SPECIAL EDITORIAL

At the end of 2017, I will be retiring as the Chief Executive Officer of the Jamaica Environment Trust (JET) after almost 27 years. There are some days when I’m sure I’ve been doing this all my life (not true), and other times when the day my environmental journey started on the beach at Harbour View seems to be yesterday (also not true). I remember very clearly what I thought as I looked at untreated sewage from the Harbour View community flowing into the sea: in what universe is this OK? And: Someone should do something about it.

Of course, there is no universe in which raw sewage in the sea is OK, but it is now hard to remember why I thought that someone should be me. I just knew I wanted to try. I had the privilege of a childhood spent outdoors and a deep connection to the island of my birth, not just to the idea of being Jamaican, but to the physical place itself. I loved the mountains, rivers, forests, mangroves, beaches and reefs – I thought of them as the inheritance of all Jamaicans. I saw the land being degraded. People did not know. I was going to tell them.

I didn’t know anything about the environment at the time, but I began to meet others, to read, to learn, and soon, without any idea what we were all getting into, a small group decided to form a new non-profit environmental agency. We were concerned about the garbage everywhere and thought we’d call our new organization Waste Not – that was a mistake I’m glad we did not make! We wrote our first grant proposal and it was funded – a cleanup of the small gullies of Grant’s Pen. Then we did a cleanup at Hellshire Beach. We saw how quickly our efforts were undone, and turned our attention to education.

This year, our long-running Schools’ Environment Programme is 20 years old, although our education projects really started with Earth Schools in 1994, so we’ve been conducting environmental education in Jamaican schools for 23 years. And International Coastal Cleanup Day has become popular beyond anything we could have imagined at Hellshire back in 1993, when we were a handful of friends and family facing a mountain of trash – this year, over 9,600 volunteers cleaned 146 coastal sites. It has to be said that despite these efforts, our beaches are still full of garbage. More recently, we have developed and delivered the very successful Nuh Dutty Up Jamaica anti-litter public education programme – the first time JET has had an adequate budget for broad-based public education.
Roughly ten years after JET was formed, we faltered. It seemed we had failed. Despite the education efforts, the many committees, articles, cleanups, protests, interviews, handouts and presentations the island was still filthy, sewage still flowed into the sea, the dumps were unmanaged, laws were unenforced and natural resources continued to fall. We turned to the law. Surely, the courts would say the environmental laws should be obeyed?

With the help of overseas partners, the Environmental Law Alliance Worldwide (ELAW), JET hired our first lawyer in 2005. We filed our first lawsuit against the Government of Jamaica in 2006 with another environmental group, the Northern Jamaica Conservation Association, and four individuals. We challenged the public process regarding the permitting of a large hotel at Pear Tree Bottom. The judge ruled in our favour and quashed the permit. Although following representations by the owners, the hotel did go ahead, the judge made strong declarations about the failings of the consultation process. It improved. We went on to file other legal cases, including the one that finally got the Harbour View sewage plant fixed in 2010. JET still has a legal programme; we still give free legal advice to communities affected by environmental issues.

For 26+ years, we have been a determined – some would say strident, others would say not strident enough – voice for Jamaica’s natural resources. I’m proud of all that JET has achieved. Now it is time for new leadership. JET has a strong Board of Directors, a solid financial foundation, a wealth of experience and a truly outstanding staff of young people – the Jetters – who will carry on this work. It has been the privilege of my life to have stood shoulder to shoulder with them and I step down as CEO with full confidence that JET is in the best of hands. All I ask of everyone – members, donors, partners and friends – is this: please continue your support for JET, which is about far more than any single individual. JET is about nothing less than the enlightened stewardship of our homeplace itself: Jamaica.

Diana McCaulay, Chief Executive Officer
November 2017
JET’S NEW CHIEF EXECUTIVE OFFICER

Suzanne Stanley

Suzanne joined JET as Programme Director in March 2010. She has a Master of Science in Environmental Change and Management with distinction from the Oxford University Centre for the Environment, Oxford University, and a Bachelor of Science in Geography with a minor in Geology from the University of the West Indies, Mona. Suzanne has been responsible for all JET’s environmental education projects during her tenure at JET; she was promoted to Deputy CEO in September 2015 and her areas of responsibility broadened. Suzanne is an Alumni of the Georgetown Leadership Seminar, Georgetown University; her academic writing has been published in Environmental Policy and Practice in the Caribbean (2013; UWI Press). She brings eight years of energy, experience, learning and commitment to her new role.
What aspects of your job at JET have most inspired you over the years?
SS: Good communication is essential as JET solicits support for our organization and mission. An ordinary citizen shouldn’t need to hike through Cockpit Country, hold a Jamaican Iguana or see Sting Rays in Manatee Bay to understand their importance to the world we live in – effective communication can do that. It is very inspiring when an audience responds positively to JET’s messages, and in turn voices their support for environmental protection.

