms. Geeta Singh, Director, EMD, and Ms. Sonia Gumbs-Luke

attended a Flood Preparedness and Response Exercise organized by the Civil Defence Commission. This exercise was held on July 12-13, 2012 in the Commission's Boardroom. These two officers also attended a Damage Analysis and Needs Assessment Workshop also organized by the CDC, which was conducted during July 03-04, 2012.

- Mr. Rayner McAndrew attended a Workshop on the Presentation of the Draft Plan for the Prevention of Foot and Mouth Disease (FMD), held during the period September 24 – 26, 2012. This workshop was a collaboration among the Ministry of Agriculture, PAHO and the Ministry of Health.
- Ms. Geeta Singh, Director EMD, and Ms. Nalissa Persaud, EO II, EMD, attended the first meeting of the Committee of Stakeholders to address the issue of landscape restoration and replanting/rehabilitation of areas subject to mining. This meeting was held on August 24, 2012, in the Guyana Forestry Commission Conference Room.



## UPCOMING ACTIVITIES



The EPA initiates and undertakes continuous activities to ensure that the concept of environmental stewardship reaches all parts of Guyana. Having successfully achieved the set goals for the third 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 final quarter.

The interesting mix of activities planned for October-December 2012 include the following:

Activity	Theme	Target Group	Date
Ozone Day outreach	Protecting our atmosphere for generations to come	Grade 6 students in Georgetown, Berbice and Linden General public	October
Teachers Training Camp	Learning about the Environment through English Language, Mathematics, Social Studies and Science	Trainee teachers– CPCE, Turkeyen	October 18-21, 2012
School presentations, competitions, etc.	'Pick it Up Guyana'	6 Pilot schools ( 3 primary & 3 Secondary)	October
Climate Change workshop	Children in a Changing Climate	Primary School Students ( Grade 6)	October – November
Climate Change workshop		Women's group	November-December



# WILDLIFE SPOTLIGHT

## Did you know?

### The Common Basilisk (*Basiliscus basiliscus*)

The Common Basilisk also known as the Jesus Christ Lizard, is a lizard from the family *corytophanid*. The basilisk is named for the creature of Greek mythology made up of parts of a rooster, snake, and lion which could turn a man to stone by its gaze. Its generic, specific and common names all derive from the Greek *basiliskos* meaning "little king".

Notorious for its ability to run on the surface of water, these tiny reptiles are found in Central and South American rainforests and are commonly encountered along streams, rivers and lakes. They are more numerous in the dry north-western region of the country. Adults often bask in daylight near water when they are not foraging or resting. At night they sleep on perches close to the ground or as high as 20 m.



The Common Basilisk can be distinguished from similar species within its range by its large size and the high finlike crests down its back. Males also have high crests on the head and tail. Both sexes are brown to olive, and have a white, cream or yellow stripe on the upper lip and a second stripe along either side of its body; these stripes have higher contrast in juveniles and fade as the lizard ages. Hatchlings weigh a mere 2 g and are 37 to 43 mm long. Adults can grow up to two and a half feet long. Females are generally 135 to 194 and weigh half as much as males. The tails of these lizards comprise 70 to 75% of their total length: for example, on an 800 mm (or 31.5 in) long lizard, 600 mm of its length is tail.

The Basilisk have large mouth with saw-like teeth that are on the inner sides of the jaw. These lizards have been known to run up to 7 mph (11 km/h). While the basilisk is most known for its ability to run on water, they are also excellent climbers and swimmers and have been known to stay underwater for up to half an hour. The average lifespan is 7 years in captivity; in the wild it tends to be less because of predators.

When startled, the common basilisk escapes by speeding to the nearest edge of water and continues sprinting. The lizard runs on only its hind legs in an erect position, holding its arms to its sides. They are so adroit on water because their feet are large and equipped with flaps of skin along the toes. When moving quickly, the lizard can cross a large surface of water before sinking. On water it runs an average speed of 8.4 km/h (or 5.2 mph), which is just a little slower than its speed on land. Younger basilisks can run 10 to 20 meters on water, while adults cross only a few meters before sinking. Adults do not move slowly, but they weigh more and cannot sprint for as long a time. Once a basilisk submerges, it continues swimming until it is sufficiently far from its pursuer if the predator has followed past the bank. Although this lizard stays close to water to escape terrestrial predators, it swims only when necessary because there are aquatic animals that would be just as happy to eat the basilisk given the chance.

As with any small animal, the basilisk has many natural predators including large reptiles, birds, and some mammals. To avoid predators they conceal themselves under leaves on the forest floor and can remain motionless for a long time. The Common Basilisk is an omnivore, and has a diet consisting of insects, flowers and small vertebrates such as snakes, birds, eggs and fishes.

Females of this species lay three to four clutches of 10–20 eggs a year. Eggs hatch after about three months and the young weigh about 2 grams and are up to 3 inches long. Their outstanding camouflage allows them to remain undetected when they are still.

### 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

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

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