

ENVIROFOCUS

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Issue #19



ACT NOW
protect our environment



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Director's Message



The end of 2019 marked the end of the second decade of the 21st century. At the beginning of the decade the Environmental Protection Department (EPD) set an agreed strategic direction to address some of the challenges encountered at the time. Strategies were focused on addressing five (5) areas of concern:

1. pollution prevention;
2. evaluation of environmental health risk;
3. polluter pays and economic resources;
4. public education and information sharing; and
5. research and development.

The theme of “Lasting Solutions Through Thorough Assessment” ran through the four (4) strategies of:

1. understanding your environment;
2. environmental protection for a wholesome life;
3. resource efficiency; and
4. compliance through communication, education, partnerships and shared responsibility.

What have we achieved over the last ten years? A number of research programmes were commissioned with varying degrees of success. For instance, the EPD has made significant contributions through the completion of:

- a. Regulatory and compliance inspection reports on forty-one (41) facilities;
- b. Two (2) National Anti-microbial Resistance studies;

- c. Ambient Air Quality Assessments of Bridgetown, Oistins, Speightstown, Holetown and two (2) Rural areas;

- d. Noise characterization studies of Bridgetown, Speightstown, Oistins and Holetown;

- e. National Implementation Plan for Stockholm Convention for Persistent Organic Pollutants (POPs) for Barbados;

- f. National Inventories for PCB, PBDE, Pesticides, PFOS and UPOPs;

- g. Technical guidelines for Environmentally Sound Construction, Operation and Decommissioning of Petroleum Storage Tanks;

- h. National Implementation Strategy: Globally Harmonized System of classification and labelling of chemicals in Barbados;

- i. National Water Reuse Policy;

- j. Updated National Oil Spill Contingency Plan.

As we advance the local sustainable development agenda, this foundation of knowledge will serve to assist in realizing the goal and objectives articulated in the National Strategic Plan. As a Department we will continue to advocate for an Environmental Protection Act with provisions for authorization and licensing of facilities, processes, procedures and people to prevent, reduce and control pollution of our sensitive ecosystems.



RADIATION PROTECTION & SAFETY

Radiation. In our last issue, we highlighted that radiation may be used for agricultural, medical, industrial and educational purposes. And, we introduced you to the International Atomic Energy Agency or IAEA whose sole focus is to promote the safe, secure and peaceful use of radiation and nuclear technologies.

Sounds familiar?

No?

Well, in that issue, we mentioned that Barbados became a member of the IAEA in November of 2015 and we identified actions that the Government of Barbados was taking to protect you from skin burns, sickness and death! The possible outcomes when radiation is used inappropriately or maliciously.

In 2019, the Government of Barbados, through the Environmental Protection Department (EPD), continued its efforts to improve radiation protection and safety. There was:

- a review of the regulatory mechanisms for radiation protection and safety in Barbados by international experts; and
- training for identifying and securing certain radioactive sources.

These events were conducted from September 2-5, 2019 and September 9-12, 2019, and hosted by the IAEA.

The experts from the IAEA reviewed the current regulatory infrastructure and provided guidance on the steps needed to ensure that our national regulations meet the international requirements.

There was also an opportunity for stakeholders from across various sectors in Barbados to give input into a national policy for radiation protection.

As a result of the training course, there are now 22 persons from the Department of Emergency Management, Ministry of Labour and Social Relations Partnerships, Environmental Protection Department, Sanitation Service Authority, Barbados Fire Service, Royal Barbados Police Force and Barbados Defence Force, who have been trained in recovery planning, design, and searching techniques for radioactive sources.

The EPD also participated in the development of a draft national radiological emergency plan with the assistance of the IAEA and other stakeholders.

So, now you know. Even though, radiation has a number of beneficial uses, it is dangerous! However, rest assured that the EPD is working to keep you protected.





REMOVAL OF DERELICT VEHICLES

What is a derelict vehicle? More importantly, why should we care about them?

A derelict vehicle is an abandoned automobile, truck or other vehicular part which may become a home for rodents and other vermin. They can lead to the spread of diseases such as dengue fever and leptospirosis. Derelict vehicles can also be:

- unsightly;
- sources of potential fire, safety and security hazards for communities; and
- sources of pollution if, for example, engine oil leaks from them.

