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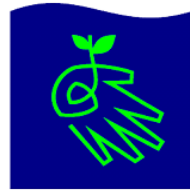
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Sustainable Development Goals being addressed



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IWECO:link

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www.iweco.org



Looking towards the west and Mt. Soufriere from the Georgetown watershed

St.Vincent & the Grenadines: Addressing Land Degradation in the Georgetown Watershed

IWECO's National sub-Project in St. Vincent and the Grenadines officially started with the first Project Steering Committee Meeting in early-April 2020. Its goal is to reduce and revert land degradation within the Georgetown Watershed, Saint Vincent, by an integrated water, land and ecosystems management approach.

It is being jointly implemented by the United Nations Development Programme (UNDP), along with another Global Environment Facility (GEF)-funded project - the Conserving Biodiversity and Reducing Land-Degradation using a Ridge-to-Reef (R2R) Approach Project. That focuses on three watersheds in the south of the island - the central forest reserve that holds key biodiversity areas; a west coast marine protected area; and, habitat conservation of endemic reptiles on the Grenadine Island of Union.

The amount of the GEF grant to St. Vincent and the Grenadines' IWECO National sub-Project is US \$999,685, with the co-financing amount being US \$1,608,875 and it is being implemented over a period of four years.

The main project objectives are to:

- Reduce the amount of risk posed by land degradation to the Georgetown community (floods and landslides), farm-



Project area, highlighted

IWECO and post-COVID-19 recovery

Amidst various government policies and strategies to contain the coronavirus and protect public health, socio-economic challenges have arisen as economic downturns affect the livelihoods and social status of millions of people all over the world. It is evident that things cannot remain the same.

Our colleagues from the Convention on Biological Diversity have highlighted that:

*"As the global community is called to re-examine its relationship to the natural world, one thing is certain: despite all our technological advances we are completely dependent on **healthy and vibrant ecosystems** for our health, water, food, medicines, fuel, and energy, just to name a few.*

We must re-consider the ways we have worked with 'nature' or with 'the environment' in order to better protect people, their livelihoods and cultures through reversing the current trend of biodiversity loss and degradation of nature.

Elizabeth Maruma Mrema,

Executive Secretary of the Convention on Biological Diversity (CBD).

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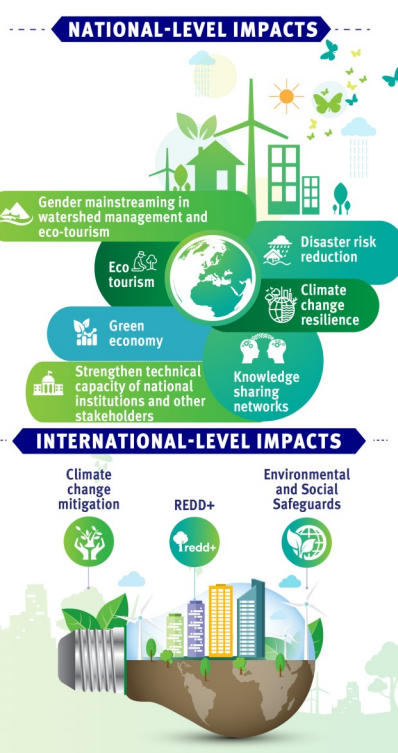
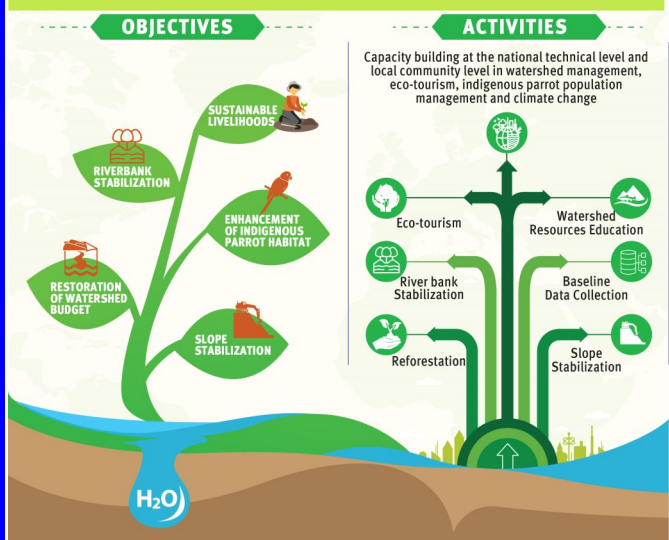


