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UPDATE ON THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE (INC) ON PLASTICS POLLUTION

Rapidly increasing levels of plastic pollution represent a serious global environmental issue that negatively impacts the environmental, social, economic, and health dimensions of sustainable development, particularly for Small Island Developing States such as Barbados. In our previous Issue 22, we indicated that Barbados had entered global discussions as part of the Intergovernmental Negotiating Committee in a worldwide effort to reduce the impacts of plastic pollution.

The aim of the INC is to develop an international legally binding instrument on plastic pollution, including in the marine environment. It is anticipated that the agreement could include both binding and voluntary approaches, based on a comprehensive approach that addresses the full life cycle of plastics. Barbados has participated in three meetings of the INC to develop this international legally binding instrument and is preparing for the Fourth INC (INC-4), to be held from April 23 to 29, 2024, in Ottawa, Canada, where the proposed Zero Draft of the International Legally Binding Instrument on Plastic Pollution, Including the Marine Environment, will be used as a starting point for the development of the actual text of the agreement.

In order to prepare for this important meeting, the Environmental Protection Department (EPD), in association with the University of the West Indies (UWI) Faculty of Law, convened a stakeholder meeting on March 14, 2024, to review the Zero Draft document.

The discussions with various stakeholders, such as retailers, consumer advocates, and waste management operators, provided an outlet for their concerns and offered the negotiators points for discussion during the upcoming Fourth INC in April 2024, which will hopefully result in the drafting of a legal instrument that achieves its goal of reducing plastic waste while allowing all parties involved to benefit from the proposed changes.

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EPD INTERNSHIP PROGRAMME 2023

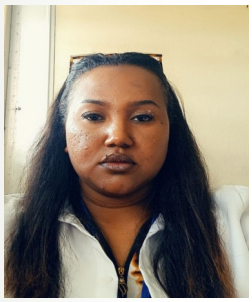
The Environmental Protection Department's Summer Internship Programme welcomed five interns, selected from the Barbados Community College and the University of the West Indies (UWI). Several of the selected interns were transitioning from the BCC to the UWI, and some had recently completed their BSc degrees and were exploring the possibility of continuing at UWI to pursue their Master's degree at the UWI Centre for Resource Management and Environmental Studies (CERMES). The internship was conducted over a six (6) week period, from July 17, 2023, to August 25, 2023.

During this period, the interns were assigned to various sections in the department, such as Solid Waste and Hazardous Materials Management, Derelict Buildings and Vehicles, Air and Noise Pollution Control, Water Quality, Marine Pollution Control, and Buildings Development, to gain valuable work experience, gain insight into the role and functions of the Environmental Protection Department, and gain an awareness of the myriad of environmental issues facing the country. In addition to the regular EPD activities, the interns were allowed to participate in an educational outreach interaction at a summer camp, participate in the GEF ISLANDS meeting on End of Life Vehicles and Country Tour, a survey for the CAP.CAP notification system, and some were tasked with working to create a summary of the 'Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean', known as the Escazú Agreement, whilst others were tasked with drafting an article for Clean Air for Blue Skies as part of Environment Month.

At the end of their internship, some of the interns were asked to write a brief report on their experience working at the EPD, which would be shared with our readers. In summary, our interns' experience at the Environmental Protection Department was enriching and educational. From learning about waste management to exploring water quality monitoring, they gained valuable insights that will undoubtedly shape their future endeavours.

As we bid farewell to our interns, we extend our gratitude for their contributions and wish them success in applying their newfound knowledge to their studies and beyond.

MY INTERNSHIP
BY NICKIETHA MORIAH



Upon completion of my Associate Degree at the Barbados Community College in Environmental Science and Biology, I was invited to apply for the Summer Intern Programme at the Environmental Protection Department (EPD). The Environmental Protection Department is a regulatory government agency responsible for environmental monitoring and control of conditions likely to affect the quality of the land, air, and water, as well as the general health and environmental well-being of the inhabitants of Barbados. During my time working in the EPD, I was assigned to four (4) of the various sections in the department.

My first assignment was in the Buildings Development Section. During my time there, I was able to do several site visits with the officers of the section and gained an understanding of what they look for in the assessment of the various plans submitted for review to the department. I also gained an appreciation for the purpose of the requirements for septic tanks, wells, and grease traps in capturing discharges of wastewater from residential and commercial buildings.

My second placement was in the Water Pollution Monitoring and Management Section. This section was responsible for the testing of groundwater (both agricultural wells and chlorinated public supply wells) and assisting the Marine Pollution Control Section in the testing of bathing beaches in the South and West Coasts across Barbados, including near shore testing (beach water sampling) on the south and west coasts. During this time, I assisted in the collection and transport of the samples to the Bes Dos-Santos Laboratory (marine samples) and Government Analytical Services (groundwater samples) for analysis.

My next placement was in the Solid and Hazardous Waste Section. The duties of this section were to monitor activities related to the safe and environmentally sound disposal of solid and hazardous materials in Barbados. These duties included the monitoring and inspection of solid waste disposal sites and the recommendation of policies that would help to manage solid waste in Barbados.

I was able to participate in a meeting of the GEF ISLANDS project dealing with the environmentally sound disposal of end-of-life vehicles. As part of the meeting, we visited two (2) privately owned recycling establishments, Scrapman Recycling and B's Recycling, which accepted end-of-life vehicles. The Sanitation Services Authority runs the Bagatelle Bulk Waste Facility, which accepts bulk waste items such as home appliances that are not allowed to be dumped at the Mangrove Pond Landfill.

