



GREEN LEAF

Management Plan formulated for Shell Beach Protected Area

Inside this issue:

- ◆ Shell Beach Protected Area Management Plan Formulated Pg 1-2
- ◆ EPA Interfaces with the Public at National Exhibitions Pg 2
- ◆ EPA engages Primary Schools in critical environmental issues Pg 3
- ◆ Environmental Authorisations Pg 3
- ◆ Litter Prevention Wardens Programme sees steady progress Pg 4
- ◆ EPA collaborates with BNTF Pg 4
- ◆ Kids Corner Pg 5
- ◆ Building Staff Capacity Pg 6
- ◆ Infrastructure Development for Protected Areas Management Pg 6
- ◆ Complaints and Response Pg 7
- ◆ Upcoming Activities Pg 7

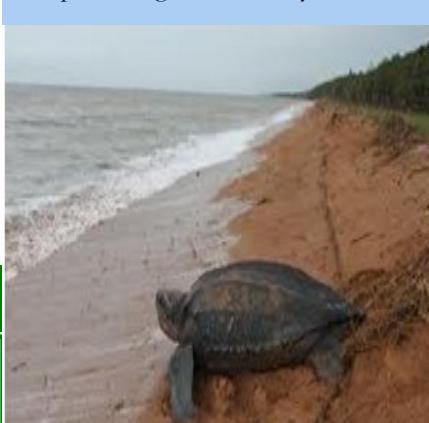
A Management Plan has been developed for the Shell Beach Protected Area (SBPA) which is designed to address conservation and sustainable resource use; law enforcement; education and awareness; and promote infrastructure development within the Area.

The development of this Management Plan was one of the major activities under the German funded Guyana Protected Areas Systems Project (GPAS) Phase II, being executed by the Ministry of Natural Resources and the Environment (MNRE) and implemented by the Environmental Protection Agency (EPA).

SBPA is located in Region 1 along the North West Coast of Guyana and in 1999, was identified as a priority site for conservation, not only for the four species of marine turtles that nest there, but also for the other rich flora and fauna present. The largest intact stand of mangroves in



Map showing the boundary of SBPA



Leatherback Turtle at Almond Beach

The United Nations General Assembly decided to place specific emphasis on Small Island Developing States (SIDS) for 2014 by designating the year as the International Year of SIDS. As we begin a new year, it is important to remember that Guyana is considered a SIDS, although it is not an island. This is so because our country faces similar challenges to those that affect the small islands of the world. These challenges include reliance on natural resources for development, low lying coast, susceptibility to natural disasters and limited financial resources.

To assist in the effort to enable our country to deal with these challenges, the EPA has continued to make strides in environmental protection and sustainable natural resource use through the establishment of its Water Quality and Litter Units and the development of key Regulations which all aim at orienting development in an environmentally friendly way.

We encourage all levels and sectors of society to continue to supporting the EPA in its efforts to implement conservation-wise actions in the coming year and beyond.

Guyana is found along this Beach - another reason for conservation, given the important benefits these ecosystems provide.

With the enactment of the Protected Areas Act in 2011, Shell Beach was legally declared a Protected Area.

...Cont'd on Page 2

Shell Beach Protected Area Management Plan Formulated

Cont'd from Page 1... A team of specialists was hired in March, 2014, to assist the Protected Areas Commission (PAC) to develop the Management Plan for Shell Beach. This Plan was developed through a highly participatory process during the period March-October, 2014. The process involved several consultations with eleven (11) Amerindian communities located in and around the Protected Area, along with Conservation NGOs, the Ministry of Amerindian Affairs and Sector Agencies in the Natural Resources Sector.

Sea turtles are under serious threat, however, they play an integral part in the marine ecosystem; like manatees they help to keep sea grass short by feeding on it, this is necessary for maintaining a healthy ecosystem and provides a perfect breeding ground for other marine species. Six (6) out of seven (7) species of sea turtles existing in the world are either threatened, endangered or critically endangered - hence the need for conservation.

In Guyana, Shell Beach is an important nesting site to four (4) of turtle species which are currently listed as endangered, the Leatherback, Olive Ridley, Hawksbill and Green turtle.



Community Consultation at Santa Rosa, Moruca.

A Draft Management Plan was made available for public review from November – December, 2014; final comments received were subsequently addressed and incorporated into the document. Over the next five (5) years, the final Management Plan will be implemented by the PAC.

EPA Interfaces with the Public at National Exhibitions

During final quarter, the EPA took advantage of the opportunity to participate in four exhibitions to interface with members of the public on environmental issues. The In early October, the EPA hosted a booth at Guy Expo - Guyana's premier exhibition and trade show event. Patrons flocked to the booth excitedly taking part in the many informative, fun and educational games to win useful giveaways.