How do you feel about taking over as CEO of JET?
SS: Excited and happy because my new role is a fantastic opportunity and challenge on a personal and professional level; but I would be lying if I said I didn’t have a little stage fright. I consider that normal, and won’t let it get in the way of giving the job the best that I’ve got. I am a little sad because I will not be as actively involved in delivering projects; however, considering JET’s small size I am sure we will still have “all-hands-on-deck” moments to keep me engaged.

Do you have plans for new initiatives at JET?
SS: Currently my focus is for JET to continue delivering effective projects, providing legal support for communities with environmental issues and being the voice for the environment in Jamaica. This is the agenda that Diana has set for JET, and it is a big part of the reason I love working here. With that said, I do feel there are strategies for promoting environmental protection we have not fully explored, which I am considering for future initiatives - on-the-ground community projects and conservation work. It is also important to me that much consideration is given to the interests of the Jetters, as team support is essential for the success of anything JET does.

What are your main concerns about the environment in Jamaica?
SS: Although I perceive awareness of environmental issues to be increasing among Jamaicans, our country’s legal and policy framework for environmental protection and public health is lagging. Jamaica’s environmental laws and regulations are ineffective, partly due to inadequate enforcement by state agencies, but also because of what I consider to be the archaic way natural resources are perceived by some members of our government. In many GOJ sectors economic development continues to take precedence over all other considerations – including the health of citizens and our environment. As a Small Island Developing State, Climate Change threatens Jamaica’s very survival, and our leaders are still considering coal plants, bauxite mining and sand mining as viable strategies for economic development – it baffles me.

Tamoy Singh Clarke

Tamoy joined JET as a student member and volunteer via the Student Environment Network – one of JET’s early school programmes – in 2002. She has a Bachelor of Arts in Geography from the University of the West Indies, Mona and started working as JET’s Administrator in 2005. Tamoy showed considerable aptitude for accounts, and with the guidance of JET’s Treasurer and further study, she began to learn accounting procedures. She is now responsible for all in-house accounting management. Pursuing her interest in field work and project management, Tamoy became Project Coordinator in 2010 working mostly on the Schools’ Environment Programme. Tamoy was promoted to JET’s Programme Director in September 2017 and now oversees JET’s environmental education programme.

You’ve done many different jobs at JET – which ones have you most enjoyed?
I have enjoyed my job as a Project Coordinator the most as it is a diverse role and I am constantly challenged. I have enjoyed working with people from many different backgrounds of many different ages – teachers, students, communities. It is great to see a project successfully delivered from start to finish.
You’ve been at JET almost 15 years – how have you seen the organization grow and change?
When I started in 2005, there were nine people on staff and by 2010 this was reduced to only four. Since then we have grown steadily and now have a staff of seven. The types of projects we do has also changed. In the past, our projects were smaller and mostly school-based environmental education and environmental law. Presently we have larger projects with many different components, including big public education campaigns. This has helped to enhance our visibility in the media.

How do you feel about this big transition at JET?
I am excited about the transition and changes to come.

What new things would you like to see JET doing over the next few years?
Management of a Protected Area is one new thing that I would love to see JET do; I think it fits in well with our mission of protecting Jamaica’s natural resources.

LEGAL DIRECTOR
Terri-Ann Guyah
Terri joined JET as Legal Officer in March 2017. She has a Bachelor of Laws from the University of the West Indies Mona, and received her Legal Education Certificate from the Norman Manley Law School in 2013. Terri took a break from JET to have her baby daughter in August this year, but returned in early November as JET’s new Legal Director. She is now responsible for JET’s Environmental Law and Advocacy programme, and advises the organisation on legal and policy matters. Terri enjoys legislative drafting, advocacy and policy review, and loves going to court.

What do you think is the most interesting part of your job?
Most interesting part of my job is doing the site visits in areas where there are environmental issues and assessing the laws (if any) that address said issues. Earlier this year I visited a community with Diana to assess a failed drainage project – it was an eye-opening experience to see how Jamaican citizens’ private property was put at risk by state agencies responsible for implementing same.