Finally, my fourth placement was in the Air and Noise Quality Control Section, I was able to assist Ms. Lianda Chapman (Senior Environmental Technician (ag)) in the sectional duties of regulating, monitoring and data collection, investigating, and researching ambient air quality and noise issues.

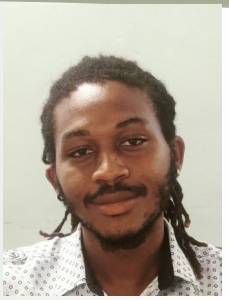
Environmental Tip

Reduce, Reuse, Recycle: Make it a habit to recycle paper, plastic, glass, and metal products whenever possible.

Also, consider reusing items like bags, containers, and bottles to minimize waste.

A NEWFOUND KNOWLEDGE

BY KERSTIN CORBIN



My first week of internship commenced with a significant assignment – investigating the viability of incorporating Artificial Intelligence (AI) into Environmental Monitoring, a task entrusted to the interns by the Director of the EPD, Mr. Anthony Headley. This opportunity not only prompted me to delve into the world of AI but also encouraged me to contemplate its potential applications, something I hadn't considered previously.

During our research, we delved into the realm of AI and its capabilities. We discovered that AI can be meticulously programmed to execute a wide spectrum of tasks, mirroring human functions. Essentially, it is constructed from intricate lines of code, enabling it to assimilate information from training data. Depending on the nature of its application, this AI can harness its training data to continuously learn and enhance its performance, thereby refining the responses it offers.

This newfound knowledge has opened up an entirely new perspective for me. I have come to appreciate the versatility and power of AI in solving intricate problems and enhancing various processes. It's fascinating to envision the possibilities that AI could unlock in the realm of Environmental Monitoring, and I was eager to continue exploring this frontier throughout my internship.

I began the internship in the Water Pollution Monitoring and Management Section, where I was able to go out into the field to observe the officers collect groundwater samples and seawater samples on their set days. I was then tasked with generating a report, where I analyzed the data for three (3) separate years for the South Coast beaches. Each report provided details on the microbial and inorganic analysis trends seen at each site.

During the second week of the internship, I was able to step out of the office and accompany the Senior Environmental Protection Officer, Miss Tonya Armstrong, on a visit to a summer camp to speak on the Department and the work done. In addition, we accompanied Miss Armstrong on an inspection as part of the processing of a radioactive material source application.

I gained insight into the process and the requirements for a radioactive source to be stored on the island, and the precautions for the storage, accessibility, and use of the source.

In August, the interns were invited to attend a consultancy meeting between the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean (BCRC-Caribbean), EPD, and stakeholders in the recycling sector of Barbados to discuss the management processes of End-of-Life Vehicles (ELVs) here.

During the meeting, I learned of some of the challenges which the recycling sector faces currently in Barbados, as well as the current practices that they have employed to manage the ELVs being disposed of at their facilities to identify if environmentally sound management (ESM) practices are in place. This meeting and the subsequent site visit provided the BCRC-Caribbean and their consultancy group, Rapid Environmental Assessment Limited, with information to help develop a plan of action to improve the ESM of ELVs. The second phase of the BCRC-Caribbean visit was a site visit to B's Recycling, Scrapman Recycling, and SSA's Bagatelle Metal disposal site.

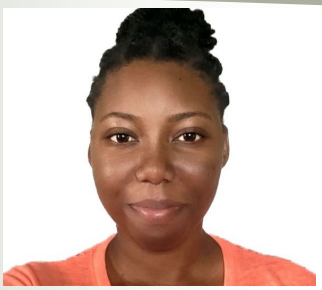
During the visit to Scrapman Recycling, we observed the disposal of end-of-life vehicles. The site also receives other materials to be recycled, such as ferrous and non-ferrous metals, lead-acid batteries, and components such as alternators and motors, which buyers can strip for parts. The site utilizes multiple bailers and grapple excavators to aid in a more streamlined process of metal sorting and compacting. Materials that are not recycled at the site are piled to be removed from the site and transported to a government sorting facility to be properly recycled.

While Scrapman Recycling focuses mainly on metal collection, B's Recycling looks at the recycling of metal, plastics, cardboard, and glass. B's Recycling is able to shred their plastics and cardboard before being shipped to their buyers off island. The metal, on the other hand, is not shredded but baled, similar to Scrapman Recycling, before shipment overseas.

In conclusion, I would like to thank the staff of the EPD for providing a learning opportunity this summer. The knowledge gained was definitely an asset, and I intend to use it when making a decision about pursuing a Master's degree.

EMBARKING ON AN ENVIRONMENTAL ADVENTURE: MY INTERNSHIP JOURNEY

BY SHERNISE MAYERS-SPRINGER



During my first week as an intern, I had the invaluable opportunity to work in the Water Quality section of the department. This experience allowed me to accompany Environmental Protection Inspector Charmaine Griffith and Environmental Protection Officer Gail Hinds to observe the operations as they gathered water samples for testing. On July 18, comprehensive groundwater testing was conducted at three pumping stations situated along the west coast.

