

**In this issue:**

- Trinidad & Tobago's National sub-Project ...pgs. 1,2,3
- First Governance Partnership Meeting ...pg. 1



- Launch of St. Kitts & Nevis National sub-Project ...pgs. 4, 5
- Meet the CARPHA team ...pg. 5



- IWeco's 3rd RSPC Meeting coming up ...pg. 6
- IWeco Website Launch on 15 April! ...pg. 6



- The West Indian Whistling Duck ...pg. 7
- International Day of Forests 2019 ...pg. 8



Sustainable Development Goals being addressed



Volume 2, Issue 1

March 2019



# IWEco:link

Quarterly newsletter of the GEF-funded Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States Project



Landscape extensively scarred by quarrying activities in North East Trinidad

## Reducing and Reversing Land Degradation at Selected Quarry Sites in the North East of Trinidad using an IWeco approach

The Aripo Savannas, located in North Eastern Trinidad, is designated as an Environmentally Sensitive Area (ESA) and Strict Nature Reserve under Trinidad & Tobago's Environmental Management Act (2000). It includes unique habitats, rare and endemic biodiversity and is of great scientific importance. The Savannas provide important ecosystem services - water resources for both aquifer recharge and direct extraction, high quality sand and gravel deposits for construction, and livelihoods for many associated in the quarrying industry.

Quarrying in this part of Trinidad started in the 1940s to meet national demand for aggregate materials by the building and road construction industries. Poor regulation over the years has led to indiscriminate quarrying, resulting in severe land degradation as existing vegetation and top soil is cleared leading to loss of habitat, wildlife and plants. Watercourses are polluted by large quantities of sediment from erosion and from wash plants, and this eventually is transported to the sea, affecting coastal water quality badly.

Given the sensitivity of the ecosystems within the North East area, focusing attention on the restoration and rehabilitation of the degraded quarry areas



Pond left behind as a result of excavation

(Continued on page 2)

### IWeco's First Governance Partnership Meeting successfully held!

The IWeco Project successfully hosted its First Governance Partners Meeting on 18 – 19 March 2019 at the Bay Gardens Hotel in Saint Lucia.

The Meeting, which was convened by the Caribbean Public Health Agency (CARPHA) in close collaboration with the OECS, was attended by over 15 participants representing different regional agencies united in their common purpose of how to best utilize the Project's resources in order to advance the regional harmonization of policy and legislation.

The Governance Partnership contribution  
(Continued on page 4)



Caribbean Public Health Agency

CARPHA

pci media impact tell a story, change the world.

SGP The GEF Small Grants Programme

(Continued from page 1)

was deemed to be of high priority by the Government of Trinidad & Tobago and is the focus of their IWEco National sub-Project.



**The overall objective of this sub-project is a reduction in risk posed by land degradation at selected quarry sites in the northeast of Trinidad through the employment of an integrated water, land and ecosystems management approach.**

Direct interventions on the ground, improved monitoring and reporting, policy-making, institutional strengthening and capacity-building, as well as knowledge exchange are all among its objectives. In addition, on-site land and forest cover investments in a minimum of 40 hectares over the target watershed areas, are expected to contribute to CO<sub>2</sub> sequestration over the life of the project.

The major two outcomes of this project will be: 1) To reduce the scarring of the landscape through the implementation of appropriate rehabilitation techniques and 2) To reduce the impact on the natural and socio-economic environment through the application and adherence to international best practice for quarry operators and improved adherence to local legislation.

The Environmental Management Authority (EMA) is the executing agency and the Project was launched in May 2018 with a 48-month timeline. It is funded by a GEF grant of \$643,658 USD, with Co-financing of \$768,875 USD from the Government of Trinidad & Tobago, and an additional \$105,000 USD in projected partnership support, bringing the total funding to \$1,517,533 USD.

## First Pilot Site



Original conditions at pilot site no. 2, National Quarries Company Ltd., Guaico

The IWEco National sub-Project aims to restore natural vegetation, reduce sedimentation and flood risk and restore ecological function to 40 hectares of exhausted or abandoned quarry pits. Demonstration sites are being selected for targeted rehabilitation efforts. National Quarries Company Limited (NQCL), the state owned and operated quarry, located in Guaico, was chosen as the pilot training

and rehabilitation site.