What environmental issue in Jamaica is of greatest concern to you?
Pollution by sewage and industrial waste – because not enough enforcement and legislation exists to act as a deterrent to polluting industries

How do you feel about joining JET during this transition period?
I feel like there is a lot to learn in a short period of time. Big shoes to fill.

What things would you like to see JET doing over the next few years?
Pursuing legal action against state agencies who take decisions which fail to protect the environment

Suzanne, Tamoy and Terri will be supported by an extremely qualified and hardworking project and administration team:

Felicia Wong
joined JET in 2014 as Project Coordinator. She has a BSc in Chemistry, with a minor in Business Administration and Biology

Denise Reid
joined JET in 2017 as Public Education & Community Outreach Officer. She has an MSc in Communications and a BSc in Sociology, with a minor in Political Science

Nazli Williams
joined JET in 2014 as Administrator. She has a BA in History, with a minor in Philosophy
SEP CELEBRATES MAJOR MILESTONE

JET’s flagship environmental education programme, the Schools’ Environment Programme (SEP), is 20 years old this year. SEP has reached over 300,000 students and 600 teachers over its history and is currently funded by the Natural Resources Conservation Authority (NRCA).

During the summer of 2016, SEP partners and donors conducted a review of the structure of the programme and agreed on changes. Schools with long experience in SEP would become core schools, with less support from JET staff, and each year there would be a cohort of new schools who would receive more assistance. 39 schools participated in SEP in 2016/2017; of which 15 were new.

The usual teacher workshops were held in November 2016 under the theme Protected Areas: Do we need them? The workshops were attended by 31 teachers and ended with a debate, with participants outlining the arguments for and against protected areas, which is hopefully an approach they will use in the classroom.

The annual student workshop took place on 4 May 2017 at the Hope Zoo, and was attended by 65 students and teachers – the subject was Jamaican Iguanas: More than just two likkle lizard.

During the internal review of SEP, environmental research was seen to be the weakest element of campus-based activities, so a new research competition was devised to replace annual judging. School visits were carried out in the Easter term 2017 and the research day was held on 13 June 2017 at the Jamaica Conference Centre. Fifteen schools entered their projects, and mounted displays for a judging exercise. Guest speaker at the awards ceremony was Mrs. Thalia Lyn, Chairman of the NCB Foundation.

A short video was made of the research day awards ceremony for release via social media to celebrate SEP’s 20th anniversary. To mark the 20th anniversary JET has also launched Feature the Teacher – monthly social media posts to highlight the work of exceptional SEP teachers over the years.

### 2017 SEP RESEARCH DAY AWARDDESS

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<tr>
<th>Award</th>
<th>School</th>
<th>Research topic</th>
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<tr>
<td>Champion SEP School</td>
<td>Maryland All Age</td>
<td>Endemic birds of Jamaica: The Jamaican Owl and the Jamaican Woodpecker</td>
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<tr>
<td>Best Display – 1st Place</td>
<td>Sanguinetti Primary</td>
<td>Environmental impacts of the local communities on the Rio Minho</td>
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<tr>
<td>Best Display – 2nd Place</td>
<td>Maryland All Age</td>
<td>Endemic birds of Jamaica: The Jamaican Owl and the Jamaican Woodpecker</td>
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<td>Best Display – 3rd Place</td>
<td>Pisgah Primary</td>
<td>The impact of pollution on the Great River</td>
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<tr>
<td>Best Spokesperson</td>
<td>Ashleigh Monteth, Pisgah Primary</td>
<td>The impact of pollution on the Great River</td>
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<tr>
<td>Best New School</td>
<td>Sanguinetti Primary</td>
<td>Environmental impacts of the local communities on the Rio Minho</td>
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<tr>
<td>Most Creative Display</td>
<td>Jacks River Primary</td>
<td>Contamination of the Jacks River by ‘blue stone’</td>
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<tr>
<td>Most Knowledgeable Students</td>
<td>Sanguinetti Primary</td>
<td>Environmental impacts of the local communities on the Rio Minho</td>
</tr>
<tr>
<td>Best Solid Waste Research</td>
<td>May Pen Primary</td>
<td>Is solid waste effectively managed at the May Pen market?</td>
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THANKS TO OUR 2016/17 SEP DONORS!