The collected samples were then transported to the Government Analytical Services for meticulous analysis. The following day, on July 19, I worked with Senior Environmental Protection Officer (SEPO) Carlon Worrell and Environmental Protection Officer Patrick Fergusson. We visited the picturesque beaches along the south coast of Barbados, where the mission was to procure nearshore samples. These collected samples were subsequently delivered to the Government Analytical Services for nutrient assessment. Additionally, other samples were entrusted to the Best-dos-Santos Public Health Laboratory for further examination.

Embarking on my internship with the Environmental Protection Department was like opening the door to a world of adventure and learning!"

Groundwater and nearshore sampling are conducted every week, and this experience opened my eyes to the lengths that these professionals go to in ensuring the safety, well-being, and vitality of both the people of Barbados and the environment that cradles them. As my journey as an intern continued, I eagerly anticipated the unfolding chapters that lie ahead. With each interaction and discovery, my appreciation for the commitment of these professionals deepened, and I was excited to play a part, even if small, in this grand narrative of safeguarding our precious environment

On July 24, water collection continued as I worked alongside Environmental Protection Officer Tonia Williams and Environmental Inspector Charmaine Griffith as they gathered nearshore water samples along the beautiful west coast. However, this endeavor was cut short by a tropical wave, resulting in rough water conditions that were unsuitable for collecting samples.

"In just a few days, my internship experience showed me the real-world challenges and rewards of environmental work. Each day brought a new lesson."

The next day, July 25, was all about teamwork as all interns teamed up with professionals for wide-screen sampling. This happens quarterly and involves sending samples to Miami, Florida, for analysis of contaminants such as heavy metals and persistent organic pollutants. This activity was postponed due to a UPS courier strike in the USA.

As the week advanced, July 26 brought a different kind of engagement, one that highlighted the ripple effect of environmental stewardship. Teaming up with the dynamic Environmental Protection Officer Tonya Armstrong, we ventured to the Ursuline Convent School, where a vibrant summer camp buzzed.

In a condensed three-day week of the third week of my internship, I transitioned into an intriguing new task: developing a methodology for testing rain pH, which was for the Air and Noise Pollution Control section of the department, where I worked alongside Senior Environmental Technician Lianda Chapman. This shift underlined the multifaceted nature of my internship, where I not only engaged in fieldwork but also delved into office-based projects that contribute to our understanding of environmental dynamics. I continued to work on the methodology the following week.

Week five proved to be a captivating chapter in my internship journey. It kicked off with a pivotal consultation meeting on August 14, 2023, that brought together the forces of The Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean (BCRC-Caribbean), Environmental Protection Department, and key stakeholders within Barbados' recycling sphere. The agenda? To dissect the management processes surrounding End-of-Life Vehicles (ELVs).

EMBARKING ON AN ENVIRONMENTAL ADVENTURE: MY INTERNSHIP JOURNEY CONT'D

From the meeting, I gained direct insight into the real-time challenges faced by Barbados' recycling sector. The collective goal was to evaluate the environmental soundness of current practices related to ELVs and formulate a roadmap for more sustainable management practices.

During the second phase of the BCRC-Caribbean's visit on August 15, a series of site inspections unfolded at key locations: the Sanitation Service Authority's (SSA) Bagatelle Metal disposal site, Scrapman, and B's Recycling. These visits offered a unique window into the daily operations of each site.

At SSA's Bagatelle site, a structured process for handling white metal scrap was observed. This meticulous process prioritized proper segregation, crushing, and bulldozer coverage to facilitate gradual decomposition.

However, challenges emerged due to a temporarily incapacitated bulldozer, underscoring the practical complexities of site management.

The operation at Scrapman showcased a streamlined approach to the management of various recyclable materials. The strategic use of machinery such as bailers and grapple excavators illustrated an efficient sorting and compacting process. Non-recyclable materials were systematically organized for subsequent sorting and recycling.

The final stop, B's Recycling, emerged as a hub for diverse materials, from plastic containers and glass bottles to metals and old appliances.

Their innovative approach included glass bottle crushing and strategic shipment to Trinidad. Their emphasis on responsible disposal and processing, like shredding plastics and galvanizing bales, resonated with environmental consciousness.

In summary, Week 5 was an eye-opening exploration of the recycling sector's inner workings, an experience that illuminated the challenges, solutions, and dedication that underpin its daily operations. Through active participation, I gained an understanding of the intricacies involved in translating sustainable practices into real-world implementations. This week's lessons will undoubtedly echo in my future contributions to safeguarding our environment.

On August 17, I accompanied the Air Quality section to inspect and evaluate air and noise monitoring equipment. This sheds light on the intricate work involved in maintaining a healthy environmental balance. Our first destination was the Christ Church Post Office, where noise monitoring equipment was stationed atop the building. This strategic placement underscored the significance of monitoring noise levels in urban settings, ensuring a harmonious soundscape for the surrounding environment.

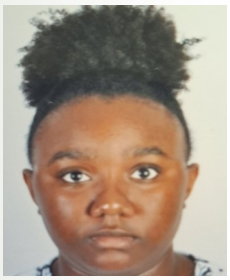
EMBARKING ON AN ENVIRONMENTAL ADVENTURE: MY INTERNSHIP JOURNEY'S END

Our expedition continued to the Caribbean Institute for Meteorology and Hydrology (CIMH), which is an institution dedicated to studying atmospheric conditions. The other sites where equipment is stationed are the D'Arcy Scott Roundabout in Warrens and the Treasury building in Bridgetown.

