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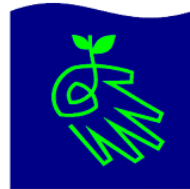
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Sustainable Development Goals being addressed



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IWECO:link

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

www.iweco.org



IWECO.Cuba: Helping farmers improve agricultural practices

World Soil Day 2022 was celebrated on December 5 with the theme "Soils, the source of food." The campaign had a very clear objective: to give soils the recognition they deserve and to make people aware of their importance. Sustainable management of substrates is the only way to ensure the food sovereignty of every nation.

On that day, María Alomá Oramas, Coordinator of the demonstration area in the Arimao Watershed, Cuba, visited the demonstration project in the UEB Integral Agropecuaria Cienfuegos, Limones, which is implementing sustainable land management and introducing the concepts of conservation agriculture. This activity has included the introduction of new tools and agricultural machinery to improve efficiency, as well as teaching good agricultural practices for sustainable land management.

The demonstration project is located within the Guasimal Farm, a water, soil and forest conservation area in the Arimao watershed. Under IWECO.Cuba, machinery and agricultural implements were purchased, with the purpose of introducing improvements that would lead to better production.

The farmer Antolino Pérez Rodríguez (Papin), who is in charge of the farm, explained that a power tiller was received and is



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End-of-Year Statement from RPCU

Dear IWECO partners,

This has been an eventful year in the life of the project - one full of challenges as we worked to ensure that participating countries move closer to attaining wiser and more integrated management of their watershed and coastal areas.

2023 will be IWECO's final year of implementation and we are well aware of the work that remains to be done. By end-August 2023, activities in the national sub-projects must come to an end and we expect that the period September to December 2023 will enable the

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Caribbean Public Health Agency

CARPHA

SGP The GEF Small Grants Programme

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completion of reporting, as well as the project's Terminal Evaluation.

After more than two years of COVID-19 restrictions, we were happy to meet in-person for our Sixth Regional Project Steering Committee Meeting (RPSC6) in July 2022, just in time to say farewell to Jan Betlem, Regional Project Coordinator since October 2017. The Regional Project Coordinating Unit (PCU) has since then done its best, with the support of UNEP's Cartagena Convention Secretariat, to provide oversight and guidance to the wide range of IWeco project activities.

We now say goodbye to another member of the PCU team – Shamene Parker Millen, Programme Management Assistant since December 2017, who moves on. We thank her for her very valuable contribution to the work of IWeco and wish her well in her new adventure. She will be missed!

The continuing efforts and support of our participating countries and regional partners have been encouraging - we are all acutely aware that we are in this together and that project-end is fast-approaching. Responses to requests for information and articles for this newsletter, for instance, have been outstanding...we do not take this support for granted; we understand the many demands faced by our partners, especially at year-end. Overall, significant progress is evident and we feel encouraged as we look to the year ahead.

On behalf of the RPCU, I wish you all a Holiday Season filled with Peace and Joy, and a Healthy and Fulfilling New Year!

- Donna Sue Spencer,

Ag. Regional Project Coordinator,

IWeco Regional Project Coordination Unit (RPCU)



Cane used as a barrier for soil retention.

Sustainable management has improved on the farm. Regla María Alomá Oramas reports that the machinery and implements acquired will “continue to promote sustainable management of natural resources, contributing to the protection of biodiversity in the production system and increasing the quality of life of the workers and inhabitants of the area.”

Article submitted by Regla María Alomá Oramas,
IWeco.Cuba National sub-Project

intended for use in agriculture in small areas. The power tiller is accompanied by three implements for very specific tasks. Each of these can be attached to the power tiller to help with different tasks.



Left to right above, mower, plough and rotary cultivator.

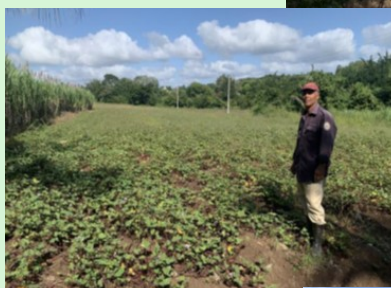


In addition, the power tiller comes with a trailer, which can be used to transport the harvest (above), as well as various inputs that are supplied to the area.