It consists of three areas:

1. One 0.5 hectare area focused on planting of tree species for food production, creation of wildlife habitat and regeneration of original forest species;
2. One 1.7 hectare area of a back-filled exhausted quarry pit devoid of soil nutrients with severe gullying and erosion occurring. For this site the pilot interventions underway are:
  - Soil nitrification through the creation of mulch using waste beer hops; tree and grass cuttings and sargassum which would otherwise go to a landfill;
  - Planting of vetiver grass to address soil erosion;
  - Creation of living check dams to stem gullying and water run off;
  - Creation of a plant nursery which would serve as a source of plants for other areas to be rehabilitated under the project.
1. One 0.5 hectare of compacted, back-filled, exhausted quarry pit where forest species enrichment is being tested to determine the best species for rehabilitation of quarries.

## Quarry Rehabilitation Champions trained



Demonstration of how to set seedlings, NQCL, February 2019

In September 2018, two non-governmental organizations, the Trust for Sustainable Livelihoods (SUSTRUST) and IAMovement (IAM), in collaboration with the United Nations Development Programme - Small Grants Programme, began developing a quarry rehabilitation training programme as part of the project's livelihoods programme.

From September to December, twenty-seven persons from surrounding communities underwent a 4-month programme of classroom and field work at the pilot sites. These "Quarry Rehabilitation Champions" were trained in areas such as site preparation and planting, creation of check dams and fire tracing, nursery development, top-soil conservation and management, mulching and implementing vetiver as a rehabilitation intervention. This component aimed to develop community capability thereby enabling replication at other, additional sites to be identified under the national sub-project.

(Continued on page 3)

# #CaringForOurFuture

(Continued from page 2)

## Environmental Awareness Initiative for Schools

SUSTRUST and IAM have proposed an environmental awareness pilot initiative in schools within the Sangre Grande district - the biggest, nearby town – during the next academic year. This would increase awareness of the issues surrounding quarrying and associated activities and foster more custodial attitudes and behaviour amongst children towards the environment. Teaching about the value of these precious ecosystems, of the threats to them caused by indiscriminate quarrying, and sharing examples of the work being done to rehabilitate former quarry areas, is seen as necessary if there is to be significant change.

## Guidelines for the Preparation of Rehabilitation Plans

The establishment and implementation of an effective public awareness campaign to increase voluntary compliance by quarry operators and monitoring of quarries by regulatory agencies is another key activity. A draft document: “Guideline for the Preparation of Rehabilitation Plans” was completed by the EMA in December 2018 and is currently out for stakeholder review before finalization for publication and distribution in July 2019. Since March 2015, the EMA has required that a Rehabilitation Plan be submitted and approved by them prior to the commencement of mining/quarrying operations for which a Certificate of Environmental Clearance (CEC) has been granted. This guidebook is designed to assist applicants in submitting succinct and satisfactory Rehabilitation Plans.

Close collaboration and engagement of local-level stakeholders is necessary if there is to be sustainability. The National Project Steering Committee (NPSC) is made up of representatives of various ministries and agencies responsible for overseeing and managing sustainable quarrying in Trinidad and Tobago. These include: the Ministry of Energy and Energy Industries; the Ministry of Planning and Development- Town and Country Division and Environmental Division; the Ministry of Agriculture Land and Fisheries- Forestry Division and Commission of State Lands; the Water Resources Agency and the Project’s national executing agency, the EMA. Its first meeting was convened in August 2018 and it meets on a quarterly basis.

Additional sites for rehabilitation are still to be selected. This is important in order to increase project impact, in terms of land rehabilitation and carbon sequestration, protection of surface and groundwater resources, conservation of biodiversity, and to create an enhanced enabling environment for sustainable land management.