In summary, I will say my time as an intern at the Environmental Protection Department has been a remarkable journey filled with hands-on experiences and meaningful contributions. From groundwater testing, beach sampling, collaborating with experts, and actively engaging in constructive discussions, this experience has been both enriching and enlightening. From this experience, I look forward to applying all the newfound knowledge I have gained from my tenure at the Environmental Protection Department.

A JOURNEY THROUGH ENVIRONMENTAL PROTECTION: INSIGHTS FROM AN INTERNSHIP EXPERIENCE

BY: ADRIANA WENT



In my first week at the Environmental Protection Department, July 17–July 21, I was placed in the Solid Waste Management department, where I had the opportunity to go on site visits with the derelict department. Here, I learned what classifies a building and vehicle as derelict and the processes of removing these entities from the community in which they reside. I was also able to visit businesses that focus on recycling, such as 'Recycling Preparation Inc.' and 'Sustainable Barbados Recycling Inc.' Here, I learned about how different materials, such as metals and plastics, are recycled, shipped to different countries, and repurposed.

The interns were also invited to the Department of Emergency Management to discuss their CAP.CAP app and how it can be improved. We were also tasked by the director to create a project about integrating AI technology into environmental monitoring. which was an eye-opening experience for me, and I learned about the many possibilities Artificial Intelligence has to advance the capabilities of environmental monitoring.

In my second week, July 24–July 28, I was placed in the Building Development Control department, where I learned how to read a house plan and understand the stipulations needed to build a house up to code, such as the window sizes to room ratio. I also had the chance to go on site visits and learned how to understand the placement of a building based on the plan submitted while looking at a lot of land. During this week, I also worked on my part of the project.

The third week, August 2–4, was a short week due to bank holidays at the beginning of the week. I stayed in Building Management this week and worked on the AI project assigned.

In the fourth week, which was from August 8–11, I was placed with the Environmental Technical Officers and was tasked with summarizing the 'Regional Agreement on Access to Information, Public Participation, and Justice in Environmental Matters in Latin America and the Caribbean,' also known as the Escazú Agreement. While reading and summarizing this document, I learned about what the Escazú Agreement was, how it affects the countries attached to it, and how it can positively impact the lives of many people.

During my fifth week, I was placed in the Water Quality Monitoring department. On Monday, August 14, a consultation meeting was held about end-of-life vehicles where representatives from other countries came, and I learned about what companies such as Scrap Man Recycling and B's Bottle Recycling do with these vehicles, such as stripping them, compressing them, and shipping them to different countries.

On August 15, I had the opportunity to go groundwater sampling, where I learned about the different sites water may come from, how the water is collected, and how much chlorine must be present in drinking water so it is safe to consume.

Next, on August 17, I went on site visits with Air Quality and Noise Control. We went to check on the noise and air quality devices used to monitor pollution. Places we visited included Christ Church, the Caribbean Institute for Meteorology and Hydrology, and other sites to inspect and collect data from the equipment used to monitor the quality of air and noise levels in their surrounding areas.

A JOURNEY THROUGH ENVIRONMENTAL PROTECTION: INSIGHTS FROM AN INTERNSHIP EXPERIENCE" -END

My sixth and final week was cut short due to some unforeseen circumstances. However, I was able to accompany the Water Quality team to collect spring water for testing.

In summary, my time at the Environmental Protection Department was well spent, and I am grateful for the opportunity I had. Learning about the work each department does and going on site visits, such as groundwater sampling and visiting recycling plants, has taught me a lot, and I look forward to applying the knowledge I have gained here to my studies and my life in general.

BATTLING AN INVISIBLE KILLER

BY TYRELL PAYNE

EDITORS NOTE

We would like to share with you an article written by one of our 2023 interns., Mr. Tyrell Payne. Unfortunately due to UWI commitments Mr. Payne had to cut his internship short and was unable to complete his Internship Experience article. Therefore, we wish to share with you the article he wrote for International Day of Clean Air for Blue Skies.

Each year, nations from across the globe observe International Day of Clean Air for Blue Skies in recognition of the importance of clean air to all living organisms in our ecosystem called earth. The air we breathe is one of the basic elements of life, and is extremely essential for the normal functioning of all the cells in our bodies. Without the air that surrounds us life as we know it would not be able to sustain itself.

According to the United Nations Environment Programme, air pollution is the greatest environmental threat to public health globally. Therefore, air pollution abatement is extremely crucial; not only for the health of humans, animals, and plants alike, but also to aid in climate change mitigation as air pollution is directly linked to climate change.

On November 26, 2019, the UN designated September 7 as the International Day of Clean Air for Blue Skies. This event unites governments, organizations, and individuals globally to share knowledge, showcase solutions, and take action for cleaner air. Its goal is to reduce deaths and illnesses caused by air pollution and to assert our right to clean air.

DID YOU KNOW?

SEVEN (7) MILLION PERSONS DIE EACH YEAR FROM AIR POLLUTION RELATED ILLNESSES

AIR POLLUTION—The Invisible Killer

In order to understand the importance of days such as International Day of Clean Air for Blue Skies, we first need to understand what is air pollution and how polluted air affects humans and other living organisms and why we need to join efforts to mitigate it.

According to the World Health Organization (WHO), air pollution is defined as the phenomenon in which substances put into the air by human activity reach concentrations that are sufficient to cause harmful effects to human health, vegetation, or property.

