



GREEN LEAF

Pick it up Guyana Continues to Inspire

Inside this issue:

Pick It Up Guyana continues to inspire

1

Public consultations on Biosafety begin

3

Students learn to be water managers

3

EPA takes water message to Essequibo

4

Our world, your world, get connected

4

Kids Corner

5

Environmental Authorisation

6

Equipping staff for excellence

6

Upcoming Activities

7

Wildlife Spotlight

8

The Pick It Up Guyana initiative continues to engage Guyanese from all walks of life to take action for a clean environment. Since being launched by the Ministry of Natural Resources and the Environment in June 2012, there has been a significant increase in public and private participation and action in addressing the issue of littering in Guyana. Through increased public awareness efforts, more Guyanese have been made knowledgeable about the harmful effects of improper garbage disposal and many are showing great support in addressing the issue.

Volunteer Programme empowers Guyanese to take action!

The 'Volunteer Programme' inspired by the initiative has to date motivated civic-minded individuals from different parts of the country to participate in empowerment sessions, through which the knowledge and skills needed to lead the coordination of waste management and enhancement initiatives were

imparted. Over the past several months, six (6) volunteer empowerment workshops have been organized and executed with participants from Regions 3, 4, 5 and 6.



Participants pay keen attention at one of the empowerment sessions for environmental volunteers.

The President's Youth Award – Republic Guyana (PYARG), Girl Guides Association and Lions Clubs, Christian and Muslim religious groups have all benefited from the volunteer empowerment workshops. These volunteers have committed to undertaking community work in their respective areas to *(cont'd on pg. 2)*

Representative from the Muslim Group erecting a sign.



Editorial Note

Water is a very important, yet underrated resource, on which the fulfillment of our basic human needs, our environment, socio-economic development and poverty reduction are all heavily dependent on. Without water, we would not be able to live comfortably. However, managing water is difficult because of its unique properties. Water is a shared resource that is unevenly distributed in time and space. Additionally, this valuable resource is under threat by rapid urbanization, pollution and climate change while demands for water are ever increasing in order to satisfy the needs of a growing world population, now over seven billion. Due to these issues, 2013 has been declared the 'International Year of Water Cooperation' encouraging cooperation among all stakeholders to protect this resource. The EPA, as one of those stakeholders, will throughout the year be conducting outreach to various target groups. Secondary schools in Essequibo have been targeted throughout the first quarter and the Agency has also collaborated with the Guyana Water Incorporated (GWI) to spread awareness about this important topic, and will continue to work towards engaging the public on such a key issue.

Pick it up Guyana Continues to Inspire

address issues related to the environment particularly in relation to waste disposal. Some of the common activities that have been inspired by these workshops include community cleanups and enhancement, erection of signs, awareness sessions at community events, and the starting of backyard composting.

An increase in clean up exercises has been noted!

Pick It Up Guyana has been influencing successes both directly and indirectly. While a number of cleanup exercises have been organized directly through the initiative, several others have been undertaken – both on a small and large scale by various entities who have opted to execute activities in support of the goals of the initiative.



The religious community has taken steps to collaborate for a cleaner, healthier environment. Environmental volunteer workshops were conducted with 'Grace Environmental Rangers' of the Grace Temple in New Amsterdam and Faith Revival New Testament Church of God in Middle Road, La Penitence. The Muslim Community has launched its Guyana Muslim Environmental Initiative (GMEI); with support from Pick It Up Guyana, GMEI has conducted cleanup and enhancement activities at Woolford Avenue, East Street and Albouystown. These activities empower the members of the Muslim community – both young and old, to play an active role in beautifying their surroundings by clearing the area of litter, erecting signs and planting trees.

The Ministry of Natural Resources and the Environment commends such actions and encourages more groups to join in the noble effort of making our environment one that is clean and healthy for every Guyanese.