There are currently three crops at different stages of growth - beans, sweet potato and cassava. In addition, fruit trees (guava and mango) are planted around the water source that supplies the area.



Beans



Sweet potatoes

Lemon and orange plantation in contour.



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"The IWeco.Cuba project welcomed us and has helped us a lot. This power tiller is ideal for setting up an organoponic farm - the technology saves us a great deal of manpower, as well as humanises the work in the field. It has given us enormous joy to obtain this implement, for the variability and possibility of using it as a plough, as a mower, among other things, which

allows us to replace a lot of manual labour; and thanks to IWeco.Cuba, the people of Palmira will eat fresh vegetables and greens."

Enrique Arturo Padrón,
Farmer, the Palmira Farm-School.



"We want to thank the IWeco.Cuba project, because with the delivered implements we can increase land preparation, increase the production of different crops, provision, tubers and others and this helps us to increase the happiness of the people, producing more food and satisfaction."

Manuel Alejandro Rivero García,
Farmer, the Trinidad Agroforestry Company.

IWEco.SKN Minerals Sector Study provides a roadmap to more sustainable aggregate and sand extraction



The overall goal of the St. Kitts and Nevis National sub-Project is to reduce and reverse land degradation using the IWeco approach. The project is meant to strengthen the institutional capacity, improve the policy framework, and facilitate pilot projects within the College Street Ghaut watershed (St. Kitts), and key quarry sites and nearby wetlands and coral reefs (Nevis).

In-mid 2022, an in-depth study of the minerals sector in the Federation was completed. Its main goal was to analyse both quarry and sand mining operations on both islands with the aim of improving operations and introducing best practices to stem land degradation and excessive

erosion.

Quarry operations in SKN

There are four active quarries on the island of Nevis, all of which are on land leased from the Government and operated by either private companies or the Nevis Land and Housing Corporation, a statutory body. These sites cover more than 50 acres of land and are located in the area of New River and Indian Castle along the eastern and southern sides of Nevis. Poor quarry management practices have led to serious land degradation, sedimentation of nearby ghauts (dry riverbed / ravine) and negative impacts on coral reefs and mangrove swamps.

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Policy, legislation, action and strategy for IWRM —implementing priority interventions under IWEco



Under Component 3 of the GEF IWEco Project (policy and legislation) the Caribbean Public Health Agency (CARPHA), a project executing partner, is collaborating with the Organisation of Eastern Caribbean States to implement priority interventions identified through the review the status of policy, legislative implementation, action plans and strategies at the regional level as well as within the countries. The interventions are as follows:

- Development of a Methodological Framework for Integrated Coastal Zone Management for Grenada, Jamaica, Saint Vincent and the Grenadines and Saint Lucia.
- Development and implementation of a Regional Environmental Monitoring Data Portal (REMDAP) for eight Participating Countries.
- Development of a National Water Information System for Saint Kitts and Nevis.
- Development of a National Research Strategy for the Collection of Environmental Data Necessary to Inform Environmental Management Decision-making in Antigua and Barbuda and Trinidad and Tobago.
- Development of a Marine Pollution Management Strategy and National Action Plan for Barbados.
- Update of the National Risk Management Plan for the Dominican Republic.

The interventions were prioritized through a

situational analysis and stakeholder consultations to discuss national and regional priority areas towards the preservation of Caribbean ecosystems that contribute to sustainable livelihoods. Implementation of most of the activities is ongoing, with August 2023 as the completion deadline.

There is recognition that there are recently completed and ongoing projects which have synergies with these interventions, therefore collaboration to ensure that all policies, plans, legislation and institutional strengthening activities are planned and being implemented to complement each other for a successful outcome. Lessons learnt from other countries are being considered; for example, consideration is being given to the recently developed Integrated Coastal Zone Management Plan in Barbados, and the recently completed Coastal and Marine Spatial Plans for Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines, to give insight and provide continuity in the development of the Methodological Framework for Integrated Coastal Zone Management in Grenada, Jamaica, Saint Vincent and the Grenadines and Saint Lucia.