These harmful substances are released by a variety of sources such as industrial emissions, combustion processes occurring in landfills, vehicle exhaust, and the burning of fossil fuels.

The impact of air pollution on human health heavily depends on the type of pollutant and length of exposure to that pollutant. However, no matter the type of pollutant both short- and long-term exposure can lead to a range of diseases, including strokes, asthma, the onset of respiratory infections, pulmonary diseases, and cancers. Besides human health, air pollution also affects animals and plants either indirectly or directly, and contributes greatly to climate change.

In conclusion, the International Day of Clean Air for Blue Skies reminds us of the urgent need to tackle air pollution. By learning about its sources and effects, we understand why it's important to work together to reduce it. This day encourages us to share ideas and take action to protect our health and the environment. Let's keep striving for cleaner air and a healthier planet for everyone.

WHAT ARE MULTILATERAL ENVIRONMENTAL AGREEMENTS (MEAS)?

The Environmental Protection Department (EPD) acts as the operational focal point responsible for implementing policies related to several multilateral environmental agreements (MEAs). MEAs are legally binding agreements relating to the environment between three or more states. The benefits of MEAs include:

- Promotion of cooperation on environmental issues that affect all countries and that no individual country can solve on its own.
- Utilization of available resources for the benefit of all the states that signed the agreement.
- Promotion and sharing of best practices in managing environmental challenges.
- Mobilization of financial and technical resources to address common problems.

The following articles will discuss some of the MEAs for which the EPD has responsibility.

THE BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL (THE BASEL CONVENTION)

The Basel Convention aims to protect human health and the environment from harmful effects of hazardous waste. The Convention:

- provides a system for informing countries of the shipment of hazardous waste before the waste reaches their shores;
- encourages minimization of hazardous waste generation; and
- promotes environmentally sound waste management.

Hazardous materials which cannot be treated or disposed locally, must be shipped overseas for disposal in an environmentally acceptable manner. The Basel Convention ensures that hazardous waste is shipped only to countries that are Parties to the Convention and are capable of This reduces the adverse negative impacts on human health and the environment from these wastes.

The role of the EPD is to:

- Regulate the shipment of hazardous waste overseas for disposal in keeping with the requirements of the Convention;
- Track waste disposal types and volumes and submit reports to the Convention
- Raise awareness about the Basel Convention

For more information please visit the Basel Convention website at https://www.basel.int/.

THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS

The Stockholm Convention seeks to protect human health and the environment from persistent organic pollutants (POPs). The Convention requires participating countries to reduce and, where possible, eliminate the production, use and release of POPs. POPs are chemicals that are hazardous to human health and the environment. POPs are highly toxic, very persistent, highly mobile and can build up in fatty tissue.

At the beginning of 2016, Parties to the Convention identified twenty six (26) substances whose production and use need to be regulated., with more to be potentially added.

These substances can be divided into three groups:

- pesticides;
- industrial chemicals; and
- unintentionally produced by-products from manufacturing and incomplete combustion processes e.g. the production of some pesticides and chlorinated substances.

In 2021, the previously endorsed National Implementation Plan for the management of POPs was updated by the Government of Barbados. This plan outlines activities that various stakeholders need to undertake in order to minimize the negative impacts of POPs.

For more information please visit https://pops.int

Chemical Weapons Convention (CWC)

The Chemical Weapons Convention (CWC) aims to eliminate an entire category of weapons of mass destruction by prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons, which includes the stockpiling and production of precursor chemicals associated with the development of chemical weapons.

In order to do so, countries, in turn, must take the steps necessary to enforce the tenets of the Convention. The Environmental Protection Department (EPD) has been designated as the National Focal Point for Barbados and has the responsibility to :

- report on actions taken to achieve national obligations under the convention;
- facilitate training for local officials in order to help Barbados identify and respond to threats posed by chemicals; and
- raise awareness about the Convention.

For more information please visit https://www.opcw.org/

The Rotterdam Convention

The Rotterdam Convention, established in 1998, aims to protect human health and the environment from the international trade of hazardous chemicals and pesticides..

It operates on the principle of prior informed consent (PIC), requiring exporting countries to provide comprehensive information to importing nations about potential risks.

Importing countries can therefore, make informed decisions about accepting imports. The convention promotes transparency, accountability, cooperation among nations and the enhancement of global chemical safety standards. Additionally, it facilitates information exchange, supports risk reduction strategies, and encourages safe handling practices.

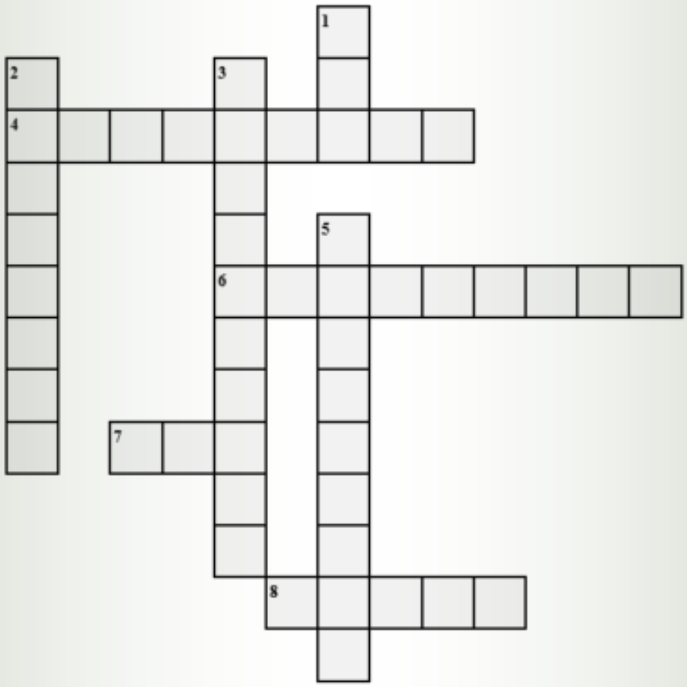
The Convention promotes the exchange of information on a very broad range of chemicals and does so through:

