



GREEN LEAF

WORLD ENVIRONMENT DAY 2012

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World Environment Day is the most celebrated global day for positive environmental action. It was first celebrated in 1973, after being established by the United Nations General Assembly in 1972 to mark the opening of the Stockholm Conference on the Human Environment.

Every year, on June 5, countries around the world undertook celebrations to draw attention to particular environmental issues. This year's theme **Green Economy: does it include you?** sought to raise awareness of the need to pursue a low carbon development path that leads to social equity and resource efficiency in the face of global warming and its dire impacts on water resources, food security and ecosystems.

World Environment Day targets everyone-politicians as well as citizens, urging them to play their part in supporting a Green Economy; by performing simple actions such as conserving or using cleaner forms of energy and recycling their waste.

WED Activities in Guyana

In Guyana, the Environmental Protection Agency (EPA) under the Ministry of Natural Resources and the Environment (MNRE) organized a number of

activities in observance of World Environment Day.



The President and Minister of Natural Resources and Environment participating in this year's Green Walk

Observances began with the annual Green Walk on June 03, commencing at the Umana Yana and ending at the National Park. Participating in this event were several Government Agencies, NGOs, Youth Groups and Environmental Clubs. The Walk was graced by the presence of the President of Guyana, H.E. President Donald Ramotar, and the Honourable Minister of Natural Resources and the Environment, Mr. Robert Persaud, who also addressed the participants at the end of the event.

Editorial Note

There was much pomp and ceremony centered around the recently concluded Rio +20 conference. However in many experts' opinions, it fell short of expectations, taking into consideration that the world's most influential leaders did not make an appearance. Furthermore, there were no major binding commitments by the world's biggest polluters to curb their destructive habits.

This should not be translated to mean that multilateral environmental agreements are not to be pursued as a means of ensuring binding commitments, and that all is lost. While we have no control over what other nations decide to do or not to do when it comes to protecting the environment, there is much that we can do within our own countries.

Guyana has taken a number of significant initiatives in this regard, namely the crafting of the Low Carbon Development Strategy, providing free solar panels for hinterland communities, the removal of taxes from all renewable energy equipment, the phasing out of the use of plastic bags, the banning of styrofoam utensils at government functions and more recently the launch of the **"Pick it up Guyana"** campaign. Despite one's political affiliations or preferences, all can agree that these are steps in the right direction.

The Honourable Prime Minister Mr. Samuel Hinds and the Honourable Minister of Health Dr. Bheri Ramsarran also participated in the event which attracted over 800 persons representing 22 contingents.

Each contingent created its own banner to depict its interpretation of the World Environment Day theme. In addition, contingents chanted slogans centered around the theme as they walked through the streets of



Participants in this year's Green Walk

WORLD ENVIRONMENT DAY 2012

Prizes were awarded for Best Banner, Best Chant, Uniformity, and Largest Contingent. Graham's Hall Green Ambassadors secured a prize in each category, most notably first prize in Largest Contingent, Uniformity and Best Chant. Guyana Amazon Tropical Bird Society copped the Best Banner prize.



Representatives from Graham's Hall Primary collecting the prize for Largest Contingent

In the mining town of Linden and in the Cinderella County of Essequibo, two 'Rides for the Environment' were held on June 10 and June 16 respectively. In Linden, there were approximately 45 participants from Secondary Schools, the local Scout Group and other Community Based Youth Groups. The Ride commenced at 08:00 h from the Amelia's Ward Bus Shed, headed down Burnham Drive to Christianburg and ended at the Co-op Crescent, Mackenzie, where brief remarks were given by the Permanent Secretary of the Ministry of Natural Resources and the Environment, Mr. Joslyn McKenzie and Ms. Sharifah Razack, Director, Education, Information and Training Division, EPA. Prizes were awarded for the Youngest and Oldest Participants and also the Largest Contingent

Participating in the ride.

In Essequibo, approximately 81 participants took part in this year's Ride which commenced at the Queenstown Bus Shed and ended at the Anna Regina Town Hall. Youth Groups and Primary and Secondary Schools participated in this event. Prizes were awarded for the same categories as the Linden Ride. At the end of the Ride, participants were addressed by Ms. Sharifah Razack.