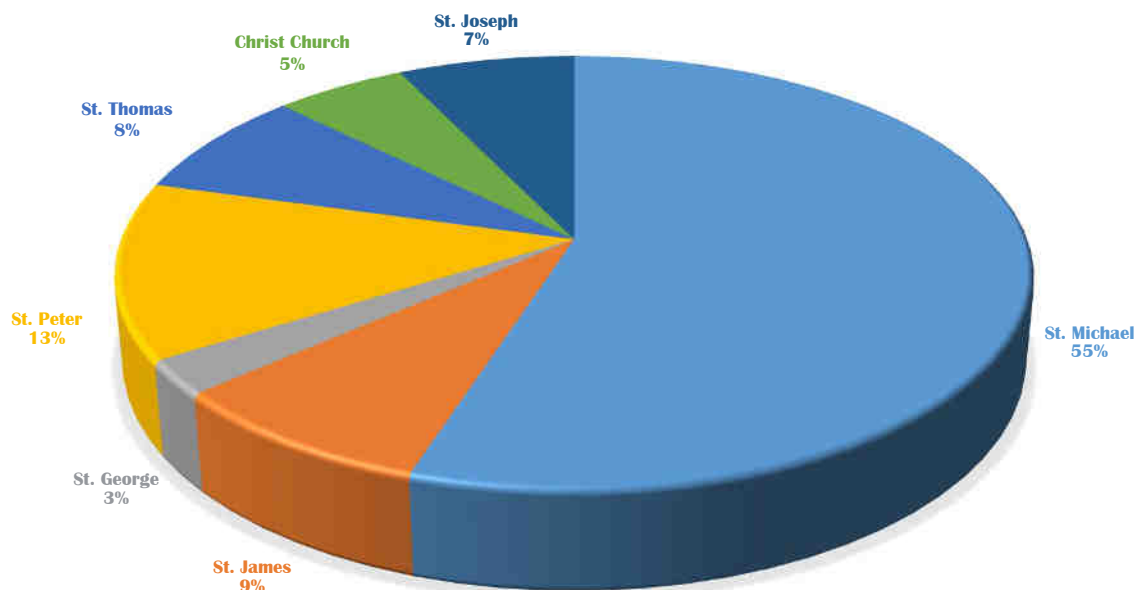
The role of the Environmental Protection Department, EPD, is to reduce the presence of these

sources of potential hazards and ensure their safe disposal.

In April, 2019, the EPD coordinated the removal of 387 vehicles from across the country. The pie chart shows the proportion of vehicles that were removed from each parish. The Department will continue to identify and remove derelict vehicles in an effort to beautify the island, reduce disease and prevent pollution of the environment.

You can also play a part.

If you think that there is a derelict vehicle in your area, contact the EPD at 535-4600 and ask to speak to an officer in the Derelict Buildings and Vehicles Section. They will investigate and, if the vehicle is derelict, take the necessary action to have it removed and safely disposed.



INTERNSHIP

PROGRAMME 2019

Each year the Environmental Protection Department (EPD) strives to provide meaningful work experience for young people who have an interest in environmental monitoring and control. This is achieved through the Department's annual internship programme, which caters to:

- final year students in the Environmental Science Programme at the Barbados Community College; and
- students from secondary and other tertiary institutions.

This year the Department was pleased to host:

- Mr. Neil Carrington and Mr. Tige Wilkinson from the Barbados Youth Service;
- Ms. Saffire Fields and Ms. Kara Corbin from the Barbados Community College; and
- Ms. Kerrisha Gibson and Mr. Chad Barrow from the University of the West Indies.

The interns were exposed to the various functions of the Department, undertook projects and accompanied the officers on their daily duties. From all reports, they enjoyed the experience.