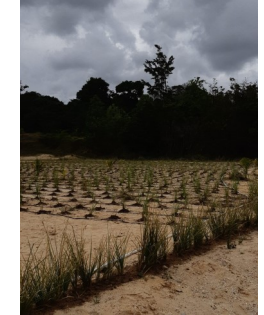


Display showing species planted, February 2019

Photos: Trinidad & Tobago IWeco National sub-Project



Volunteers begin Rehabilitation exercise at official launch, May 2018



(Left) Vetiver grass, used for soil stabilization. (Right) vetiver nursery, November 2018



Rehabilitation Champions planting seedlings in project plant nursery, January 2019



Live check dams using sustainable forest materials



SUSTRUST member explains intervention methods used

Site 2: After using mulch of waste beer hops, sargassum and tree and grass cuttings for soil nutrification November 2018



(Continued from page 1)



Participants in IWEco's First Governance Partnership Meeting

utes to Component 3 of the Project, for which OECS is responsible: Strengthening of the Policy, legislative and institutional reforms and capacity building for Sustainable Land Management (SLM), Integrated Water Resources Management (IWRM) and ecosystem services management taking into consideration climate change resilience building.

Noteworthy, the Governance Partners have been significantly involved in these areas for decades. The Governance Partnership is made up of key regional and international governmental and non-governmental agencies. It is meant to provide technical back-stopping to assist countries strengthen and mainstream policies and strategies drawing on their knowledge-base and collective experience in work in the region. The IWEco project sees their knowledge and insights as playing a critical role in guiding interventions and looks forward to achieving the outcomes over the period of three years.

Their contributions will be rolled out at both the regional component "umbrella" and under the national sub-projects in respect to interventions at the country-level related to enhancing existing mechanisms and where practical to new ones. Based on common themes that emerge from the national sub-projects, investment in policy and capacity building support will be harmonized at the regional level to gain efficiency and synergies in implementation.

Source: Presentation by Christopher Corbin, UNEP

### IWEco & Governance – Regional & National

Focus Areas	What do we already have?	Where do we go from here?
Water Resources Management	Regional & Sub-Regional Policies, Model Legislation, Tool Kits, Templates, Strategies, & Action Plans	Institutional, Policy, Legislative & Regulatory Frameworks
Watershed Management	National Visions & Development Plans	Harmonization & Coherence
Land Use Management	National/Sector Policies, Strategies, Action Plans & Roadmaps	<b>Integration</b> across sectors
Wastewater Management	Laws, Regulations, Guidelines, Criteria, Standards	Enforcement
Biodiversity Management	Multiple Decision-Making processes	Building on what we already have
Pollution Prevention	Global/Regional Commitments	Synergies between Agencies & Projects – Demand Drive
Climate Change		State of Reports...
Oceans/Blue Economy		

## St. Kitts & Nevis National sub-Project launched!

The GEF-IWEco St. Kitts and Nevis national sub-project was launched on Tuesday, February 26<sup>th</sup>, 2019 at the Ocean Terrace Inn in Basseterre, St. Kitts.

The project entitled, "**Addressing Impacts of Acute Land Degradation in the College Street Ghaut in St. Kitts and Quarries and Sand Mining Hotspots on Nevis**" aims to strengthen the institutional capacity, improve the policy framework and facilitate pilot projects within the College Street Ghaut watershed in St. Kitts and key quarry sites and nearby wetlands and coral reefs in Nevis that are earmarked for rehabilitation.

Project activities in St. Kitts will aim to reduce soil erosion and nutrient loading and overall land degradation in the College Street Ghaut via cleanup of debris, rehabilitation of bridges and retaining walls, as well as planting grasses.

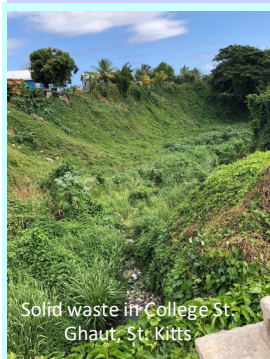
Restoration activities in Nevis will focus on reforestation at an abandoned quarry at Hicks Estate, coral reef and beach restoration at Indian Castle, New River, Dogwood and Long Haul and wetlands rehabilitation and management work at Cades Bay and Bath.

Together with on-the-ground restoration work, the project will seek to update and improve policies, legislation and institutional arrangements related to sustainable land and water management in St. Kitts and Nevis.