SEP Research Day and Awards Ceremony highlights Clockwise from top left: His Excellency Josep Bosch Bessa, Ambassador of Spain and President of the Spanish Jamaican Foundation with students from Glen Prep; Students from the 2017 Champion SEP school, Maryland All Age, their Principal, Andria Dehaney (far left), and teacher/SEP coordinator Kerel Samuels show off their award; Honorary Consul General of Thailand and Chair of NCB Foundation, Ms. Thalia Lyn, (2nd left) and Corporate Affairs Manager at Jamaica Producers Group, Lisa Johnston (far left), engage in conversation with students from the Jack’s River Primary School in St. Mary.
JET MARKS 10 YEARS AS COORDINATORS OF ICC IN JAMAICA

International Coastal Cleanup Day was held on 16 September 2017 and for the 10th year, JET was the national coordinator of the event in Jamaica. ICC is the largest one-day volunteer event in the world, and has been coordinated globally by the Ocean Conservancy in Texas, USA since 1985. ICC Jamaica activities have been funded by the Tourism Enhancement Fund (TEF) since JET became national coordinator in 2008. This year the Yello Media Group, Inter-American Development Bank (IDB) and Jamaica Biscuit Company also came on board as first time corporate sponsors of the event in Jamaica.

In 2017, 146 cleanup sites were coordinated islandwide by 93 coordinators, attracting over 9,600 volunteers. Many ICC coordinators organized multiple cleanups across the island, including the Sandals Foundation (seven sites) and the Montego Bay Marine Park Trust (four sites). The Urban Development Corporation (UDC) had the largest single cleanup site on Hellshire Beach which attracted 1,482 volunteers.

JET’s two flagship cleanups on the Palisadoes strip (Fort Rocky and End of Stones) were also funded by TEF with added support received from the Recycling Partners of Jamaica. JET’s Palisadoes cleanup was attended by Nuh Dutty Up Jamaica Ambassadors, Double Olympic Gold Medallist, Sprinter Elaine Thompson, Bella Blair and Dutty Berry.

The special 10th anniversary issue of the ICC national summary report will be published by JET in January 2018.
SOLID WASTE PROJECT CONTINUES IN 2017

In late 2016 JET received confirmation from the Tourism Enhancement Fund (TEF) that they would continue to fund the Clean Coasts Project (CCP). In January 2017, TEF was joined by Wisynco as funders of CCP Phase III, and project activities began in early February 2017. Many CCP and Nuh Dutty Up Jamaica (NDUJ) activities from previous phases of the project have been continued and/or expanded this year.

Underwater cleanups in resort areas were executed in May 2017 in Ocho Rios, Montego Bay and Negril and will be carried out again ahead of the 2017/18 Winter Tourist Season in late November. The Debris Containment Boom (DCB) across the South Gully in Montego Bay continues to be monitored and maintained in partnership with the Montego Bay Marine Park. Yardie Environmental Conservationists have also partnered with JET to scope a new DCB site, which has been identified at Oracabessa in St. Mary. The new Oracabessa DCB is scheduled to be deployed in early 2018, as part of a study which will compare its effectiveness with community coastal cleanups being carried out simultaneously in St Ann’s Bay.

A CCP research day for secondary schools was hosted in partnership with JET’s Schools’ Environment Programme under the theme Big Up Wi Beach in April 2017. Students from eight schools from across the island showcased their projects on the importance of beaches, and competed for top prizes at the event, held at the Jamaica Conference Centre in Kingston. Morant Bay High from St Thomas emerged first place winners for their project on the Rudolph Elder Park Beach. They studied the origin of garbage on the beach, and local attitudes towards solid waste.

Under Nuh Dutty Up Jamaica, community outreach in three model communities (Trench Town, Kingston; Lakes Pen, St. Catherine; and Nine Miles, St. Ann) took place in October 2017. This included the delivery of 100 NDUJ branded garbage bins to each location. A Nuh Dutty Up Jamaica cleanup network was also launched in March, which facilitated 13 cleanups across the island this year. In July 2017 the Nuh Dutty up Mobay campaign was launched in tandem with the distribution of 17 NDUJ branded garbage bins in Montego Bay, donated by the Montego Bay Chamber of Commerce and Industry. Double Olympic Gold Medallist Elaine Thompson was signed as a NDUJ Ambassador in June and has been featured in campaign advertising throughout the 2017 track and field season. NDUJ mini campaigns were also launched in conjunction with the 2017 carnival season and International Coastal Cleanup Day 2017. NDUJ is also being promoted during the 2017 ISSA/Flow schoolboy football season. A new NDUJ Road Code campaign featuring Ambassador Bella Blair is also being rolled out in November. This campaign aims to improve the management of waste during Jamaican’s daily commute.