In addition to these activities, the Agency has also planned an Environmental Camp for departing Grade 6 students from selected Primary Schools in Regions 4, 5 and 10 to further raise awareness about World Environment Day. Participants will be involved in learning about the environment through experiential learning. 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 planned for July 17 – 20.



Participants in the Linden (left) and Essequibo Rides (right)

INTERNATIONAL DAY OF BIOLOGICAL DIVERSITY

The United Nations annual celebration of the International Day of Biological Diversity (Biodiversity) [IDB] was observed on the May 22; under the theme 'Marine Biodiversity'. This theme focuses attention on the diversity of life found in our oceans, seas and coast and even to look further beyond the biodiversity found in these unique ecosystems. Further they then encouraged us to learn more about how we depend on these ecosystems for food, jobs, medicine and even recreation. Importantly, focus was also brought to the threats to marine biodiversity our oceans and seas which are due direct or indirectly to our activities.

of the competition were:

- 1st place– Kizzan Henry (age 12, Den Amstel Primary)
- 2nd place– Keron James (age 11, Sophia Primary)
- 3rd place– Saurav Moonsamy (age 11, La Grange Primary)

The EPA under, the Ministry of Natural Resources and the Environment, organized several activities to raise awareness under this year's theme for International Day of Biological Diversity. Activities included a TV panel discussion, an exhibition at the National Library, guest lectures at the Cyril Potter College of Education and School of Environmental and Earth Sciences, an Art Competition among pre-selected Primary Schools and, a Youth Forum for secondary schools on the Essequibo coast.

The Art Competition targeted twenty (20) Primary schools and entries were submitted under the theme: "We depend on marine life– Protect it" and attracted a total of fifty-five (55) entries. The winners



Winners of the IDB Art Competition coordinated by the EPA

Most unique however, was the execution of our 3rd Biodiversity Youth Forum which was organized this year in the county of Essequibo and hosted at the Anna Regina Multilateral Secondary School. The Youth Forum targeted five (5) Secondary Schools namely Anna Regina Multilateral, Cotton Field, Joanna Cecilia, and Abram's Zuil and Charity Secondary Schools. A total of 60 students benefited from this truly interactive forum.

Participants were tasked with presenting on the following topics specifically – each leading into and supporting the overall theme: 'Marine Biodiversity': **Oceans provide for Us, Giant Marine Life, Reptilian Marine Life, Coral Reef Ecosystems and Biodiversity & Marine Litter.** Added to their presentations, each school's contingent prepared concise posters for their respective topics which were displayed in mini-exhibition area for the benefit of all participants. At the closing of the Youth Forum, all participants made a 'pledge' to learn more about biodiversity and take action to do their part in helping to protect them.

Guyana is well-known for its unique biodiversity. It is therefore critical that we get involved and do our part in helping to conserve and protect our country's biodiversity.



Winning entry for EPA's Biodiversity Art Competition

Submitted by Kizzann Henry

Age 12 of Den Amstel - Primary School



Collage at IDB exhibition held at the National Library



IDB Seminar at CPCE



Youth Forum at Anna Regina Multilateral School

EPA YOUTH ESSAY COMPETITION 2012

Young people are not only the future, they are also the present. More than 45% of the world's population is under 25, with 1.3 billion young people living in developing countries (World Bank 2009). Their energy, ideas and aspiration are boundless. Youths are key agents of change, but too often the nature and impact of their ideas are not recognised or documented sufficiently, and youths face difficulties being heard and engaged more directly in civic life.

Including young people's views in programming and policy decisions not only reinforce their self-confidence, but also help prepare them to exercise their rights and responsibilities of adulthood and citizenship. The Environmental Protection Agency wishes to encourage young people's active participation in a wide variety of activities of their communities in order to develop their full potential by ensuring that young people's views are factored into policy and program decisions.

In order to provide an opportunity for youths to express themselves and have their views and needs heard, the EPA launched its inaugural Youth Essay Competition on March 02, 2012. This Competition targeted University of Guyana students from both the Turkeyen and Berbice Campuses. Further, this initiative was designed and implemented in partnership with the Guyana Mangrove Restoration Project (GMRP).