Over thirty persons attended the project launch. Various departments of government in both St. Kitts and Nevis as well as non-governmental organizations, statutory bodies, civil society, private sector and the media were represented. Overall, the project launch activity was well received, with participants expressing their approval of the project and fully endorsing the need for such a project in St. Kitts and Nevis. The project launch served as a way to foster ownership of the project with relevant stakeholders after a long-delayed start.

After the launch, the first meeting of the national Project Steering Committee (PSC) was held. There was a thorough discussion on the PSC and Project Coordinator

(Continued on page 5)



Solid waste in College St. Ghaut, St. Kitts



Cades Bay Wetland, Nevis



Abandoned quarry at Hicks Estate, Nevis

## Meet the CARPHA Team!

The Caribbean Public Health Agency (CARPHA) is a co-executing partner of the IWEco project and is responsible for executing Components 2 and 3 of the Project, in collaboration with the OECS:

- (2) Strengthening of the SLM, IWRM and Ecosystems Monitoring, and Indicators framework; and
- (3) Strengthening of the Policy, Legislative and Institutional reforms and capacity building for SLM, IWRM and ecosystem services management taking into consideration climate change resilience building.

In addition to its involvement in the Research and Governance Partnerships, CARPHA through its Environmental Health and Sustainable Development (EHSD) Department (formerly the Caribbean Environmental Health Institute, CEHI) plays a significant role in continuing to support contributions to improved natural resources management in the areas of water (and wastewater) and land resources management, building on the inputs of CEHI in the IWCAM Project (2006—2011) in association with other partners in IWRM planning and policy development.

**Lyndon Forbes Robertson**, Head of Department, EHSD



[robertly@carpha.org](mailto:robertly@carpha.org)

Lyndon has technical and management responsibility for EHSD.

**Shermaine Clauzel**, Programme Manager



[clauzesh@carpha.org](mailto:clauzesh@carpha.org)

Shermaine has overall responsibility for EHSD's portfolio of projects aligned to Sustainable Development, which includes the IWEco Project. She supervises the technical staff who contribute to the deliverables under the project.

**Newton Eristhee**, Programme Officer



[eristhne@carpha.org](mailto:eristhne@carpha.org)

Newton works with project partners, contractors and project clients to facilitate the development, implementation and evaluation of assigned programmes/projects. He works in coordination with the Technical and Monitoring Specialist in the Regional Project Coordination Unit.

(Continued from page 4)



Eavin Parry, Environmental Scientist, DOE, June Hughes, Senior Environment Officer, DOE, Halla Sahely GEF IWEco SKN Project Coordinator, Jan Betlem and Alistair Edwards, PS, Ministry of Agriculture, Marine Resources, Cooperatives, Environment and Human Settlement

terms of reference. The detailed First Year Annual Work Plan was then presented to the PSC by the Project Coordinator. Following thorough review, it was endorsed by the PSC on March 9, 2019.

Looking forward, diagnostic assessments of the College St. Ghaut and targeted quarries, coral reefs and wetlands in Nevis have started with the view to planning and prioritizing on-the-ground interventions which are to begin in the second and third quarters of 2019.



Bath Bogs, Nevis

Photos: St. Kitts & Nevis IWEco National sub-Project

**Lisa Sandy**, Technical Research Consultant



[sandyliis@carpha.org](mailto:sandyliis@carpha.org)

Lisa has responsibility for the development of the research protocols for the research focus areas which were identified at IWEco's first Research Partnership Meeting in October 2018 in Saint Lucia.

**Malika Thompson**, Communications Officer



[thompsman@carpha.org](mailto:thompsman@carpha.org)

Malika has responsibility for providing communication in support of project objectives. She works in coordination with the Knowledge Management and Communication Specialist in the Regional Project Coordination Unit.