Furthermore, consideration is being given to the reduction of duplication especially in the development of environmental information systems. The Regional Environmental Monitoring Data Portal (REMDAP) will utilize information being generated through other concurrently occurring consultancies such as the collaborative effort between the OECS and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) in providing technical support for the establishment of an Environmental Information System in the Eastern Caribbean. Additionally, national environmental data and information systems will have a direct link to the REMDAP, and in cases where countries do not have such systems, the REMDAP will serve as the information system. It is also envisioned that the REMDAP will serve as an OECS Environmental Information System in order to enhance efficiency across the region in data and information sharing.

As the year comes to a close, and with the deadline for completion of the priority interventions fast approaching, we look forward to fruitful participation and successful implementation.

- submitted by Farzana Yusuf-Leon, Technical Officer-IWEco, OECS



Maderia Valley Forest Park, St.Vincent & the Grenadines - Community learns to promote its treasure!

Partnership between the Caribbean Natural Resources Institute (CANARI) and IWeco to strengthen and support stewardship and sustainable and climate-resilient livelihoods in the targeted IWeco countries continued in 2022.

Capacity building sessions under the initiatives Intervention Area 2: 'Strengthening community enterprises to ensure sustainable use and enhance socio-economic benefits to surrounding communities.' which took place in 2021 aim to support community nature-based Small and Micro Enterprises (SMEs) in delivering triple bottom line (environmental, social and economic) co-benefits through support provided by trained in-country small business development mentors.

Chemora Mc Knee is the mentor who worked with the selected community, nature-based SME in St. Vincent & the Grenadines - the Madeira Valley Forest Park Inc.

Maderia Valley is a secluded area and agro forest located on the Massey Estate in Bridgetown, Biabou, St Vincent and the Grenadines. The Maderia Valley Forest Park Inc. is the non-governmental organization that was established to maintain the forest species of the coastal dry forest of the lower Massey Valley, as well as showcase the rich agricultural, economic, and cultural heritage of the community. Visitors to the estate pay a small admission fee which goes towards improvement of the park and trail maintenance.

The five-acre forest park consists mostly of steep terrain with a trail that goes through five levels or platforms that were created for rest, relaxation, and observation. Level One is the site of an old water-powered arrowroot factory. On Level Two is a children's play area created by infilling an area constructed from tree logs. Level Three is the Oscar Allen platform, a cluster of mango trees that attract birds and other wildlife. Level Four, the African Platform, features a sculpture and benches and is a centre for cultural performances and events. Level Five, the Summit Platform, features an observation deck from which visitors can view surrounding farmland.

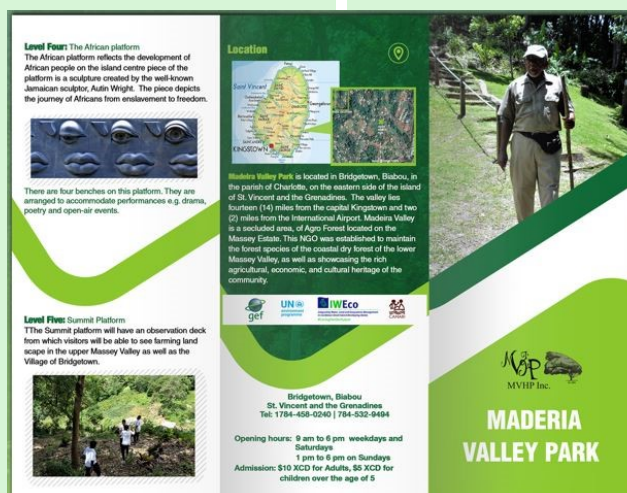
The group describes changes since it began its activities: a positive change in community attitude towards the forest park and nature-based enterprises; an increase in wildlife such as hawks, hummingbirds, mountain doves iguanas and

opossums; a renewed sense of identity and pride within the Biabou community; beautification of the village with a variety of flowers and shrubs, and; development of user-friendly trail with rest stops for both local and foreign tourists.