The EPA was also present at the annual Essequibo Night Exhibition. This trade show is the biggest event of its kind in Region 2 and was held at the Anna Regina Community Center during 17-19 October, 2014. Of note was the large crowd in attendance each night, and the eagerness of the public for environmental education.



EPA staff attending to members of the public at GuyExpo.

In November, EPA set up its booth in Kwakwani, Region (10), at the annual Kwakwani Day exhibition organized by the Lions Club of Kwakwani. Visitors had a good opportunity to learn about the environment in fun ways.



Patrons engaged at the EPA Booth.

At the inaugural Geographic Information Systems (GIS) Exhibition organized in observance of World Geographic Information Systems Day, the EPA's booth was very popular. The exhibition highlighted this year's GIS Day theme *"Discovering the world through GIS"* and the EPA's booth focused on the GIS-environment conservation and management link.

The Guyana Tourism Authority exhibition held at the Guyana International Conference Center was also another successful forum for informing and educating the public. At this event, the EPA depicted the interrelationship and interdependence between tourism and environment.

EPA engages Primary Schools on critical environmental issues

In recognition of the fact that the realities of climate change are becoming more profound, the EPA continues to educate one of the most vulnerable groups – children, on this phenomenon. During the last quarter of 2014, the outreach was extended to Kwakwani, Region 10 and Annai, Region 9. Seventy-one (71) grade six students from the Kwakwani and Annai Primary schools benefitted from the EPA's climate change outreach on October 31 and November 26, 2014, respectively.

Various tools were used including music, animation and an activity booklet. Students learnt about the causes, impacts and actions necessary to help in the fight against climate change.



Students of Kwakwani Primary School

In addition, the Agency also engaged students of the Enterprise, Bel Air, and Redeemer Primary schools on the issue of waste management using an activity booklet developed by the Pick it Up Guyana Programme. The booklet highlights the negative impacts of littering and improper waste management as well as wise choices for



Students of Annai Primary playing an educational game.

reducing waste. These outreaches were conducted with the aim of exposing children to critical environmental issues and empowering them to adopt positive attitudes and actions for the environment.

Environmental Authorisations

A total of one hundred forty (140) applications for Environmental Authorisation were received for the period October to December, 2014. Twenty-six (26) of these applications were for New Projects, fifteen (15) for Existing Projects and ten (10) for Renewal of Environmental Authorisations. Eighty-eight (88) applications for short-term noise permits were received and issued for this period. One (1) application for Long-Term Noise Permit was received.

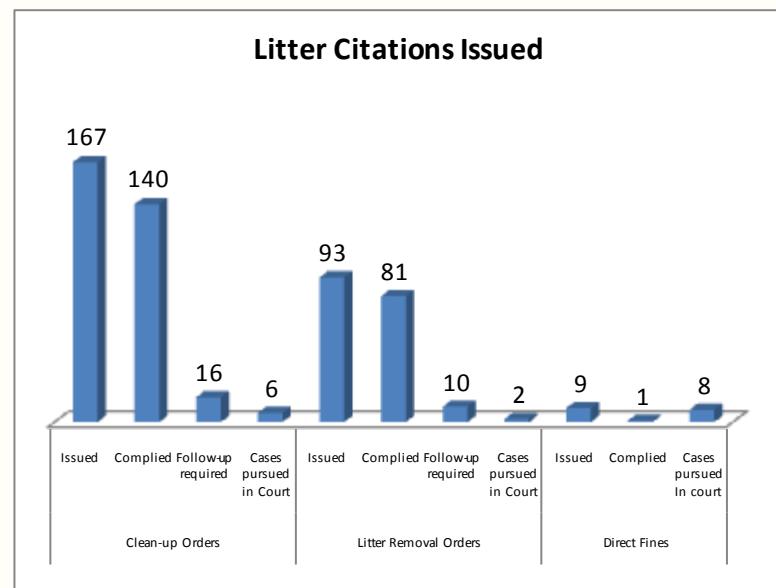
The Division conducted eight (8) site visits for New Projects and three (3) site visits for Existing Operations. Compliance/Renewal Audits were also conducted for four (4) Operations that were issued with an Environmental Authorisation as well as one (1) Variance inspection.

The Agency granted one hundred and four (104) Environmental Authorisations during this period. Six (6) Environmental Permits; one (1) Operation Permit for existing projects and nine (9) renewal of Environmental Permit were granted. A total of eighty-eight (88) short- term noise permits were issued by the Division.