Caribbean Public Health Agency

CARPHA

SGP The GEF Small Grants Programme

Adaptation Solutions for a changing climate



(Continued from page 1)

lands (soil loss and pollution) and waters (sediment load in rivers and near coastal marine habitats);

- Assist the establishment of revenue-generating small- and micro-businesses in target communities within the Georgetown watershed; and
- Enhance the cross-sectoral enabling environment for integrated landscape management by empowered communities in the Georgetown watershed.

The Georgetown Watershed management area encompasses about 5,750 ha (22.2 square miles). It consists of numerous steep gorges and valleys created as several rivers flow eastwards from the central mountains (over 900 metres high) to the east coast of the island. There are four main rivers, the Byera River; the Grand Sable River, formed as the Congo Valley River and the Jennings River merge midway towards the coast; the Caratal and Perseverance Rivers; and, the Langley Park River. The coastal area is only about 3 - 5 metres above sea level and the coastline, which is unprotected by offshore reefs, is eroded by wave action and prone to flooding and sea surges. Most people (approximately 7,000 people) live in areas on the coast and along the Caratal, Perseverance and Langley Park Rivers.

The Watershed is rich in biodiversity of global importance. St Vincent and the Grenadines' national bird, the endemic and vulnerable Saint Vincent parrot (*Amazona guildingii*), is found here, mostly in the mature rainforest between 125 and 1,000 metres up. In addition, there are seven reptilian species, of which five are endemic, including the Saint Vincent Frog (*Pristimantis shrevei*) and the rare Antillean fruit-eating bat (*Brachyphylla cavernarum*). Iguanas, armadillos, crustaceans and mullets are hunted and harvested for food.

The forests provide homes for birds and other wildlife, connectivity to the central forest reserve, stabilize the land, and are used for traditional medicines, fuel, ornamentals, craft and construction purposes. Yet, according to a 2004 study, they are being lost at an annual rate of 3%.

The watershed has been undergoing gradual degradation caused by limited and ineffective land use planning, deforestation and other forms of habitat loss and fragmentation, excessive use of agro-chemicals, forest fires, illicit cultivation, sand mining, destructive harvesting practices, pollution of water courses by waste from pig rearing, and unsustainable use of resources. The area was also severely impacted by Hurricane Tomas in October 2010, by destructive floods associated with an extreme rain event in April 2011, and by trough systems in December 2013, 2015 and 2016.

Issues include: loss of biodiversity; loss of lives and livelihoods; climate amelioration (micro climate variation/manipulation); invasive species (flora & fauna); loss of ecosystem services; negative impacts on aesthetics; flash flooding; and, coastal erosion.

Activities to be undertaken by the Project include:

- Reforestation and conservation forestry interventions over at least 7.5 hectares within upland areas where landslides have

Scarification, exposed rocks, massive soil loss, debris in coastal areas, 2011



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SGP group and Forestry personnel visiting site for hiking trail centre

occurred and along some 1.8 km of riverbank that continue to actively erode.

- Management interventions to stabilize land within steep agricultural zones.
- Rehabilitation of at least 2 hectares of a 10-hectare area of farmland severely affected by flooding, using a range of soil stabilization and forest management techniques. This area will be used to demonstrate best practices and as a learning centre for sustainable land management practices.