University of Guyana students were invited to submit essays responding to the following questions:

- ★ *How has coastal degradation affected you, your family, your community, or your country?*
- ★ *With ever-increasing coastal development, how can Integrated Coastal Zone Management (ICZM) reduce conflicts related to the myriad of activities occurring along the coast of Guyana?*
- ★ *What actions can you recommend for strengthening ICZM in Guyana?*

The Essay Competition attracted thirty-eight (38) submissions from two (2) undergraduate programmes (Biology and Environmental Studies) offered by the University of Guyana, Turkeyen Campus (76 % of the submissions came from students enrolled in the B.Sc. Degree, Biology programme). No entries were received from the University of Guyana, Berbice Campus.

Among the 38 entries, ten finalists were shortlisted, and these essays were reviewed and assessed in their entirety by a jury composed of representatives of the EPA. The finalists were selected following an assessment of the summaries provided which were based on their direct relevance to the questions asked, and the coherence of the synopsis. The winning entry was determined based on its originality of the ideas presented through compelling and novel arguments, its overall relevance to the questions posed, coherence of the material presented, sophistication of the issues discussed, and finally, its marshaling of supporting evidence. Prizes were awarded at the closing ceremony of the Annual Green Walk (2012), by Mr. Navin Chandarpal, Advisor to the President on Science, Technology and Sustainable Development, and Mr. Aditya Persaud, Project Coordinator, Guyana Mangrove Res-

toration Project (GMRP).

Anita Wilson – (19 years old, University of Guyana, Turkeyen Campus, B.Sc. Environmental Studies) was declared the Winner of the EPA Youth Essay Competition 2012, on May 21, 2012. Ms. Wilson was offered an internship at the EPA, within the Environmental Management Division, from June 18,



Ms. Anita Wilson receiving one of her prizes from Mr. Aditya Persaud

2012 to July 20, 2012, where she will be given an opportunity to contribute to the various programme areas including: Environmental Authorisation, Complaints and Response, Monitoring and Enforcement, and Research and Development.

Abstract of Winning Essay

"A coastal area is that area which is located near to the sea or ocean, and in most cases it houses most of country's population, economic activities, and its natural resources. With our country Guyana being no exception to this, coastal degradation is therefore a grave and serious problem within the country which must not be ignored. Over the years, coastal degradation has caused negative impacts within the country in its economic, social and environmental sectors, with flooding being one of the main and most destructive resultants of this coastal misuse and degradation. As a result, finances have been lost, crops and livestock have been killed, homes have been damaged or destroyed, and even lives have been lost in extreme cases. Because of this, management strategies must be implemented to ensure that this degradation is reversed and prevented at all costs, and Integrated Coastal Zone Management can justly serve this purpose, once implemented correctly. Added to this, it can reduce conflicts associated with conflict of interests as it promotes multiple stakeholder involvement and ensures that the objectives of all sectors are achieved, effectively while at the same time sustainably. Within Guyana, Integrated Coastal Zone Management strategies have provided limited results thus far, if enforcement of legislation is ensured and public education and awareness is promoted, it is believed that this management strategy would be strengthened, and the overall objective, which is to manage the resources of the coast in an integrated manner to ensure sustainability, would be easily achieved." -**Anita Wilson**

To read the complete Essay, please visit www.epaguyana.org or www.mangrovesgy.org.

KIDS CORNER

MARINE BIODIVERSITY

Marine Facts

What is marine biodiversity? Marine biodiversity is the variety of animal and plant life that live in salt water ecosystems (oceans and seas). Some forms of marine ecosystems are:

- Mangroves
- Coral Reefs
- Sea Beds



Focus on Coral Reefs

What is a coral reef? A reef is a coral community consisting of several thousand organisms living together. Although it looks like a dormant underwater bush, the reef is very much alive. Reefs grow very slowly over time. In fact, an inch of coral reef takes nearly 100 years to grow!



Where are coral reefs found? Coral reefs are found only in shallow, warm water. The water temperature is usually constant year round. The reef is made up of thousands of corals. When a coral dies, it leaves its skeleton of calcium carbonate behind. Young corals attach themselves to the old skeleton and the cycle starts again. Each new generation is built upon the remains of the previous generation.