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).

Litter Prevention Wardens Programme Sees Steady Progress

The Litter Warden's Programme being implemented by the Environmental Protection Agency (EPA), continues to progress steadily amidst challenges in catching perpetrators in the act, as the Agency seeks to enforce against littering and promote a clean and healthy environment. During the last quarter, a total 167 citations were issued, this is an increase of 90 citations over the third quarter. In 2015, increased efforts will be made to increase monitoring by Litter Wardens and collaboration with the City Constabulary and the Police to tackle this issue. Additionally, there is close collaboration with the M&CC Solid Waste Director to ensure regular clean-up of illegal dumpsites. Pick it Up Guyana continues to complement the Litter Wardens Programme and has been engaged in a series of workshops to train volunteers who will add impetus to the Programme.



EPA collaborates with BNTF

The Environmental Protection Agency collaborated with the Basic Needs Trust Fund (BNTF) to execute awareness programmes in five selected rural communities. The BNTF Projects are strategic and is a poverty reduction programme of the Caribbean Development Bank (CDB) involving Guyana and nine other Caricom countries.



Participants at Annai engaged in an activity

The community outreach activities were the second aspect of the EPA's collaboration with BNTF, with the first being the production of a training manual on 'water and sanitation'. This outreach complemented the instillation of Photovoltaic water treatment systems in the selected communities under the BNTF, CBD Project. It is against this backdrop that the Environmental Protection Agency collaborated with BNTF to educate communities on the critical role of water in sustaining life on earth, with the aim of fostering attitudinal changes and conservation practices.

This training programme was spread across the many Regions of Guyana and was welcome by the various communities. The training's main focus area was on "Water and Sanitation" with emphasis on rural communities of Sand Hills and Wiruni in Region 10, and Santa Mission and Annai in Regions 3 and 9, respectively, to mention a few of these areas covered.

The Guyana Water Inc. also played a critical role in the process, since GWI's representative educated residents on the technical aspects of the water treatment systems such as, water treatment methods which entailed practical demonstration on how residence can better treat their water for domestic uses.

Simple testing methods to determine pH and Chlorine levels in their drinking water were also conducted. Sessions on repairs and maintenance of Photovoltaic systems as well as trouble shooting were also facilitated to equip residents with the requisite skills needed to sustain and maintain these systems.

Officers of the EPA delivered strategically designed presentations on the importance of water and conservation measures and also highlighted the critical need for proper hygiene. The opportunity was also taken to discuss best practice methods for combating and adapting to Climate Change. The linkage between this phenomenon and drinking water availability was also highlighted; the importance of waste management especially at the household level was underscored.

The participants provided overwhelming positive feedback and expressed gratitude to BNTF, GWI as well as the EPA for the excellent and timely workshops.

Kids Corner

Happy New Year—2015

Recycling

Find the Words Below and lets have some recycling fun!!!!

R W I G R E U S E J H K P M A
 E T E N X O A R L S G K C R L
 V L I N Z G U E A W K C Q A S
 A E C N E B A R G J I O T A Q
 L J N Y B I T X D P W A S T E
 U H U I C K K H U X V M U E F
 A U S V P E N T R E A S U R E
 B H R R X J R O P O I X R R I
 L C Q V B N S P I A J H P E Y
 E Y V O P N T G N T C I V D Z
 I X M I U E C M I V U Q R U S
 T N E M N O R I V N E L U C A
 O C L C C L Z H P C O Z L E V
 J I J F S J N I Z B G C D O E
 R N F F A R E K U P W A B X P

Why Recycle ?

- Recycling is a great way to reduce the amount of waste that goes into the trash can.
- When you recycle you are turning your trash into fantastic new items which could be enjoyed by someone else.
- Recycling is fun, and helps to develop your creativity.

ENVIRONMENT	NEW	POLLUTION
RECYCLE	REDUCE	REUSE
RUBBISH	SAVE	TRASH
TREASURE	VALUABLE	WASTE

CD Case Picture Frame

Materials:

1 or 2 slim CD cases
 ribbon
 craft glue
 scissors
 packaging tape
 pictures of child 4x6



anything to decorate your frame
 buttons, flowers
 glitter

Instructions:

Cut ribbon into 4 pieces that are 100cm (5 inches) long. Dab a little glue in each corner on the inside of the cover of the case. Slide ribbon under the inside tabs (and on top of the glue) of the case making a border. Place picture on top of ribbon and secure with tape. You could stop there and make it a standing frame. For the double picture frame hanger, repeat steps 1-4 on a second jewel case. Cut 2 pieces of ribbon of equal lengths to use to connect the two frames. Secure both ribbons to the back of the jewel cases with tape. Make sure there is equal space between both cases so your picture frames hang straight. Cut another piece of ribbon for the hanger. Loop from one side of the top frame to the other. Secure with tape. Now decorate the front of the frames.