- the requirement for a Party to inform other Parties of each national ban or severe restriction of a chemical;
- the possibility for Party which is a developing country or a country in transition to inform other Parties that it is experiencing problems caused by a severely hazardous pesticide formulation under conditions of use in its territory;
- the requirement for a Party that plans to export a chemical that is banned or severely restricted for use within its territory, to inform the importing Party that such export will take place, before the first shipment and annually thereafter;
- the requirement for an exporting Party, when exporting chemicals that are to be used for occupational purposes, to ensure that an up-to-date safety data sheet is sent to the importer; and
- labeling requirements for exports of chemicals included in the PIC procedure, as well as for other chemicals that are banned or severely restricted in the exporting country.

Over the years, it has contributed to strengthening global chemical safety frameworks and sustainable development efforts, emphasizing responsible trade practices for a safer and more sustainable future.

The administration of the Rotterdam Convention is split between the Environmental Protection Department (EPD) and The Ministry of Agriculture Food and Nutritional Security. The EPD is responsible for the regulation of imports of hazardous industrial chemicals while the Ministry of Agriculture through the Pesticides Control Board will regulate the trade of Pesticides imported into Barbados.

Multilateral Environmental Agreements Puzzle



Across

[4] The type of assistance that the Basel, Rotterdam and Stockholm conventions provide to their parties to help implement their provisions and comply with their decisions

[6] The name of the convention that aims to protect human health and the environment from persistent organic pollutants (POPs)

[7] The acronym of the financial mechanism for the Stockholm Convention

[8] The name of the city where the Basel Convention was signed

Down

[1] The name of the procedure that requires countries to decide whether to import or not import certain chemicals that are listed in the Rotterdam Convention

[2] The body of water that surrounds Barbados

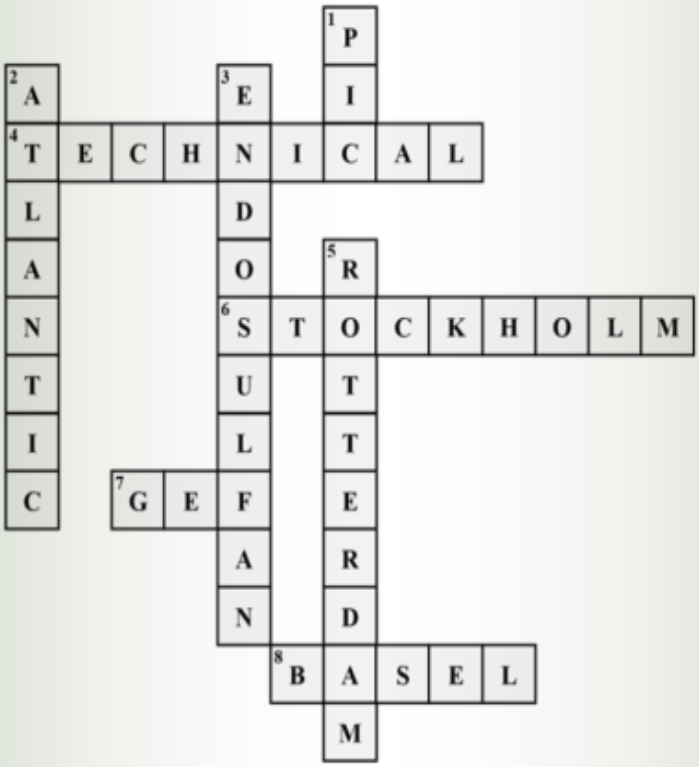
[3] The name of the chemical that is used as a pesticide and is listed in Annex A of the Stockholm Convention for elimination

[5] The name of the convention that aims to protect human health and the environment from hazardous chemicals and pesticides in international trade

Environmental Tip

Choose Eco-Friendly Products: Look for products with minimal packaging, biodegradable materials, and eco-friendly certifications. Opt for reusable items like; cloth shopping bags and stainless steel water bottles instead of single-use plastics, and reef-friendly sunscreens

Solution



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Environmental Tip

Dispose of unused or expired antibiotics appropriately, do not flush them down the toilet and minimize the use of anti-bacterial soaps and disinfectants to minimize the spread of antimicrobial resistant organisms.