# IWEco's Third Regional Project Steering Committee Meeting

2nd-5th April 2019, Santo Domingo, Dominican Republic

The Global Environment Facility-funded Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (GEF IWEco) Project's Second Regional Project Steering Committee Meeting (RPSC 3) will take place in Santo Domingo, Dominican Republic from 2<sup>nd</sup> – 4<sup>th</sup> April 2019. It will be convened by the United Nations Environment Programme's Caribbean Environment Programme (UNEP-CEP), the lead co-executing agency. The IWEco Project Coordination Unit (PCU) serves as Secretariat to the Meeting. All ten countries participating in the project - Antigua & Barbuda, Barbados, Cuba, the Dominican Republic, Grenada, Jamaica, St. Kitts & Nevis, Saint Lucia, St. Vincent & the Grenadines, and Trinidad & Tobago, as well as a network of national, regional and international partners through whom the Project is being implemented, will be present.

RPSC3 will:

- provide updates on the status of national projects and regional support initiatives (partners);
- discuss and approve the proposed draft work plan and budget for the year 2019;
- provide updates on the status of GEF Small Grants projects and coordination mechanisms between national projects and GEF Small Grants projects (UNDP); and
- identify opportunities for collaboration with other regional programmes, projects and activities.

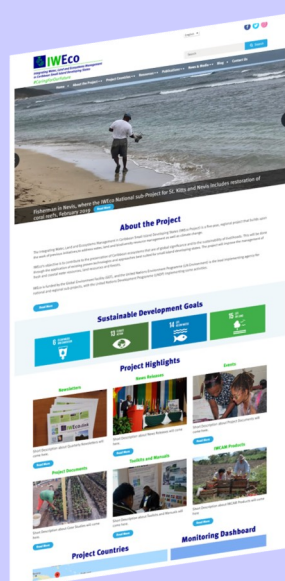
Since the last RPSC in February 2018 in Havana, Cuba all IWEco participating countries have signed their respective Project Cooperation Agreements (PCAs) and are in various stages of implementation. At the regional level, partnerships have been established in three areas: Governance; Public Awareness/Education, and; Research. These make a wide range of resources and expertise available to participating countries both during and beyond the project.

CARPHA which, in collaboration with the OECS, is responsible for executing components 2 and 3 of IWEco, signed its PCA with UN Environment in August 2018 and now also has it's full team on board (See page 5).

We look forward to an exciting and productive meeting!



Participants in IWEco's Second Steering Committee Meeting, February 2018, Cuba



[www.iweco.org](http://www.iweco.org)

Our website will be launched on

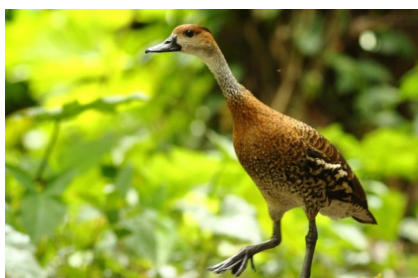
15th April 2019!



## The West Indian Whistling-Duck - *Dendrocygna arborea*

The Negil Great Morass, site of Jamaica's IWEco National sub-Project, is a biodiversity hotspot with its abundance of endangered and endemic plant and animal species. One such is the West Indian Whistling Duck which is classified as 'Vulnerable' on the IUCN's Red List of Threatened Species.

One of the aims of this IWEco Project is to restore important elements of biodiversity of the Morass.