- Thinning in *Hibiscus elastus* (Blue Mahoe) and *Swietenia mahagoni* Mahogany forest plantations located at Perseverance over approximately 5 hectares to improve stability of the existing forest plantation and enhance the diversity of the forest, through natural regeneration of indigenous forest tree species, thereby increasing the habitat of the endemic St. Vincent Parrot.



Amazona guildingii

- A census of the St. Vincent parrot (*Amazona guildingii*), which despite the increasing populations, due to limited size of its home island, human impacts on the habitat and natural disasters, retains its status as vulnerable under the IUCN Red List.
- Rehabilitation of the road allowing access to workers to carry out silvicultural interventions in the watershed to further promote soil and water conservation.
- Reduction of direct discharges of pig effluent into the environment through the employment of dry manure techniques (building on the good agricultural practices programme of the Ministry of Agriculture).
- Development of the Jennings Bird Watching Trail, an existing forest patrol trail with potential to be a significant revenue earner for the community. This is expected to result in spin-off benefits to the community through jobs linked to the provision of

services, accommodation, trail guiding and retail of indigenous local branded souvenirs. The GEF Small Grants Programme will support at least one community group in the Georgetown area to take advantage of the economic potential associated with implementation of the project.

- Preparation of a suite of information products, in collaboration with private sector and educational institutions.

The Project was actually revised in 2018 due to changes since its original conception more than five years ago, and it was observed that, despite significant erosion and scarring of the landscapes within the watershed, natural regeneration has occurred in degraded areas, comprising pioneer species as well as localized species. However, due to the distinction between these patches of scrub and surrounding stands of mature forest, untouched by the disasters, enrichment planting of naturalized species is still planned to stabilize the already unstable soil, as well as to increase the biodiversity within the secondary forest.

While the direct project interventions in sustainable land and forestry management will be over approximately 15 hectares, the entire watershed will be managed as a unit within the scope of the project. Fifty hectares of the forest protected is expected to directly benefit ecotourism. It is expected that the active sustainable land management interventions to reduce the rate of upland degradation and restore the integrity of riparian ecosystems will lead to benefits within the wider watershed through in-situ conservation.

Through on-site land and forest cover investments within 15 hectares over the target watershed areas, it is expected that an estimated 1,403.3 equivalent tonnes of CO₂ over the life of the project, or an average of 280.7 tCO₂eqv/year, will be sequestered.



Regeneration by pioneer species (Bois Flot) but observe the invasive Elephant grass and vines

Area in 2019, after eight years of protection—some regeneration has taken place.





Winner of IWEco's My Favourite Tree Competition!

"Once upon a time I was a teacher and a lady used to sell treats from a tray under a big Cordia tree outside the school. One day she gave me some seedlings from the tree as she knew how much I liked it. I planted three (my children) in my back garden and since then a couple more have grown (my Grandchildren). The Hummingbirds, Bananaquits and Bees are regular visitors to the flowers as well as other birds who like to perch in the branches. Despite hurricanes and droughts my Cordias continue to look beautiful."

- Kate Orchard, 2020

In our last newsletter (March 2020 issue), we asked people to send us a picture (photo, drawing or painting), along with no more than 100 words, telling us how they feel about a tree that is special to them. The expressions we received told us that there are those among us who notice, appreciate and value trees greatly; that trees and the act of planting trees, hold special meaning for them.

Planting and looking after trees is important to IWEco. Land rehabilitation, soil conservation, and reforestation are major aims of the Project.

It was lovely reading the submissions and we would like to thank those who took the time to share with us. During the coming weeks we will share all submissions via the Project website and social media.

Congratulations to our winner, Kate Orchard, who lives in St. Kitts!

...more about the Cordia tree

Cordia sebestena; Common name: Geiger Tree, Spanish Cordia

Plant Family: Belongs to the Boraginaceae family, which includes Coco Poule (*Cordia reticulata*), the famous Comfrey (*Symphytum officinale*) and Cotlette (*Bouyeria succulenta*).