Outreach to Schools

Schools that have been targeted under the STAND (Schools Taking Action with New Dedication) Initiative continue to encourage environmental activities focused towards improved waste management practices. Easy-to-do, backyard composting is one activity that is being promoted and encouraged in the schools that have benefitted from presentations on composting. It is intended that the schools will initially attempt to make a compost pile in the school compound and its success can hopefully lend to individuals taking the concept home to share with their family.

The Pick It Up Guyana Initiative is observing positive changes and actions. Every Guyanese has a part to play in keeping our environment clean. Whilst we recognize there is an increase of awareness activities in relation to the importance of a clean and healthy environment, we must ALL work together to make Guyana a place the present and future generation will be happy to call home!



Public Consultations on Biosafety Begin



Biotechnology is steadily increasing in its importance to economic development through various sectors such as agriculture and forestry, food processing, industry, health and the environment. Given its rich

biodiversity and indigenous resources, Guyana is considered an attractive country for business investment. In addition, the country's economy is largely dependent on the production and export of its renewable natural resources, which increases Guyana's vulnerability to environmental pressures. With the country seeking to accelerate economic growth and social development, biotechnology can provide exceptional avenues.

In September 2003, *The Cartagena Protocol on Biosafety*, which is rooted in the **Convention on Biodiversity**, came into effect. The *Protocol* aids in the regulation, management or control of risks associated with the transfer, handling and use of living modified organisms (LMOs), particularly as it pertains to those that have adverse effects on the conservation and sustainable use of biodiversity. The *Protocol* also serves to provide guidance on transboundary (between borders) movement of LMOs.

Guyana, recognising the importance of safeguarding genetic biodiversity, acceded to the *Protocol* on June 16, 2006.

Consequently, a draft National Policy on Biotechnology, Biosafety, and Biosecurity was developed during 2006-2007, which was followed by the successful completion of the National Biosafety Framework in 2007.

Currently, Guyana is in the primary stages of implementing this Framework under the UNEP-GEF funded Regional Project for implementing National Biosafety Frameworks in the Caribbean Sub-



Region. This is in an effort to meet the demands of an ever changing world and to fulfill our obligations under the Cartagena Protocol on Biosafety (CPB) and by extension the Convention on Biodiversity (CBD). In these documents, measures are outlined that would foster integration of modern biotechnology into the economic development of the country, utilising methods that provides for both biosafety and biosecurity.

In this regard, the EPA has embarked on a series of public consultations across the various administrative regions to obtain input from stakeholders which would inform the finalization of the National Policy on Biotechnology, Biosafety and Biosecurity. These extensive consultations commenced in February 2013 and are expected to culminate in May, 2013.

Students Learn to be Water Managers

World Wetlands Day is celebrated annually on February 02. To commemorate the observance this year, the Environmental Protection Agency conducted a week long outreach to students visiting the Nature School at the Zoological Park from January 28 to February 01.

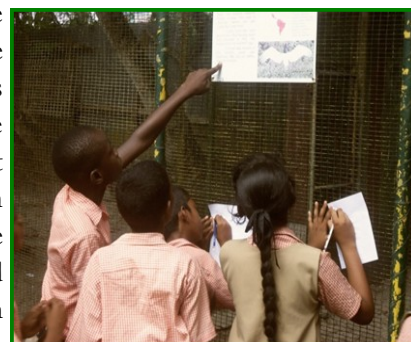
A total of one hundred and sixty-four (164) students were reached over this period. Through an interactive presentation entitled 'Wetlands and Water Management,' which was the theme for this year's celebrations, students



Students participating in an activity

learned about wetlands and the role they play in maintaining our water supply and the quality of water we receive. The students displayed great enthusiasm

throughout the presentation and were fascinated by the facts presented. They were especially eager to find out about the role they can play in protection of these dynamic ecosystems and how they themselves can be water managers. As a compliment to the presentation, students also learned to identify wetland



Students identifying wetland birds in the zoo.

birds based on certain characteristics such as long legs, slender bodies and long beaks. Students were also able to go out into the zoo to identify wetland birds present in the facility. The EPA would like to extend gratitude to Ms. Yolanda Nunes, Nature School teacher, for accommodating officers during this week long exercise.