Building Staff Capacity

The EPA continues to take advantage of opportunities to build the capacity of its staff to execute its mandate. During the last quarter of the year, staff participated in meetings and workshops as follows:

- ◆ **Mr. Sean Mendonca and Ms. Tashana Redmond:** Creative Problem Solving and Analytical Thinking Workshop organized by Arthur Lok Jack Graduate School and held during October 29 – 30, 2014.
- ◆ **Ms. Malicia Hall:** Aviation Fuel Training organized by the Guyana Energy Agency and held during October 21-22, 2014.
- ◆ **Mrs. Sonia Gumbs-Luke:** International Day for Disaster Reduction 2014 held on October 13, 2014.
- ◆ **Ms. Camille Adams and Ms. Dulcie Abraham:** Waste Water Management Workshop organized by the Ministry of Housing and Water and held on November 06, 2014.
- ◆ **Ms. Savitri Itwaru:** Sharing Experiences on the FLEGT/VPA during November 18 – 19, 2014.
- ◆ **Ms. Dulcie Abraham, Ms. Malicia Hall and Mr. Frank Grogan:** Code of Practice for Packaged Water and Specification for Packaged Water organized by GNBS and conducted on November 24, 2014.
- ◆ **Mr. Colis Primo:** The Conformity Assessment Workshop organized by GNBS held in Trinidad during November 17 – 19, 2014.
- ◆ **Mrs. Sonia Gumbs-Luke, Ms. Gregoria Vaughn, Ms. Monique Williams and Mr. Mahendra Budhram:** Environmental and Social Safeguard Training organized by Ministry of Local Government and Regional Development during December 01 – 03, 2014.
- ◆ **Ms. Malicia Hall, Ms. Gregoria Vaughn, Mr. Denroy Browne and Ms. Whoopi Liverpool:** Use of Environmental Monitoring Equipment Training organized by Ministry of Local Government and Regional Development. during December 09 – 10, 2014.

Infrastructure Developed for Protected Areas Management

To boost protected areas management in the country, the Protected Areas Commission's Head Office Building in Georgetown and the Tukey Guesthouse/Caretaker's Building at Kaieteur National Park were completed and equipped with photovoltaic systems. These infrastructure Projects were implemented under the German funded Guyana Protected Areas Systems (GPAS) Project Phase II which seeks to support conservation of tropical forests.

The Tukey Building will provide needed accommodation service to personnel involved in monitoring of the Kaieteur National Park and the electrical and

PAC Head Office including solar panels at the National Park, Thomas Lands, Georgetown

photovoltaic systems installed will better equip the building for this purpose.



Tukey Guesthouse and Warden's Building at Kaieteur National Park



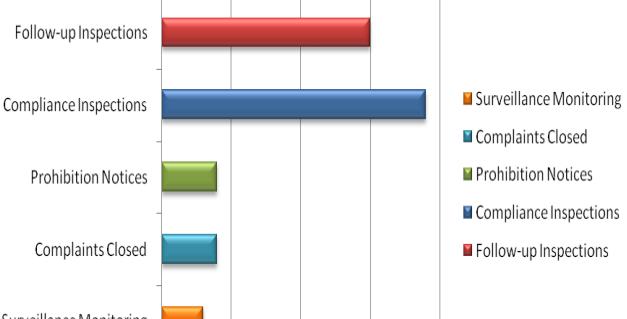
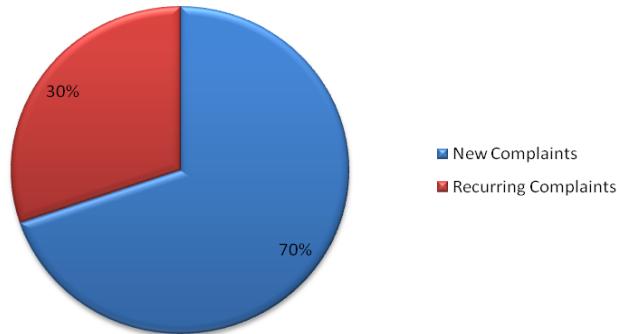
The Protected Areas Commission's (PAC) Head Office located at the National Parks Commission building was remodelled and rehabilitated inclusive of its boardroom. The installation of a solar grid-tied system allows the building to utilize clean solar energy and to be "green" or environment friendly. Any excess solar energy captured is added to the national grid.