Description: Small, evergreen, ornamental tree or large shrub, up to 9 m (30 ft); leaves large and ovate, 8-22 cm long (3-9 in) and 15 cm broad (6 in), dark green, with rough, sandpaper texture on upper surface; flowers orange-red, funnel-shaped, 3-5 cm long (1-2 in) and about 3 cm in corolla diameter (1 in), in terminal clusters of up to 15 blossoms per cluster, flowering most of the year; fruit a drupe, plum-like and edible, up to 4 cm long (1.6 in), in persistent calyx, ripe fruit white and pointed.

Natural Habitat: Dry districts on sandy soils, often occurring along sea coast at elevations up to 185 m (600 ft); grows larger when cultivated.

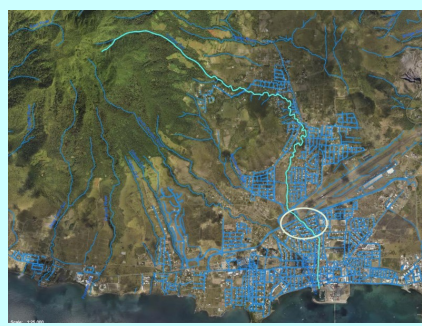
Origin and Distribution: Native to the West Indies and tropical America; introduced as ornamental in Old World tropics.

Uses: Attractive shade tree, often planted as a street tree in Caribbean

Taken from the Dominica Botanical Gardens website which is a great place to learn more about trees in the Caribbean:

<https://www.dominicagardens.com/cordia-sebestena.html>

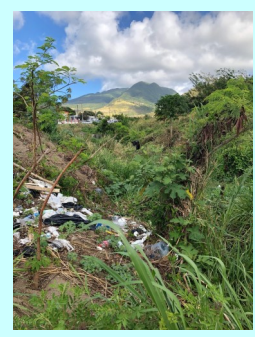
Progress with works to rehabilitate the College Street Ghaut



In the past six months, IWEco's St. Kitt's & Nevis National sub-Project has made significant progress with activities meant to prevent further land degradation in the College Street Ghaut, the site of intervention on the island of St.Kitts.

The College Street Ghaut watershed covers 662 hectares. The watershed has a complete range of features from upland natural forest, former sugar cane lands and increasing urban development.

Land use changes have resulted in more rapid surface water runoff and severe soil erosion following rainfall events. The area highlighted with the white circle and shown in Photo 2 is being targeted for land degradation control measures being implemented by the IWEco SKN national sub project.



The dumping of solid and liquid waste into the ghaut presents a major threat to the water quality of the coastal environment as well as a public health hazard.



Works to reduce and control land degradation inside the ghaut are a critical first step leading to a more proactive way of managing this important environmental zone. The main land degradation control measures being implemented are gabion baskets and planting of grasses and trees.

A gabion is a galvanized wire cage filled with materials like stones. The gabion structures act as building blocks and are a powerful and cost-effective defense against erosion.



Vetiver grass, which has a deep root system, is being planted along the banks of the ghaut; this holds the soil together effectively.



Sargassum, Toxic Chemicals and Microplastic Research begins as small grants awarded by CARPHA



IWEco's First Research Partnership meeting, held in Saint Lucia in November 2018, proposed four broad areas of research:

- Plastic pollution and micro plastics in the environment.
- Toxic chemical substances including heavy metals, chemicals lead in paints, anti-fouling.
- Sargassum blooms in the Caribbean.
- Nutrients and Ocean acidification.

In late 2019, a call for proposals was circulated by CARPHA to facilitate expressions of interest in a small grant to conduct research in the first three thematic areas. To date, small grants have been awarded to the University of the West Indies (CERMES) to conduct research in Sargassum blooms in the Caribbean, and Trent University in Toronto, Canada, to conduct research in Toxic chemicals. CARPHA will itself conduct research to determine the presence of microplastics in tissue of reef fish in Saint Lucia.