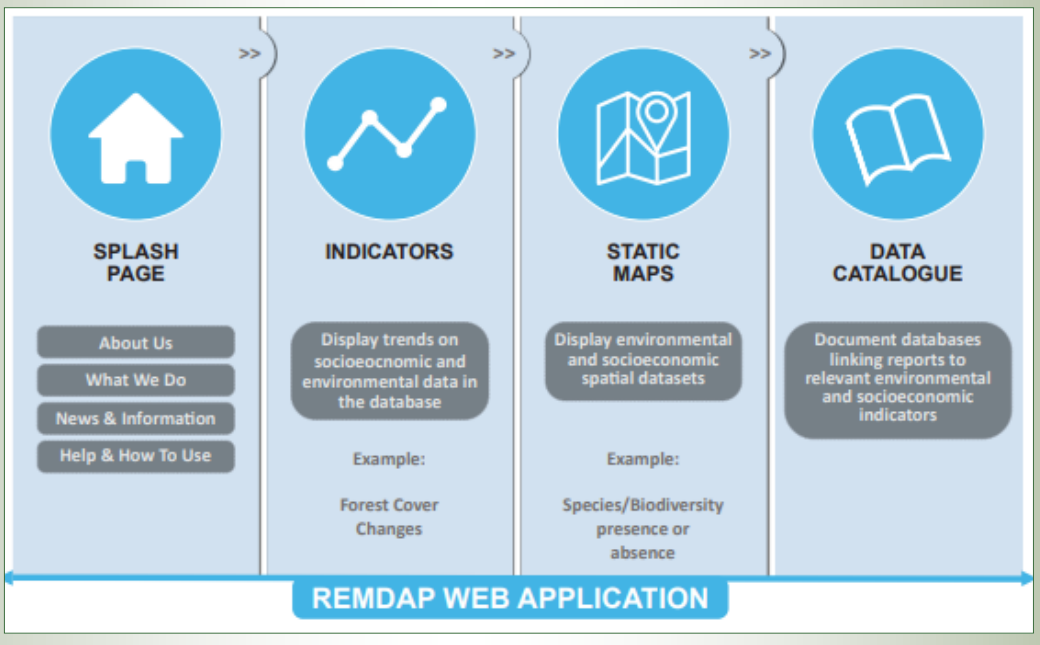
IMPROVING ACCESS TO REGIONAL ENVIRONMENTAL MONITORING DATA

Barbados is one of the eight Caribbean nations that took part in the Regional Environmental Monitoring Data Portal (REMDAP) project. This project was developed through the Caribbean Public Health Agency (CARPHA), in collaboration with the Organisation of Eastern Caribbean States (OECS) Commission, for the Global Environmental Facility (GEF) funded, United Nations Environment Programme-implemented Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco) Project.

This project was developed from studies within the "Feasibility study for the establishment of a regional environment monitoring data portal". REMDAP was designed to facilitate easier access to quality data that will support reporting, policy, and environmental decision-making. The objective of the portal was to contribute to the preservation of Caribbean ecosystems and natural resources, through the improvement of data availability by developing a web-based REMDAP. This will serve as a clearinghouse mechanism to strengthen the process of regional environmental monitoring and assessment.

The project also included training of participants from member states to use, update and maintain the web-based portal with their data. Each member state could determine what data can be shared, who can see the data, and how persons can access or request access to the data. To continue sustainability each country was given the responsible to maintain the portal with their relevant data. This responsibility will be within the Environmental Protection Department.

The Regional Environmental Monitoring Data Portal was official launched in St. Lucia on March 19, 2024.



Proposed front end of the REMDAP Web application. Visual courtesy of IWEco

OPCW SUB-REGIONAL FORUM ON THE IMPLEMENTATION OF THE CHEMICAL WEAPONS CONVENTION

The Environmental Protection Department, of the Ministry of Environment and National Beautification, Green and Blue Economy has responsibility for several international conventions serving as the national focal point. One such convention is the Chemical Weapons Convention (CWC); The Chemical Weapons Convention aims to free the world from chemical weapons and protect the populations from the risks associated with weapons of mass destruction, while promoting the peaceful use of chemistry.

The work of the Chemical Weapons Convention is executed by the Organisation for the Prohibition of Chemical Weapons (OPCW) which is headquartered in The Hague, The Netherlands. Barbados joined the OPCW in March 2007 and through the years has been taking the steps to ensure the national implementation of the requirements under this Convention. From October 3 to 5, 2023; Barbados hosted the first Sub-Regional Forum on the Implementation of the Chemical Weapons Convention for the Caribbean Sub-Region.

This event brought together delegates from several Caribbean countries which are party to the Convention, these included: Antigua & Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Suriname and Trinidad and Tobago. At the end of the meeting, the delegates expressed that they had gained a better understanding of the critical provisions of the CWC, the need for national implementing legislation and the role of national authorities for coordinating the implementation and enforcement of the CWC at the national level.

The meeting provided an excellent opportunity for collaboration among the Caribbean Member States to share experiences on the implementation of the CWC in participating countries, identify and develop best practices for the implementation of the CWC relevant to the specific national needs of the Caribbean countries and to develop mechanisms for information sharing among the Caribbean Member States.

This sub-regional forum was conceptualized to assist Member States, which are smaller and do not produce or trade in the scheduled chemicals, with the implementation of their national obligations under the CWC. It was the first of its type for the region and the OPCW has committed to working with the region to advance the implementation of the requirements under the Convention.

Delegates at the OPCW Sub-Regional Forum October 3-5, 2023

INTEGRATED WATER AND WASTEWATER MANAGEMENT (IWWM) AND CARIBBEAN REGIONAL FUND FOR WASTEWATER MANAGEMENT (CREW+)

THE CREW+ PROJECT

Barbados and many countries in the Caribbean are no strangers to the challenges associated with wastewater management. We should also be familiar with the negative impacts of improper wastewater treatment and disposal, especially on our groundwater resources and coastal areas. The GEF CReW+ (CReW+) project is being carried out in the Wider Caribbean Region (WCR) to help countries collectively address these problems.