They have been working towards completion of an interpretation centre to facilitate park tours. With guidance from Chemora, they were able to identify and prioritize capacity needs and under this particular initiative decided to focus on the development of a marketing plan, a digital and print brochure, and t-shirts, in order to promote the park to the local and wider community. They qualified for a micro-grant of US \$2,000 which enabled the hiring of a marketing consultant and a graphic artist. In workshop sessions they worked to identify and articulate a marketing identity and message and to develop a marketing promotional plan. The graphic artist then designed a brochure and t-shirts, which were produced with the remaining funds.

Chemora noted that this has been a great group to work with; it was open to learning and engaged in the process. They are driven by their love of the area and wish to share it with others. Their challenge now is to involve younger people and partners to ensure the sustainability of their vision and efforts.

Although expected results have so far been only partially achieved, they are working to increase NGO membership as well as to increase partnerships with other organizations and businesses which have similar objectives. IWeco was glad to support its development and plans with the support of CANARI and through the efforts of Chemora and partners!



Front of brochure designed and produced by the SME as a result of this collaboration.



Members of Maderia Valley Forest Park Inc. in a training session with the marketing consultant, 2022.

(Continued from page 3)

A similar situation exists in St. Kitts. However, there is only one quarry located at Canada Estate which is owned and operated by the Government of St. Kitts and Nevis (GSKN) through the Public Works Department (PWD). The different operations produce boulders, coarse base, fine base, aggregate, various grades of sand, and filling material for road and runway construction, on demand in the construction industry.

St. Kitts and Nevis has seen significant growth in the hospitality sector over the past years, with the construction of high-end properties placing extra demand on the supply of gravel, stone and sand. The quarry sites are covered by semi-deciduous dry scrub forest, sparsely dense vegetation with a few patches of open canopy. The issue being faced is that most of these operations do not implement measures to stabilize displaced overburden and mitigate the flushing of sediment into ghauts and/or into the marine environment during heavy rains. Various stakeholders have been raising concern over degraded beaches and the high sedimentation rates.

SKN Minerals Sector Study

In February 2020, Wood UK Ltd was contracted to spearhead the SKN Minerals Sector Study which included **three major reports: (1) Minerals Sector Analysis, (2) Legislation and Policy Report and (3) Good Practice Report.** Interviews and historical data collection were done virtually in 2020 and in 2021 until a first field mission, delayed by COVID-19 restrictions, was finally possible in November 2021.

The Minerals Sector Analysis aimed to:

- Document current rates and patterns with respect to sand and aggregates extraction/supply and consumption/demand in St Kitts and Nevis;
- Determine the sustainability of current and future rates of sand and aggregates extraction in St Kitts and Nevis;
- Identify potential sand supply options in St Kitts and Nevis;
- Analyse options relating to sand importation based on the experience and lessons learnt in Nevis and within the Caribbean region; and
- Analyse ways to reduce demand for sand through use of alternative materials for construction.

The final report presented a detailed materials balance of sand and aggregates production and consumption, based on extensive datasets and data processing methodologies. This served to identify baseline rates of annual average sand and aggregates consumption. Using a novel method, it simulated future scenarios in terms of future development trajectories, in order to assess sand and aggregate requirements for planning purposes.

Legislation and Policy Report

This identified that environmental and planning legislation and policy are structured, clear and contain strong provisions to manage the extraction of sand, gravel and stone. Existing legislation includes provisions for:

- Restriction on quarrying and mining activity without an application to the Minister (National Conservation and Environmental Planning Act)
- Prevention of sand mining from the foreshore or coastal zone without a permit (National Conservation and Environmental Planning Act)
- Restriction on the extraction of sand from ghauts (National Conservation and Environmental Planning Act)
- Provision for the requiring Environmental Impact Assessment (EIA) for major projects, including for quarrying and mining proposals (St Kitts Development Control and Planning Act and the Nevis Physical Development Control Ordinance).

Overall, it found that these provisions give the government enough power to impose suitable controls when considering new quarrying activity. It further found that in order to provide comprehensive environmental control of quarrying/mining activities across St Kitt and Nevis, there needs to be sufficient provision to regulate both existing and new activities, as well as sufficient clarity on the requirements for environmental impact assessment and/or permitting of activities. There are three scenarios, covering both St Kitts and Nevis, to be considered including the effective environmental regulation of new activities, of existing quarries and of illegal sites. A wide range of recommendations for these three scenarios are included in the report along with key considerations for permitting.