The University of the West Indies' research, focuses on assessing economic impacts of environmental degradation due to sargassum influxes on one or more key sectors in the Eastern Caribbean such as tourism,

public health/wellbeing and livelihoods, fisheries and other ecosystems services. The research is expected to contribute to: better decision-making about resource use and sustainable management of coastal resources, including adaptation to external threats; increased awareness and political will for coastal protection and management; identification of efficient financing mechanisms; and, enhanced community engagement by highlighting economic opportunities and wellbeing.

Trent University will focus on chemical contaminants discharged into the coastal zone in Caribbean countries that may be a significant hazard to coral reef ecosystems. Currently, there are few data on the concentrations of chemical contaminants in the Caribbean coastal zone. To fill this information gap, Trent University proposes to monitor for selected pesticides, pharmaceuticals and personal care products, chemical indicators of domestic wastewater and steroid hormones in the nearshore zone impacted by discharges from the Soufriere watershed in Saint Lucia. The monitoring will be conducted by deploying POCIS passive samplers in the nearshore zone. The outcomes of the study will contribute to the overall objectives of IWEco by identifying integrated watershed management strategies that are needed to protect coastal areas, and specifically coral reefs in the Caribbean region.

CARPHA's research will focus on micro plastics in reef fish, a continuation of work done by St. Georges University. There will be a focus on the invasive Lionfish *Pterois volitans* which feed on juvenile reef fish in waters of the Soufriere Bay in Saint Lucia. The outcomes of the study will provide information on the presence of microplastics in the tissue of lionfish and, by extension, reef fish in the Soufriere Bay.

These important pilot research projects have the potential to be replicable and expandable to the benefit to all CARICOM states.

IWEco Team ...and associates working from home!



Due to COVID-19 restrictions, the IWEco PCU has been working remotely since 16th March 2020 and will continue to do so until at least 10th July 2020. We remain in contact with all our partners via email and the various virtual platforms available.

This note from Marva Aparicio, Sales Executive with Allegro Tours in Panama City (and our super-efficient travel partner!) made us smile:

"Working from home has been a challenge, but it offers flexibility in order to manage my time. Every day I have a long drive to the office and back home, and now I'm avoiding all that stress. But now, my stress is not being able to offer my clients available options to return to their homes or to be with their families. For now I'm just willing to all be on a healthy path, to make a stronger come back, with all the energy and strength to continue with the great job we were doing, making everyone close!"

Here she is looking very much like part of the IWEco team in her Project polo! Thank you for all you do to enable the travel that is so important to our work Marva! Hopefully, in the not too distant future, we will be keeping you busy again!



Caribbean “Breaking Up With Plastics” music video...

Winner of three awards!:
- A Silver Telly Award in the category
“Green/Eco-Friendly for Online”
- Best Short Video, CINEFISH,
Gulf and Caribbean Fisheries Institute
73rd Conference



- Communicators Award
of Distinction in the
category
“Individual-Social
Responsibility for Online
Video”



Our dependence on single-use plastics is bad for
wildlife, oceans, and our health.
Watch the award-winning
“Breaking Up With Plastics”
music video and take the pledge today at
<https://www.cleanseas.org>

#CleanSeas #CaringForOurFuture

The GEF IWEco Project thanks
and congratulates its
collaborators!

Producers:
All Biz Ltd.
Future Crab Studios

Our Communications Partners:
PCI Media
CANARI
PANOS Caribbean
WaterWays
UN Environment Programme



**Toxic relationships
don't have to last forever.
Join the worldwide movement and
Break Up
with single use plastics**

“I’m breaking up with you, long time it’s overdue, gotta get you out of my space”
See it at: <https://www.youtube.com/watch?v=j0FHWQ5AP1M>



IWEco Partners’ Webinars

On Tuesday 2nd June 2020 IWEco held the first in a series of bi-monthly Partners’ Webinars. These virtual meetings are meant to encourage sharing and exchange amongst IWEco partners—national, regional and international. The first Webinar featured the work of the National sub-Projects in Cuba and St. Vincent & the Grenadines. The second, held on 16th June 2020, featured the Jamaica and St. Kitts & Nevis National Projects.