EPA takes Water Message to Essequibo



Water is one of the most precious resources and is very crucial for the sustenance of life on earth. In recognition of the importance of freshwater to life on earth, the United Nations (UN) designated March 22 as 'World Water Day.' Since 1993, 'World Water Day' has been celebrated annually and seeks to draw attention to the importance of freshwater and advocating for the sustainable management of freshwater resources.

Each year, 'World Water Day' highlights a specific aspect of freshwater. However, since 2013 has been designated 'International Year of Water Cooperation' by the UN, this year's WWD theme is also dedicated to the theme of cooperation around water. This theme emphasizes the fact that cooperation is essential to strike a balance between the different needs and priorities and to share this precious resource equitably. Promoting water cooperation implies an interdisciplinary approach bringing in cultural, educational and scientific factors, as well as religious, ethical, social, political, legal, institutional and economic dimensions.

The EPA has over the years been collaborating with Guyana Water Inc. (GWI), the lead Agency for WWD in Guyana in the execution of activities. The activities for this year's observance included a televised debate competition for students of School of Earth Environmental Sciences (SEES), University of Guyana; a panel discussion; and, a news spread. In addition, the

EPA conducted two seminars at Essequibo Islands Secondary and Leguan Secondary on March 12 and 13, 2013, respectively. These sessions were very interactive and sensitized students and teachers of

these islands about the importance of freshwater, thereby fostering positive attitudinal change for its protection and conservation. A total of one hundred and twenty (120) students and six (6) teachers benefitted from these seminars.

The EPA also took the water message to Linden, where approximately fifty-two (52) energetic young people from the Young and Thoughtful Environmental Club were actively engaged in a WWD session. Two religious organizations also recognized the importance of environmental stewardship and were receptive to the message under the caption – **'Water - an abundant but scarce resource'**. Two newspaper articles were also published. Given the theme for the year, the Agency will continue its outreach in order to get people to 'give water a second thought'... **Use less, save more, advocate always.**

Students taking part in an activity during the outreach.



"Our World, Your World, Get Connected"

After a one year hiatus, the University of Guyana re-opened its doors to students and the general public to host its Open/Career Day. The theme "Our World, Your World, Get Connected" gave the Agency and the thirty-nine other (39) other participants from the private and public sectors, an opportunity to not only showcase their products and services, but also to show students how the programmes that the University offers can be used.

The event, held on February 15, 2013, attracted students from both private and public secondary schools as far as Corentyne, Berbice, as well as students of the Cyril Potter College of Education and the Guyana School of Agriculture.



Students matching duties to jobs on the career tree.

An important feature in the Agency's booth was the career tree which engaged the students in learning what was required for jobs in the environmental science and technology fields.

On display in the Agency's booth was a variety of educational materials including brochures, booklets and aids depicting simple tips for going green

in 2013. The Agency's exhibits incorporated the UN environmental theme for 2013, "The International Year for Water Cooperation" through a water wiz quiz and bookmarks that gave water conservation tips.

Kids Corner

WILD ABOUT WETLANDS

Some of the most prevalent creatures in wetlands are birds. Some wetland birds have special features that help them to adapt to moving and feeding in this unique habitat. These include elongated beaks and long, slim legs and bodies. Match these wetland birds correctly.



Wattled jacana
(*Jacana jacana*)



Cattle egret
(*Bubulcus ibis*)

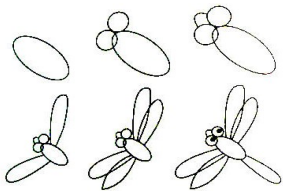
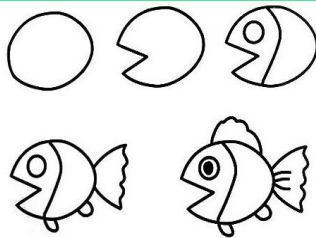


Jabiru stork
(*Jabiru mycteria*)



Scarlet ibis
(*Eudocimus ruber*)

DRAWING WETLAND ANIMALS



Wetlands are important for water management; they act as storehouses for freshwater and filter water for us to use.