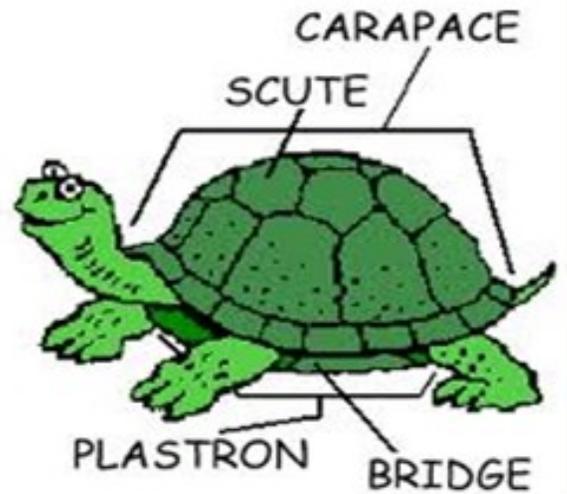
Is the coral an animal? The actual animal that makes up the physical coral is called a **polyp**. It is column shaped and attaches itself to the floor of the reef. The top end extends into the water and is free to move about. Thousands of individual polyps form a colony, which in turn forms a reef.

What makes the reef hard? Each individual polyp is responsible for each bump in the reef. Each polyp creates its own skeleton, usually made up of calcium carbonate (chalk), which it lives in. Polyps are active at night. During the daytime, they retreat into their skeleton, so divers usually only see their skeletons.

Why do so many fish live near coral reefs? Because of warm water and abundant food supply, coral reef communities are bustling with life. Reefs with their bush-like shape offer many nooks and crannies for fish to hide in. Small fish can hide from big predators inside a coral reef. Because of this, many small tropical fish are found in coral reefs.

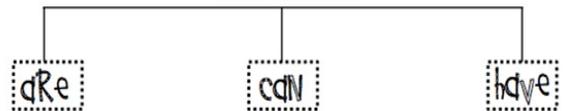


MAIN PARTS OF A TURTLE



Marine Turtles

Place the words below under the correct heading to learn about the characteristics of turtles.



- green swim brown shell tail
- lay eggs eat plants, fish or insects
- slow heads four legs reptiles

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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 fifty-four (54) Applications for Environmental Authorization, were received for the period April to June, 2012. Twenty-two (22) of the Applications for new projects, twelve (12) or existing projects, nineteen (19) for renewal of Environmental Authorizations, and one (1) for the variance of Environmental Authorizations were received during this period.

An Environmental Impact Assessment (EIA) is required for a Logging and Sawmilling Operation by Simon and Shock International Logging Inc. located at Upper Essequibo-Corentyne-North Rupununi District, Region 8 and Linden, Region 10, respectively.

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).

Thirty-six (36) Applications for Noise Permits were received and issued for this period.

The Division conducted twenty-three (23) site visits for new projects and three (3) verification visits for existing projects/operations. Compliance/renewal audits were also conducted for thirty-two (32) operations that were issued with an Environmental Authorization.

The Agency granted thirty (30) Environmental Authorizations during this period. Sixteen (16) Environmental Permits and one (1) Construction Permit were granted for new projects, while thirteen (13) Operation Permits were granted to existing 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 second quarter, the Agency would have sent officers on a number of workshops and meetings to enhance the technical skills of employees making environmental management at the Agency more effective.

- Ms. Tashana Redmond and Mr. Colis Primo participated in an Environmental and Social Management Workshop during April 19-20.
- Ms. Padmini Persaud, Mr. Stephon Rixs and Mr. Dhanraj Persaud attended and participated in an Occupational Health and Safety Month seminar at the Umana Yana titled "Green jobs, promoting safety and health in a green economy".
- Ms. Tejivarti Persaud attended a meeting organised by the Guyana Geology and Mines Commission to discuss issues related to river mining.
- Mr. Colis Primo represented the Agency at a meeting organised by the Food and Agricultural Organisation on Inland Fisheries and associated issues.
- Ms. Diana Fernandes attended a sea turtle tagging exercise organised by the World Wildlife Fund- Guianas which took place at Shell Beach during May 21-23.
- Ms. Tashana Redmond attended the first meeting of the Scientific, Technical and Advisory Committee to the Protocol concerning Pollution from Land-Based Sources and activities in the Wider Caribbean.
- Ms. Sonia Gumbs-Luke attended a Disaster Management workshop organised by the Civil Defense Commission.
- Mr. Mahendra Sawyack participated in a Technical Assistance for Mangrove Management organised by the Guyana Mangrove Restoration Project.
- Ms. Darshini Seeram attended a Country Disaster Risk Indicators and Flood Evaluation workshop organised by the Civil Defense Commission.
- Ms. Aretha Forde and Ms. Nalissa Persaud attended a meeting on June 20, organised by the Guyana Geology and Mines Commission to discuss plans for the Commission's Mining Week activities.