The rehabilitated and refurbished PAC Head Office was officially opened in April, 2014 and was named the Schomburgk Building, in the presence of a visiting German delegation. Sir Robert Schomburgk was a German explorer for the British in the 1830s who has been credited with renowned achievements, such as, the discovery of the giant water lily (*Victoria regia* – later renamed *Victoria amazonica*); the *Schomburgkia orchid*; and the "Schomburgk Line" – the provisional boundary between British Guiana and Venezuela, among many others.

Complaints and Response Management

Forty-three (43) complaints were received for the last quarter of the year comprising thirty (30) for new complaints and thirteen (13) for recurring complaints. Nineteen (19) Compliance Inspections were conducted; of which (15) were follow-up complaint inspections and three (3) were surveillance Monitoring exercises. Four (4) Prohibition Notices were issued for the quarter and four (4) complaint cases were closed.

Complaints Received for the Period



For the month of October, seventeen (17) complaints were received in relation to: dust, noise and improper waste disposal. While in November, twenty-six (26) complaints were received in relation to dust, noise, odour and livestock operations. No complaints were received for the month of December.

Upcoming Activities

The EPA initiates and undertakes activities on a continuous basis to pursue its mandate. Having successfully achieved the set goals for the last quarter of the year 2014, planning and coordination have already begun towards strategic objectives for the first quarter of 2015.

Activities scheduled for January - March, 2015, are as follow:



Activity	Theme	Target Group	Date
World Wetlands Day	"Wetlands for our Future"	General Public	2nd February, 2015
UG Career Day	"Building block for a stronger foundation"	University of Guyana Students and Interested Public	20th February, 2015
Outreach -Poultry and Swine Guidelines	Monitoring and Public awareness	General Public	Jan-March 2015
Site Visits for Projects in the Environmental Authorisation Process	Projects going through Environmental Authorization process	Projects in Regions : 1, 4, 6, 7, 9 & 10	Jan-March 2015

WILDLIFE SPOTLIGHT

Did you know?

The Sun Parakeet (*Aratinga solstitialis*)

The *Aratinga solstitialis* (also known as the Sun Conure) is a member of the family *Pittacidae* species of parakeets. They are largely found in central Guyana, and Roraima state in Brazil. The species may also be found in extreme south-eastern Venezuela, near the Brazilian border, but has probably disappeared in Suriname and French Guiana.

Appearance

Despite having once been abundant, a history of unsustainable trapping has made the strikingly plumaged Sun Parakeet one of South America's rarest parrots. Vibrantly coloured, the sun parakeet is largely yellow, with contrasting patches of orange around the head, belly, rump and lower back. The wings are green and blue, with yellow tips, and the long, elaborate tail is green and olive, with a yellow tinge. The sharply curved beak is black, while the dark brown eye is surrounded by a bare white eye ring. The sexes are very similar, but juveniles have a green upper back, a reddish tinge on the lower back and rump, a green throat and an orange breast. Their size ranges from an average head-body length of 30cm and they weight between 120-130g.

Habitat

Its exact ecological requirements remain relatively poorly known. It is widely reported as occurring in savannah and coastal forests, but recent sightings suggest it mainly occurs at the edge of humid forest growing in foothills in the Guiana Shield, and crosses more open habitats only when traveling between patches of forest. Like other members of the genus *Aratinga*, the Sun Conure is social and typically occurs in groups of up to 30 individuals. It has been reported as nesting in palm cavities.

Diet

The main foods in this bird's diet are fruits, flowers, berries, nuts, and the like.

Reproduction and nesting

Very little is known about the Sun Parakeet's breeding behaviour, but in common with most parrots, it is probably monogamous, pairing with a single partner throughout its breeding life. They reach sexual maturity at around 2 years. Breeding takes place in February, and a nest is constructed in a cavity of a palm tree. Around three to four eggs are laid, and incubated by the female for a period of approximately one month. The young chicks will remain in the nest for around eight weeks before fledging.



Facts

The term **Conure** readily identifies the bird as one of the species of small to medium sized parrots with a long tail of the tribe **Arini**, that are mainly endemic to South America. Also, captive Sun Conures can live for 20 to 30 years provided they are properly cared for and do not fall victim to accidents. They are also known for their melodious vocals in the morning and in the evenings.

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

Candacie Brower - Thompson

Deuel Hughes

Vanessa Williams

Dillon Charles

Fareena Alli - Narine

E-mail:

eit.epaguyana@gmail.com

Mailing address:

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

Telephone Numbers:

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

Fax # 225-5481