Neil Carrington

Kerrisha Gibson

Tige Wilkinson

Saffire Fields

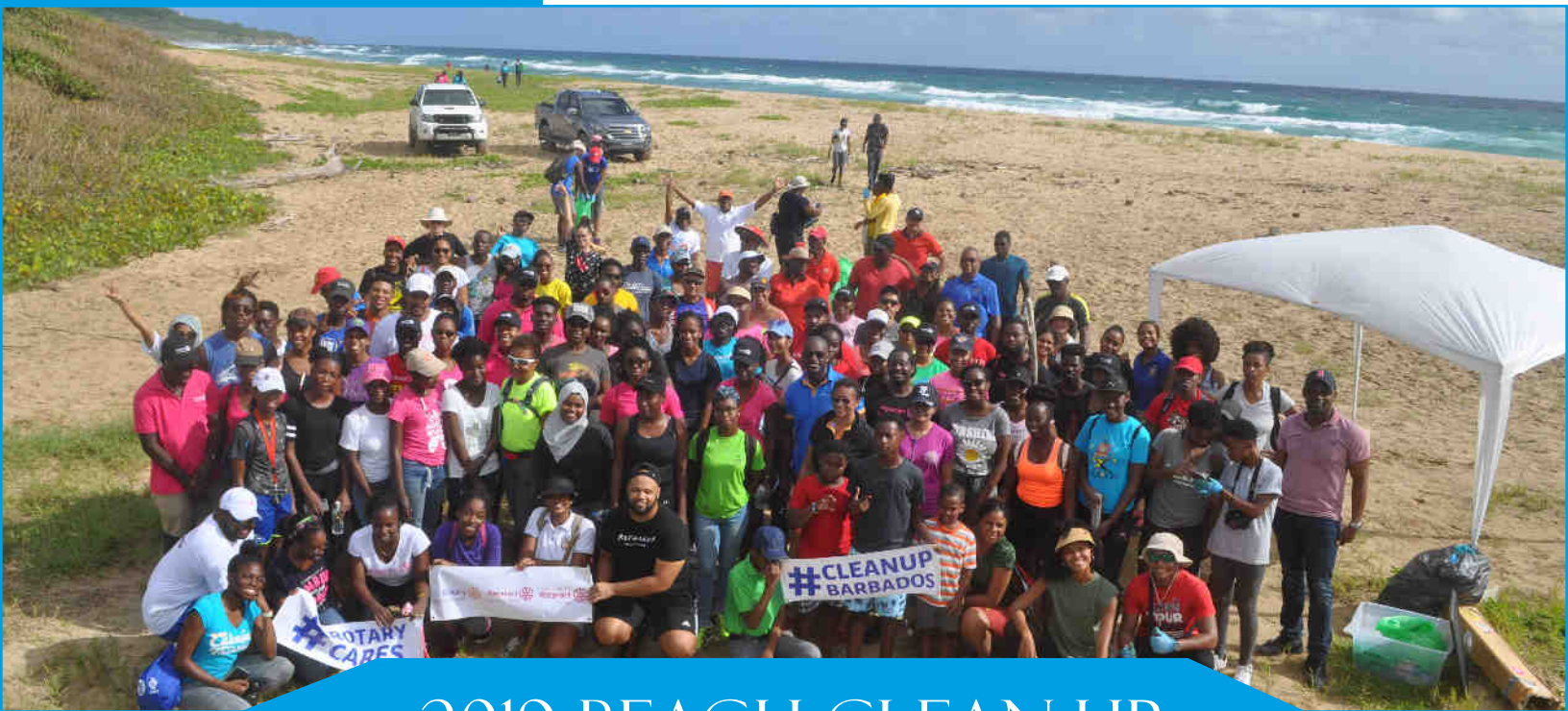
Kara Corbin

Chad Barrow

"Water and air, the two essential fluids on which all life depends, have become global garbage cans."

- Jacques Yves Cousteau, Oceanographer





2019 BEACH CLEAN-UP

The National Marine Litter Monitoring Programme has been an ongoing initiative by the Department which began in 2006. Each year, the residents of Shorey Village, St. Andrew, non-governmental organisations, private sector agencies, government departments and lovers of the environment join the Environmental Protection Department (EPD) to clean Morgan Lewis Beach and record information about the marine litter collected.

The clean-up has been conducted every year, with the exception of 2018, at Morgan Lewis beach, which is located on the east coast of Barbados and receives runoff from the north and east portions of island. Approximately 144 people attended and assisted personnel of the EPD with the clean-up on Saturday, September 21, 2019, including the Minister of Maritime Affairs and the Blue Economy.

The clean-up was held on International Coastal Clean-up (ICC) Day – the third Saturday in September. ICC day started more than 30 years ago in Texas, United States of America, by Linda Maraniss and Kathy O’Hara of the Ocean Conservancy. Linda Maraniss was inspired by work done by her colleague, Kathy O’Hara, on plastics in the ocean and the two began planning what would be Ocean Conservancy’s first clean-up. Now more than one hundred countries, including Barbados, participate in ICC Day.

In 2019, the total amount of garbage collected, over a one kilometer stretch of beach, weighed nearly 1,031 pounds and consisted of 5,062 litter items. Plastic pieces and plastic bottle caps remain the most commonly found litter items. Other items collected included:

- clothing and footwear and various types of food wrappers,
- containers; and
- packaging of different materials.

Additionally, litter from ocean-based sources, in particular, fishing nets and pieces, fishing line and rope were found on the beach.

The continued presence of a significant quantity of marine litter on the Morgan Lewis Beach shows that efforts must continue to improve how we dispose of our solid waste.

Do not litter or dump waste illegally. Keep our beaches clean!



BREATHABLE!!