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 July-October 2012 include the following:

Activity	Theme	Target Group	Date
<ul style="list-style-type: none"> Annual Environmental Camp 	“Green Economy: Does it include you?”	General public and Environmental clubs	July 17-20
<ul style="list-style-type: none"> Environmental Education Teacher Training Camp 		Trainee Teachers from the Cyril Potter College of education (CPCE)	October
Mining Week– organised by the Guyana Geology and Mines Commission <ul style="list-style-type: none"> Mining Walk Mining Exhibition Panel discussion 	“Staying the course of sustainable mining”		August 19-25
International Ozone Day outreach		Primary Schools	September 16-21



WILDLIFE SPOTLIGHT

Did you know?

The Ocelot (*Leopardus pardalis*)

Also known as the 'dwarf leopard'.

Distribution– found extensively over South America, Central America, and Mexico. They have been reported as far north as Texas, and as far east as Trinidad and Barbados in the Caribbean. Ocelots only inhabit areas with relatively dense vegetation cover, although they may occasionally hunt in more open areas at night. They are found in tropical forest, thorn forest, mangrove swamps and savannas, at elevations ranging up to 1,200 meters (3,900 ft).



Appearance- Ocelots have sleek, smooth fur, rounded ears and relatively large front paws. While similar in appearance to the oncilla and margay, which inhabit the same region, the ocelot is larger. The coat pattern for these cats can vary, being anything from cream to reddish-brown in color, or sometimes grayish, and marked with black rosettes. In many individuals, some of the spots, especially on the back, blend together to form irregular curved stripes or bands. The fur is short, and paler than the rest of the coat beneath. There are also single white spots, called ocelli, on the backs of the ears. Two black stripes line both sides of the face, and the long tail is banded by black. The ocelot ranges from 68 to 100 centimetres (27 to 39 in) in length, plus 26 to 45 centimeters (10 to 18 in) in tail length, and typically weighs 8 to 18 kilograms (18 to 40 lb), with a lifespan of 11 to 15 years. Much larger individuals have occasionally been recorded, making it the largest of the generally dainty *Leopardus* wild cat genus.

Behaviour- Ocelots are mostly nocturnal and very territorial. They will fight fiercely, sometimes to the death, in territorial disputes. In addition, the cat marks its territory with urine. Like most felines, it is solitary, usually meeting only to mate. However, during the day, it rests in trees or other dense foliage, and will occasionally share its spot with another ocelot of the same sex. Males occupy territories of 3.5 to 46 km² (1.4 to 18 sq miles), while females occupy smaller, non-overlapping territories of 0.8 to 15 km² (0.31 to 5.8 sq miles). Territories are marked by urine spraying and by leaving feces in prominent locations, sometimes favoring particular latrine sites. They hunt over a range of 18 km² (6.9 sq miles), taking mostly small animals, including mammals, lizards, turtles, frogs, crabs, birds, and fishes. Almost all of the prey that the ocelot hunts is far smaller than itself, with rodents, rabbits, and opossums forming the largest part of their diet. Studies suggest that it follows and finds prey via odor trails, but the ocelot also has very good vision, including night vision.

Reproduction- This cat species typically breed only once every other year, although the female may mate again shortly after losing a litter. Mating can occur at any time of year, and estrus lasts from seven to ten days. After mating, the female will find a den in a cave in a rocky bluff, a hollow tree, or a dense (preferably thorny) thicket. Gestation lasts 79 to 82 days, and usually results in the birth of only a single kitten, with its eyes closed and a thin covering of hair. Litters of two or three kittens also occur, but are less common. The small litter size and relative infrequency of breeding make the ocelot particularly vulnerable to population loss.

Compared with other small cats, ocelot kittens grow quite slowly. They weigh around 250 grams (8.8 oz) at birth, and do not open their eyes for 15 to 18 days. They begin to leave the den at three months, but remain with their mother for up to two years, before dispersing to establish their own territory.

Ocelots live for up to 20 years in captivity.

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

Candacie Brower– Thompson

Aretha Forde

Fareena Alli– Narine

Sean Mendonca

Deuel Hughes

E-mail:

cit.epaguyana@gmail.com

Mailing address:

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

Telephone #s:

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

Fax # 225-5481