CCP remains one of JET’s most successful projects; consequently, JET has submitted our proposal for a fourth phase beginning in early 2018.
JET has been working with many Cockpit Country stakeholders and partners since 2006, when it was first announced that there were plans for bauxite mining to take place in the area. Despite widespread public support for protection of Cockpit Country, and a Government of Jamaica (GOJ) commissioned boundary study by the University of the West Indies (UWI) in 2013 which recommended there should be no mining in the area, at the time of writing, there has been no declaration of its boundaries or protection by the GOJ.

After becoming aware that there were new proposals for bauxite mining and limestone quarrying in August 2017, JET revived the Cockpit Country Stakeholders Group (which had been dormant) and sought help from many stakeholders to bring the issue back to public attention.

Earlier this year the Office of the Prime Minister (OPM) announced a new online portal where citizens could post a petition on any issue, and if 15,000 signatures were received, the GOJ would issue a response within thirty days. JET decided to use the new portal to attract attention to the Cockpit Country issue. A Save Cockpit Country petition was uploaded on 21 August 2017, and by the petition end date, 30 September 2017, it had exceeded the OPM’s target, attracting 20,919 online signatures within 40 days. Determined efforts were also made by many other stakeholders, including the Accompong Maroons, Windsor Research Centre, and communities in Cockpit Country, to get signatures on paper petitions, and by the end of September, JET had another 16,647 signatories in office (including 808 from students under the age of 18 years), for a total of 36,745 signatures. The success of the petition reflects all the work done by many over ten years to raise awareness of the issues, both in Cockpit Country itself and all over Jamaica.

The campaign also benefited from media support led by Irie FM, ZIP FM and Nationwide News Network who declared September 22, Save Cockpit Country Day. Irie FM held an outside broadcast in Brown’s Town on September 22 to galvanize support and get petitions signed. Numerous local celebrities and media personalities also lent their support to the campaign including dancehall artiste Bounty Killer and reggae artists Queen Ifrika, Third World and Protoje.

During a meeting at Jamaica House on November 9, Diana handed over the hard copy petitions to the Prime Minister, the Most Hon. Andrew Holness. Prime Minister Holness congratulated JET and stakeholders on their efforts, and promised that a boundary for Cockpit Country would be announced within two weeks (late November 2017).

The Save Cockpit Country campaign would not have been possible without the support of Windsor Research centre, Cockpit Country communities, Accompong Maroons, the Jamaica Civil Society Forum, Esther Figueroa and many others, too numerous to mention. JET would also like to thank Laura Facey for her generous and timely donation to the campaign. For more information and updates, check out the Save Cockpit Country website www.savecockpitcountry.org
Better Beaches for Jamaicans

In 2016 JET began the Better Beaches for Jamaicans (BBFJ) project, aimed at improving community management of Jamaican beaches. The project, funded by the US-based Irwin Andrew Porter Foundation, came about in response to increasing public concern reported to JET on the state of and access to Jamaica’s public beaches. Between August and September 2016, JET carried out scoping visits to seven public beaches and three beaches were selected to be targeted by the project: Alligator Pond Beach, Manchester; Winnifred Beach, Portland and Duncans Bay Beach, Trelawny.

Training workshops on beach conservation, management, advocacy and access rights were delivered by JET in each community during February 2017. The workshop content was used to create a heavily-illustrated community beach manual entitled *Big Up Wi Beach: An Introduction to Better Beach Management for Jamaican Communities*. Environmental Law Alliance Worldwide (ELAW) assisted JET with a technical review of the manual, which has been distributed electronically and in hard copy to BBFJ communities, International Coastal Cleanup Day site coordinators and Schools’ Environment Programme teachers.

A social media campaign was also launched under BBFJ, entitled *Big Up Wi Beach*, and a Facebook page and Twitter account (@bigupwibeachja) were set up to share related content. BBFJ also facilitated certified lifeguard training for one member of each participating community in May 2017.