The CReW+ project seeks to advance integrated water and waste water management (IWWM). It builds on the sustainable financing mechanisms piloted through the original Caribbean Regional Fund for Wastewater Management (CReW). It also aims to promote IWWM related feasibility studies, financing mechanisms and, the piloting of small-scale, local, rural, peri-urban, and community-based projects.

WHO'S INVOLVED IN CREW+?

The eighteen CReW+ project countries are: Barbados, Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Grenada, Guatemala, Guyana, Honduras, Jamaica, Mexico, Panama, Saint Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname and, Trinidad and Tobago. CReW+ has the added benefit of supporting countries like Barbados in realizing the United Nations Sustainable Development Goals.

The CReW+ project is funded by the Global Environment Facility (GEF) to the amount of ~ US 15 million dollars. It is implemented by the Inter-American Development Bank (IDB) and United Nations Environment Programme (UNEP). It is executed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and, the Organization of American States (OAS) and Cartagena Convention Secretariat – Caribbean Regional Coordination Unit (CAR/RCU). See the latest CReW+ newsletter here: https://gefcrew.org/resources/newsletters/21-newsletter-gef-crew-december-2023

CREW+ IN BARBADOS

In Barbados, the Ministry of Environment and National Beautification, Green and Blue Economy is the national focal point for the CReW+ project. The Environmental Protection Department (EPD) then acts as technical focal point and is a member of the CReW+ project steering committee.

Barbados' coastal waters are vulnerable to pollution via groundwater and surface water flows into the sea. Groundwater especially becomes contaminated from on-land activities such as improper wastewater disposal. There is also the challenge of emerging pollutants in wastewater which may not be fully understood. Innovative IWWM solutions are required.

CReW+ in Barbados also seeks to support the National Water Reuse Policy. Furthermore, public education and information on water reclamation and reuse as a part of IWWM is limited. It is not quite at the level required to stimulate public engagement and encourage support.

Storm water going flowing into the sea via a storm drain

Efforts to address these challenges have led to the design of two CReW+ projects in Barbados. The first is the development of a holistic communication strategy on IWWM and the second is the creation of the framework for developing a sustainable financing mechanism that supports IWWM. These will be discussed next.

BARBADOS' ACTIVITIES AND MAIN OUTPUTS- A HOLISTIC COMMUNICATION STRATEGY

The first CReW+ activity in Barbados was the development of a National Communications Strategy and Implementation Plan (NCSIP) for IWWM which would build on and complement the regional communications strategy.

The NCSIP included the determination of the relevant communication requirements and identifying and addressing challenges to effective communication, especially related to information dissemination by government bodies and agencies. This was supported by consultations with, and assessments of, key stakeholders.

Sample of material generated by the NCSIP

In addition to the communications strategy and implementation plan, this activity reported on the Needs Assessment, Best Practices, Knowledge Attitude and Practices (KAP) Survey and, Strengths Weaknesses Opportunities and Threats (SWOT) Analysis conducted for stakeholders and the public. These gave insights into gaps in knowledge and the demographic groups for targeted messaging.

Another major output was an assortment of market ready social media communication assets including editorials, google ads, jingle, logo, website, social media post and video animation.

DEVELOPING A SUSTAINABLE FINANCING MECHANISM

The second CReW+ activity was the Design of a Framework to Build/Advance the Enabling Environment for the Development of Sustainable Financing Mechanisms for Integrated Water and Wastewater Management (IWWM) in Barbados. AKWATIX Ltd. was contracted to conduct this activity.

A diagnostic analysis of the governance framework of the wastewater sector, financial sectors and other national stakeholders was completed. Gaps in the operations of these sectors regarding IWWM were identified and discussed along with an analysis of how they could support a Sustainable Environmental Protection Revolving Fund (SEPREF)/Alternative Funding Mechanism (AFM).

Two workshops were held with stakeholders in the wastewater and financial sectors. A survey/questionnaire was also administered. This fed into a feasibility assessment which was conducted. A needs assessment was also completed and specified the initial level of capitalisation and the administrative structure required to establish a financing mechanism such as a Barbados Waste Water Fund (BWWF).

Recommendations for the technical, financial, legal and engagement requirements to support the fund were provided. It was suggested that an interagency task force with specialists' input be set up to guide the work.

Other recommendations included supporting the Water Reuse Act with updated water services and sewerage regulations. This would include an assessment of the requirements to properly enforce pollution monitoring and control regulations generally.

A document for decision making, recommending the most feasible mechanism for Barbados (SEPREF/AFM) and the recommended technical, financial, and legal requirements and arrangements, will be the final output. This will then inform the expected second phase of setting up an actual fund.

Examples of the improper disposal of wastewater (above) and a wastewater treatment facility (right) both of which would be subject to pollution monitoring and control regulations

ENVIRONMENTAL PROTECTION DEPARTMENT

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L.V. HARCOURT LEWIS BUILDING
DALKEITH
ST. MICHAEL
BB12017

PHONE: 246-535-4600
WEBSITE: HTTPS://EPD.GOV.BB
E-MAIL: EPD.SECRETARY@EPD.GOV.BB