Let's create a model of a wetland to show how it acts a natural water filtration system

What you need

- 1 foil roasting pan or other shallow pan
- 2 large sponges or florist foam
- 1 spray bottle or small watering can
- Sharp knife to cut sponge (ADULT SUPERVISION)
- Clay (enough to cover half the pan)
- Potting soil

What to do

1. Use the clay to build an 'upland' in half the pan. Create a hill that slopes down into the middle of the pan. The clay represents the land and the empty half of the pan represents a lake or other body of water.
2. Place the sponge or florist foam in the pan right next to the clay. The sponge will not cover the remaining length of the pan, but it should fill the width of the pan. The sponge represents the wetland (a buffer between the land and a lake)
3. Sprinkle some of the potting soil on the clay land.
4. The water in the spray bottle or watering can represents rain or other precipitation. Carefully make it rain at the top of your hill.

Observations

- How long did it take for the water to end up in the lake?
- Did all the dirt end up in the lake?
- What does the water look like when it reaches the lake?

Remove the wetland sponge and pour off the water in the lake. Without the sponge, make the hill again and re-answer the questions above.

- Were there any differences with and without the wetland sponge?
- Without the wetland, how might the water in the lake affect the fishes, birds and other wildlife?
- Would people be affected in any way?
- Think of the possible consequences if wetlands are drained or paved over.

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.

A total of seventy-nine (79) applications for Environmental Authorization were received for the period January to March, 2013. Twenty-six (26) of the applications were for new projects, nine (9) for existing projects, thirty-seven (37) for Renewal of Environmental Authorisations, five (5) for the variance of Environmental Authorizations and two (2) for transfer of Environmental Authorisations.

Twenty-five (25) applications for Noise Permits were received and issued for this period.

The Division conducted thirteen (13) site visits for new projects and twenty-four (24) verification visits for existing

projects/operations. Compliance/renewal audits were also conducted for twenty-seven (27) operations that were issued with an Environmental Authorization.

The Agency granted twenty-one (21) Environmental Authorisations during this period. Twelve (12) Environmental Permits and two (2) Operation Permits were granted to new projects.

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



Equipping Staff for Excellence

During the first quarter of 2013, the Agency sent officers to a number of workshops and meetings to enhance their technical skills to make environmental management at the Agency more effective. Staff who benefitted are as follows:

- Ms. Felicia Adams, Ms. Earlla Nelson, Ms. Tashana Redmond, Mr. Colis Primo and Ms. Sonia Gumbs Luke, attended a workshop entitled “Managing Offshore Oil and Gas Resources: Environmental Risk Mitigation”.
- Ms. Darshini Seeram, EO I, GIS, Ms. Nadia Nasir, GIS Technician and Ms. Felicia Adams, EO II, EMD attended a Stakeholder Meeting at the Maritime Resource & Coordination Centre.
- Ms. Darshini Seeram, and Ms. Nadia Nasir benefitted from a half day Seminar on Remote Sensing.
- Ms. Nadia Nasir also participated in a Remote Training course relating to the development of Land Use Planning Project.
- Ms. Earlla Nelson, EO II, EMD attended the FAO’s Annual Accountability Seminar for 2013.
- Ms. Stacy Lord, EO II, NRMD was a participant at the Caribbean Sub-regional Workshop on Capacity Building for the Effective Implementation of the Cartagena Protocol on Biosafety.
- Ms. Diana Fernandes, EO II, NRMD attended the Second Regional Meeting of the GEF ABS LAC Project and Workshop on Negotiation of Contracts for Access to Genetic Resources.
- Mr. Dhanraj Persaud, Administrative Director attended a Consumer Rights Symposium commemorating “World Consumer Rights Day.” The theme for this symposium was “Consumer Justice Now”.
- Mr. Jermaine Clark, SEO, Biodiversity Unit, NRMD attended a National Seminar on Amazon Cooperation Treaty Organization (ACTO) in Guyana.