The project culminated with an information exchange for each participating community at Duncans Bay in June 2017. Four community groups/beaches which had not participated in BBFJ were also invited to the exchange: Treasure Beach Women’s Group Benevolent Society, St. Thomas Environmental Protection Association (STAPA), Flavours Beach, St Ann and Jacob Taylor Fisherman Society. At the information exchange, BBFJ participants reported some improvement in handling of solid waste, reduction of burning and raking following the February workshops.
Jamaicans for Clean Air & Water

In keeping with JET’s ongoing law and advocacy work with communities impacted by mining and quarrying operations, in 2016 JET launched a two-year project aimed at raising public awareness of air and water quality issues in Jamaica. The Commonwealth Foundation funded Jamaicans for Clean Air and Water (JCAW) project also seeks to assess the adequacy of the Jamaican regulatory framework for air and water and promote community-led advocacy around the issue.

During year one of the JCAW project (October 2016 to October 2017) communities received advocacy training from JET, and participated in stakeholder meetings with state regulators and industry representatives in Kingston. JET continued to work with the Ten Miles Bucket Brigade from Bull Bay in St. Andrew (affected by quarrying) and Hayes/New Town in St. Catherine (affected by bauxite processing). Pleasant Farm near Ewarton in St. Catherine (also affected by bauxite processing) was added half way through the year, and Port Morant in St Thomas (affected by sugarcane harvesting and processing) came on board later in 2017.

Using the Access to Information (ATI) Act, research on air and water quality standards in other jurisdictions, and informational and stakeholder meetings, JET produced a new report entitled *Review of the Legal and Policy Framework for Air and Water Quality in the Island of Jamaica* which was launched on October 5, 2017 at a Gleaner Editor’s Forum. The report outlines the many gaps in the regulation and management of air and water quality in Jamaica and has received wide media coverage. A summary of its findings is included on pages 14 and 15. The report was accepted by the National Environment and Planning Agency (NEPA) and the Ministry of Health (MOH). Copies of the report were circulated to a wide range of stakeholders. JET received invaluable help in conducting the legal and policy review from Dr Anthony Greenaway, retired Chemistry professor, and a member of JET’s expert panel.

Community work under JCAW has not been very successful however; despite receiving training and outreach visits, communities are reluctant to initiate their own advocacy. Partly, communities fear retaliation by private sector interests and/or the state, but it is also true that Jamaican communities have not had experience running advocacy campaigns. Work continues under JCAW to develop a social media campaign on air and water quality, which we hope will generate more engagement at the community level in 2018.

Top to bottom: Community meeting in Hayes, Clarendon (2016); Stakeholder meeting at Alhambra Inn in September 2017; Gleaner Editor’s Forum in October 2017
JET recently released our *Review of the Legal and Policy Framework for Air and Water Quality in the Island of Jamaica*. A summary of the report’s findings has been included in this issue’s *Did you know?* feature. The full report can be found on our website [www.jamentrust.org](http://www.jamentrust.org).

**Air**

**Overlapping responsibilities** The responsibility for air quality is shared between two ministries, one statutory board and two agencies. Ministries: Ministry of Health (MOH), Ministry of Economic Growth and Job Creation (environmental ministry); Statutory Board: Natural Resources Conservation Authority (NRCA); Agencies: National Environment and Planning Agency (NEPA), Central Board of Health. We found collaboration, data and information sharing between the various state agencies to be inconsistent and in need of improvement.

**Gaps in the legal framework** Progress has been made in establishing a reasonable framework for managing air quality in Jamaica, but there are important gaps in the legal framework and implementation has been weak. For example, although emissions from motor vehicles are a major source of air pollution, Jamaica still has no standards for these mobile emissions. The regulatory framework concentrates on specific “major and significant” facilities (such as refineries, bauxite and cement plants), but other sources of air pollution such as open burning or fires at waste disposal sites, are not adequately covered in the legislation. In fact, all Jamaica’s waste disposal sites are currently operating without the required permits and licenses. Fines under the relevant acts are very low in many cases and as a result, do not function as a deterrent. A new Environmental Protection Order (2016) prohibits open burning in certain watersheds areas, but contains no penalties.