*Photo: the Internet Bird collection (IBC),  
Taken by Markus Lilje*

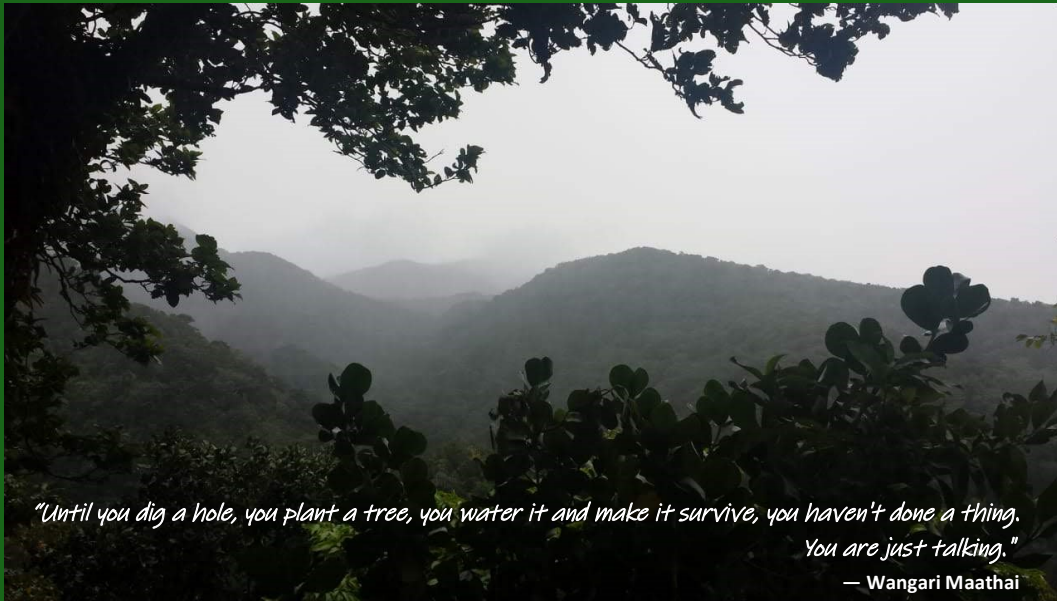
The West Indian Whistling duck is one of the rarest ducks in the Americas. It is a large, graceful, mostly brown duck with black and white speckling on its flanks, long neck and legs, black bill and large feet. It is endemic to the Caribbean islands and can be found in a variety of fresh and saline water bodies, including lagoons, swamps, salt ponds, tidal flats, coastal mangroves, rice fields and palm savannas.

Their populations have been reduced by excessive hunting, destruction of wetland habitats and predation by introduced invasive species such as mongoose, rats and feral dogs and cats.

More sustainable management of the Morass as well as increasing public awareness and education is necessary if endangered and endemic plant and animal species, such as the West Indian Whistling Duck are to be protected.

*Photos: IWEco Project,  
January 2019*





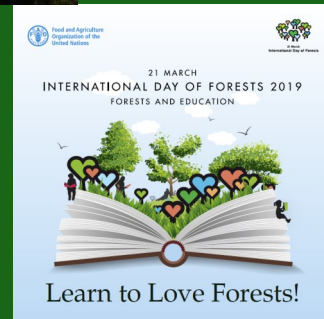
View from the forests of St. Kitts, down towards the coast.

One of IWECO's focal areas is sustainable forest management. Celebrating our beautiful forests on 21st March -

International Day of Forests 2019  
- Our Responsibility to Protect and Educate!

*"Until you dig a hole, you plant a tree, you water it and make it survive, you haven't done a thing. You are just talking."*  
— Wangari Maathai

Photo: IWECO Project




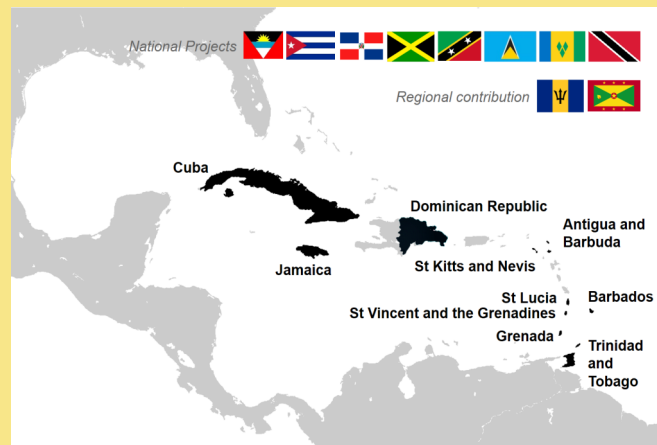
IWECO thanks the Trinidad & Tobago and the St. Kitts & Nevis Project Managers for their contributions to this issue.

For more information contact:

**Project Coordination Unit**  
GEF IWECO Project  
United Nations Environment Programme  
14-20 Port Royal Street  
Kingston, Jamaica  
Phone: 1(876)-922-9267/9; Ext. 6225  
Email: [donna.spencer@un.org](mailto:donna.spencer@un.org)

[www.iweco.org](http://www.iweco.org)

 @caribbeaniweco



IWECO countries



*integrating water, land and ecosystems management  
in caribbean small island developing states*

**#CaringForOurFuture**