Air. We can't stop breathing it, but we can do something about the quality of the air that we breathe. This is why "Air Pollution" was the theme for World Environment Day 2019, and why the Environmental Protection Department (EPD) is taking this opportunity to share with you what we are doing to deal with air pollution.

What exactly do we mean when we say air pollution?

Air pollution is the term that is used to indicate that the levels of chemicals or particulates (dust) in the air can have negative impacts on both human health and the environment. Poor air quality can cause health effects such as eye irritation, upper respiratory tract infections, lung cancer and trigger asthma attacks. Environmental effects include ozone depletion and higher outdoor temperatures due to the greenhouse gases such as methane in the atmosphere. There are many sources of air pollution; some are natural such as dust from the Sahara Desert, sea salt spray and pollen from plants. Other sources originate from human activities such as construction, open burning, spray painting, agriculture, burning of fossil fuels like diesel and other activities.

Unfortunately, it is not possible to totally get rid of air pollution; at least, not with the technologies available today. Therefore, controlling what we put into the air is critical. This involves tracking the levels of chemicals and dust in the air to determine if they can cause harm, and regulating the sources that put those substances into the air.

This is where the EPD comes in!

The EPD performs various tasks linked to air pollution in Barbados. One of these tasks involves researching the levels of pollutants in the air. In 2012, the EPD initiated its first passive sampling project, which monitored the air in Bridgetown. This involved exposing filters to air for periods of three months before analyzing them to determine what pollutants were present in the air. This project was repeated during 2013 in Oistins and Speightstown and in Hometown in 2015. During the four projects, the EPD worked with the Ministry of Transport and Works and local property owners to site the sampling

equipment at twenty-one locations. Samples were collected and sent overseas for analysis. The results indicated that Bridgetown had the highest levels of air pollution of the four major towns in Barbados due to its higher population density and vehicular traffic. However, the levels observed were not a cause for concern as they were below other countries such as Singapore.

The Department also undertook a project funded by the QuickStart Programme of Strategic Approach to International Chemicals Management (SAICM) in 2018. This project looked at the levels of cadmium, mercury and lead in the air, water and soil at several sites across Barbados. The results of the air monitoring were again encouraging as no high levels of cadmium, mercury or lead were found in the air samples.

Does this mean that we should stop monitoring?

No. Of course not! Rather it suggests that we continue air monitoring. Constantly tracking the quality of the air allows the Department to identify any concerning trends so that corrective action can be taken sooner rather than later. Corrective action could include developing and delivering new public education campaigns or legislation in order to curb polluting practices. In the near future, the EPD aims to have a monitoring network across the island to provide immediate information about the air we breathe, among other things.

It is hoped that by knowing what is in our air, all of us will take steps to protect the quality of that air by regularly servicing our vehicles to minimize emissions; only using environmentally friendly refrigerants in our air-conditioning systems; and obtaining permission from agencies such as the Town and Country Development Planning Office and the EPD before building structures for industrial or commercial use such as spray-painting and autobody operations.

All life depends on clean air for survival, so air quality must be a concern for all of us. Let's do what we can to protect the air we breathe each and every day!

Blue Carbon Ecosystem Tour



Nigel Jones speaking to participants

On August 11, 2019, the Environmental Protection Department (EPD), in collaboration with the Coastal Zone Management Unit (CZMU) and the National Botanical Gardens (NBG) conducted a Blue Carbon Ecosystem Tour.

Blue Carbon?

What is that?

Blue carbon is the carbon stored in coastal and marine ecosystems such as mangroves, tidal marshes and seagrasses. These ecosystems remove carbon, in the form of carbon dioxide, from the atmosphere and store it in the plants and the sediment. For example, over a large quantity of the carbon in seagrass meadows is stored in the soils.

The aim of the tour was to sensitize the general public on the ecologically diverse areas along the coastline of Barbados, their economic importance and their role in combating the effects of climate change. Ninety (90) participants including the Minister of Environment and National Beautification the Honorable Trevor Prescod, visited three coastal ecological treasures. The locations visited were Long

Pond, St. Andrew, the Chancery Lane Swamp and the Graeme Hall Swamp both located in Christ Church. Participants received a wealth of information from presenters Mr. Anthony Headley, Acting Director of the EPD, Dr. Leo Brewster, Director of the CZMU, and Mr. Nigel Jones of the NBG.

Following the tour, an electronic survey was conducted. Participants indicated that the information provided was educational and that they enjoyed the tour immensely. Several persons indicated that they would recommend a similar tour to other persons in the future.

We listened. And, another tour is coming!

*Stay Tuned!
More Details Coming Soon...*



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