Good Practice Guide

The purpose of the third report was to expand upon the environmental considerations set out in the Legislation and Policy report (and in the table below) to provide descriptions and examples of good practice in environmental management of this sector.

Definition of site and activity <small>For all quarrying/mining activities it is important that there is a clear definition of the site and activity proposed, as required by the National Conservation and Environmental Protection Act.</small>	Environmental Considerations <small>Alongside the definition of site and activity, environmental considerations should also be included in permissions for quarrying and mining activities. These would normally be included within the Environmental Impact Assessment for the site, as required under the Development Control and Planning Act (St Kitts) or the Physical Development Control Ordinance (Nevis).</small>
<ul style="list-style-type: none"> • Definition of proposed extraction area • Duration of extraction activities • Volume to be extracted • Depth of working • Phased working • Topsoil and subsoil preservation • Geotechnical considerations and facing angles 	<ul style="list-style-type: none"> • Site runoff and surface drainage management • Groundwater protection • Waste management • Dust suppression • Noise • Landscaping, restoration and aftercare

The work on the SKN Minerals Sector Study culminated in training sessions held in July 2021 on both islands for a range of stakeholders, including government agencies and quarry operators.

You can find the full SKN Minerals Sector Study reports and training guides on the IWECO website under:

<https://www.iweco.org/publications/project-reports>

- From article submitted by Halla Sahely, IWECO.SKN National Project Coordinator



Season's Greetings



The year 2022, which marks Year 4 of implementation for the IWEco Project, is rapidly coming to an end. We are celebrating what is, for many, the most wonderful time of the year. In the hustle and bustle of the holiday season, it is important to "press pause" and reflect on what has been achieved and why we do what we do - preserving Caribbean ecosystems for future generations.

Despite the challenges of this year, cherish this reflective season. Our collective compassion, solidarity, grit and resilience will ensure IWEco's continued success.

From all of us, we wish you a Happy, Healthy, Productive and Prosperous New Year. We look forward to working with you in 2023, as we continue to
#CareForOurFuture.

~ The IWEco PCU Team ~



A little note from the Regional Project Coordination Unit...

Shamene Parker Millen ends her time with IWEco on December 31, 2022! She has been a valuable and essential part of our team and we will miss her greatly! Goodluck in your new endeavours Shamene!

This means that the RPCU team will for now be the two Donna's : Donna Henry-Hernandez, who will be on leave from 28 December 2022— 3 January 2023; and Donna Sue Spencer, who will be on leave from 19 December— 11 January 2023. We thank you for your patience in this period and will respond to your queries as soon as possible.

We haven't forgotten our promise to send the 'Snapshots of Biodiversity in IWEco' posters prepared in 2021 out— it is taking longer than anticipated to organize but we hope to deliver them early in the new year.

Take good care all and we look forward to connecting again in 2023! Happy Holidays!



The UNEP Cartagena Convention Secretariat, through funding from the GEF IWEco project, has prepared a four-part video series on sargassum to raise awareness among the wider public on the origins and impacts of the sargassum influx that has plagued the Wider Caribbean for the past several years. The series explores the origin of the seaweed in the region and the efforts of governments and other stakeholders to reduce the influx and its impacts on coastlines, health and livelihoods. The featured testimonials also provide insight into the actions and their associated costs to mitigate and monitor the influx, and the innovations of young entrepreneurs to turn sargassum into a valuable economic opportunity.

The Secretariat and GEF IWEco Project extend their appreciation to Mayers Media Inc. for leading the production and development of the series, as well as to several regional experts, representatives of government, non-governmental organizations, civil society, private sector and academic institutions for sharing their testimonials and best practices.

The series will be available on December 30, 2022 on the YouTube channel of the Secretariat.

Stay safe everyone!

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

IWEco thanks its partners, both regional and national, for their contributions to this issue and for their continuing support.

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

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