Our Third Partners’ Webinar will take place on 14th July 2020 (due to the scheduling of the Fourth Regional Project Steering Committee Meeting, 1—2 July 2020) and will feature the Projects in Saint Lucia and Trinidad & Tobago. Participation has been great so far and we look forward even richer exchanges in the future!

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COVID-19 has underscored the close connection between people, nature and climate. Humans live in a symbiotic relationship with nature; humans cannot truly survive without natural and vibrant ecosystems. The Caribbean is facing another hurricane season and we must, beside updating our disaster management response, continue to improve our resilience against threats like COVID-19.

The IWEco Project focuses on: preservation of Caribbean ecosystems; promotion of sustainable livelihoods; fresh & coastal water resources management; sustainable land management; sustainable forest management ...while also seeking enhanced resilience of socio-ecological systems.

The Project, which is hosted by the Secretariat of the Cartagena Convention, has a key part to play in regional post-Covid-19 recovery actions to increase resilience and build back a better society.

COVID-19 has given us an opportunity to press the reset button on many of our activities.



The UNEP Regional Office for Latin America and the Caribbean has issued a series of policy briefs for the region on how to “build back better, leaving no one behind.”

<https://www.unenvironment.org/resources/policy-and-strategy/articulating-social-and-environmental-policy-post-covid-19-recovery>

They include:

- [Waste management as an essential service in Latin America and the Caribbean.](#)
- [Environment in COVID-19 humanitarian response in Latin America and the Caribbean.](#)
- [Opportunities to respond and build back better while leaving no one behind in Latin America and the Caribbean.](#)
- [How to articulate integrated responses to the health, economic and climate crises in Latin America and the Caribbean.](#)

GEF IWEco’s 4th Regional Project Steering Committee Meeting (RSPC4) takes place virtually on 1st—2nd July 2020.

For up-to-date info on COVID-19: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

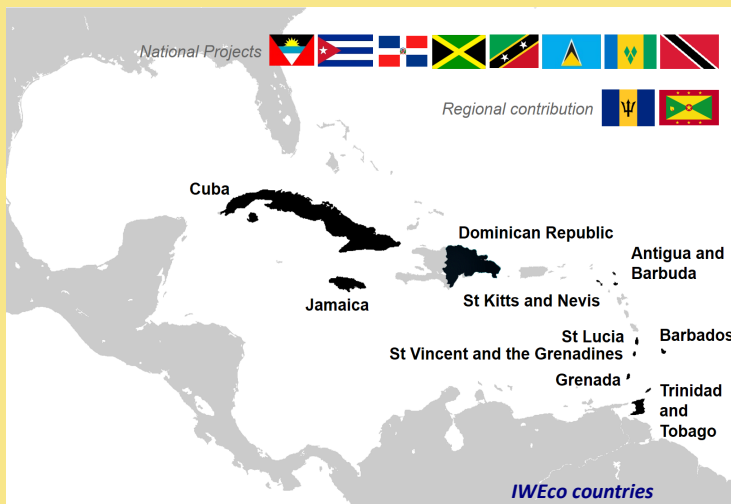
IWEco thanks the SKN and SVG National sub-Projects, CARPHA and other Project Partners for their contributions to this issue.

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**

www.iweco.org

[@caribbeaniweco](https://www.facebook.com/caribbeaniweco)



The IWEco Project is a five-year multi-focal area regional project funded by the Global Environment Facility (GEF). UN Environment is the lead Implementing agency and it is hosted by the Cartagena Convention Secretariat.



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

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