Upcoming Activities



The EPA initiates and undertakes continuous activities to ensure that the concept of environmental stewardship reaches across all parts of Guyana. Having successfully achieved the set goals for the first 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 April—June 2013 include the following:

Activity	Theme	Target Group	Date
Earth Day <ul style="list-style-type: none"> • Mural Painting • Radio Tips • Radio/TV Quiz • Climate change workshop • Earth Day Message by Minister of Natural Resources and the Environment 	'The Face of Climate Change'	School-based Environmental Clubs	April 22
International Day for Biological Diversity <ul style="list-style-type: none"> • Art Competition • Exhibition • Documentary Night • Panel discussion • Biodiversity tour 	'Water and Biodiversity'	Selected schools and general public	May 22
World Environment Day <ul style="list-style-type: none"> • Green Walk (Georgetown) • The spoken word challenge • Photo Canvas • Panel Discussion (NCN 11) • Ride for the Environment (Linden & Essequibo) • Annual Environmental Camp 	'Think. Eat. Save.'	General public and Environmental clubs	June 5 <ul style="list-style-type: none"> • June 2 • June 5 • June • June 5 • June 16 & 29 • July
Regional Biosafety Project/National Consultation of Draft Biosafety Policy		Farmers, producers and retailers of chemicals, etc.	April



WILDLIFE SPOTLIGHT

Did you know?

The Green Parrot Snake (*Leptophis ahaetulla*)



The green parrot snake (*Leptophis ahaetulla*) is one of the most common species of the parrot snake family and is endemic to Central America and northern South America. Green parrot snakes are arboreal (reside in trees) and are active during the daytime. They are long, slender snakes and put on an elaborate defensive display when threatened. The head is elongated and distinct from the neck. The snake has a large eye with a round pupil, while the body is slender, and the tail long.

The green parrot snake is a colubrid, the name that refers to a broad family of nonpoisonous snakes. Over half of all snake species worldwide are members of the *Colubridae* family. Green parrot snakes vary in appearance, but most adults have bright green scales. The belly scales may be light yellow, green or white. Some individuals develop a darker stripe around their bright yellow and black eyes. Adults average between six and eight feet in length.

The young hatch from eggs laid by the female.

Habitat and Range

The green parrot snake may be found in a wide range of habitats, from the Amazon rainforest to dry savannas. The snake is also common in the Pantanal wetlands in Brazil as well as desert-like shrublands and thorny-treed forests in Brazil called Caatinga areas.

Diet and Hunting Methods

The green parrot snake feeds primarily on frogs from the *hylidae* family. Parrot snakes will also feed on small lizards, birds and bird eggs. They are active hunters and track down their prey during the day. Many of the frogs that they feed on are nocturnal species, so the snake simply has to uncover their resting places during the day for an easy meal. Green parrot snakes, like most non-venomous snakes, constrict their prey once captured and swallow them whole.

In turn, they are fed on by birds of prey.

Defensive Displays

When threatened, the green parrot snake will raise its head off the ground and face the threat with a gaping, hissing mouth. If the threat persists, it will flatten its neck and hiss louder and then open its mouth once more. This behavior makes the green parrot snake appear similar to the eye lash pit viper as well as the forest pit viper, two venomous snakes found in the same range.



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.

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

Editorial Committee:

Sharifah Razack

Padmini Persaud- Roberts

Fareena Alli– Narine

Candacie Brower– Thompson

Aretha Forde

Deuel Hughes

Sean Mendonca

E-mail: eit.epaguyana@gmail.com

Mailing address:

Environmental Protection Agency,
EIT Division,
Ganges Street,
Sophia,
Georgetown.

Telephone #s:

225-6044, 225-6048, 225-5467-9,
225-0506, 225-6917, 225-1218,
225-2062

Fax # 225-5481