**Adequacy of Licensing, Monitoring, Equipment and Testing** Very few air pollutants are being routinely measured in Jamaica. NEPA is only measuring particulate matter, mostly PM$_{10}$, (larger particles). NEPA operates six PM$_{2.5}$ (smaller particles – most harmful) at Portmore, Constant Spring in Kingston, May Pen, Mandeville, Spanish Town and Montego Bay. The air quality regulations speak to “criteria pollutants” (those to which ambient air quality standards apply) and “priority pollutants” (those listed in the 2006 Air Quality regulations). NEPA does not have the facilities to test for all criteria pollutants or priority pollutants. They therefore cannot cross check much of the data provided by their licensees, who are required to measure these pollutants. There are no accredited laboratories in Jamaica (those operating in line with international quality management systems for atmospheric sampling or the analysis of atmospheric samples), not even for the criteria pollutants.

Data collection, analysis and management is weak JET did more than 20 requests under the Access to Information Act for the data and reports necessary to compile this report. In many cases, the data provided was inconsistent, absent, conflicting, unclear, or missing important information such as sampling time or weather conditions. During the review period, we received additional and conflicting information from NEPA.

Inadequate dissemination of data, weak public education Air quality data do exist (collected by NEPA and by licensees), but it is not available to the public in an accessible form, nor is it proactively disseminated, even in the case of an emergency. NEPA collates data collected by licensees and from its own monitors into one database annually, but this is not generally available to the public. NEPA advised that the information from this report is used to generate the Annual Air Quality Report, which is...
disseminated to the public. JET does not believe an annual report is sufficient. There has been very little attempt to educate the public on the public health threat posed by poor air quality.

**Comparison to other jurisdictions** We found the air quality standards in Jamaica reasonably equivalent to the other jurisdictions reviewed.

**Water**

**Adequacy of standards and monitoring** The two major findings of this review with regard to water quality are:
- Jamaica does not have legally enforceable drinking water quality standards as they have never been finalized; and
- Jamaica tests very few of the parameters contained in the Ambient Water Quality Standards. Our confidence in the quality of our water rests on many untested assumptions, for example, that source water is uncontaminated by agricultural chemicals. Put another way, we do not know much about our water quality.

Jamaica's water quality standards were developed in the 1980s using assumptions that are very likely no longer applicable and methods that are outdated. The Jamaica National Ambient Water Quality Standard – Freshwater and Marine serves as a guide to the expected quality of our ambient waters, but it is not an enforceable standard. Sampling frequencies are inadequate and not all the parameters in the standard are being monitored.

**Comparison to other jurisdictions** When compared to similar standards for other jurisdictions, Jamaica’s parameters are inadequate. Jamaica has only one standard for the whole island, whereas most other jurisdictions classify waters according to their source and use.

**Laboratory capacity** For all standards, companies/institutions required to monitor and submit associated data reports are required to use MOH approved laboratories. A list of such laboratories exists but many, if not all, of these laboratories are not equipped to analyse for many of the parameters identified in the standards (particularly specific organics and metals). Only two laboratories in Jamaica are accredited by Jamaica National Agency of Accreditation (JANAAAC) for water quality parameters and even then, not for all the parameters identified in the various standards. There are no laboratories that are capable of regularly monitoring for organic (carbon-based) materials in Jamaica.

**Significant sewage treatment failures** Jamaica has sewage and trade effluent standards, but they omit parameters that are required in other jurisdictions and are frequently not enforced. About half of Jamaica’s sewage treatment plants fail to meet legal standards more than half the time. Large areas of the country remain unconnected to sewers and even recently constructed plants often do not meet legal standards. There is no licensed facility to receive sludge (semi-liquid material produced by waste treatment plants). There is lack of clarity about what constitutes ‘compliance’ to sewage standards and informal methods are often used – for example, if a plant meets standards for faecal coliforms it is deemed compliant, even if it does not meet other standards. Discharge of inadequately treated sewage to water courses and thereafter to the marine environment has had impacts on coral reefs.

**Soapberry Sewage Treatment Plant alongside the Rio Cobre in St Catherine in 2013; © Jeremy Francis**

**Overlapping responsibilities** The responsibilities for water quality reside within a number of ministries and agencies and a Memorandum of Understanding was signed in 2016 to improve collaboration and communication between them. While this is a welcome development, an impact of this MOU on the practices of monitoring and regulating water quality, the establishment of up-to-date and well-managed databases, and the dissemination of data and information to the public has yet to be seen.

**Inadequate public education** As with air quality, there is no specific commitment to proactive public disclosure of any information. We found only a few cases of the National Water Commission (NWC) warning the public of poor drinking water quality, although we were told that in the event of the standards not being met, this would be done routinely. The MOU referred to above merely states that “the parties will make reasonable efforts to regularly publish water quality data to keep the public informed.”