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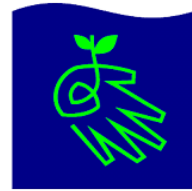
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Sustainable Development Goals being addressed



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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

"Biodiversity remains the answer to several sustainable development challenges. From nature-based solutions to climate, health issues, food and water security, and sustainable livelihoods, biodiversity is the foundation upon which we can build back better."

-The Convention on Biological Diversity, International Day for Biological Diversity, 22 May 2022

Snapshots of Biodiversity in IWECO

IWECO launches a series of posters featuring flora and fauna in participating countries!



GEF IWECO Project interventions have been designed to have a positive impact upon areas of great ecological value and which support many species of flora and fauna in our ten participating countries.

The Caribbean Sea Basin is globally significant, having been designated as one of the 36 biodiversity hotspots in the world due to its high endemism and threat risk (Ecosystem Profile - The Caribbean Island Biodiversity Hotspot – CEPF 2019). According to Conservation International (CI), the Caribbean Islands 'hotspot' supports exceptionally diverse ecosystems.

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Training for better Environmental Quality Monitoring

The Regional Laboratory Assessment conducted for UNEP GEF IWECO, under Component 2, in 2020 aimed to strengthen national and regional capacity to perform environmental quality monitoring. It assessed environmental quality monitoring needs, including the capacity in the national and regional laboratories and Regional Activity Centres to respond to demands for environmental quality monitoring in participating SIDS. The assessment made recommendations for suitable laboratories in which to conduct capacity building activities.



IWECO committed to capacity building in selected laboratories through the provision of equipment to support environmental quality monitoring and, through training, to support the provision of consistent results fit for the intended purpose. All laboratories were recommended for training as all training would be virtual in nature. The courses recommended were based on frequency of request by the assessed laboratories.

Webinar Training Series

From March – June 2022, the webinar training series took

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Caribbean Public Health Agency

CARPHA

SGP The GEF Small Grants Programme

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place, as follows:

- **Module 1:** Improving Laboratory Management Practices – An Introduction to ISO 17025 (15-16 March 2022)
- **Module 2:** Current methods + quality control (20 – 21 April 2022)
- **Module 3:** Nutrient analysis methodologies with focus on surface waters (12 May 2022)
- **Module 4:** Sampling (1 – 2 June 2022)
- **Module 5:** Working with Environmental Monitoring Data (21 – 22 June 2022)

There was wide participation by personnel from all interested laboratories. Participants included staff and on-site managers of government and non-government water quality testing laboratories within the IWeco Project's ten participating countries. The training was prepared and conducted by the University of North Carolina Water Institute and coordinated by United Nations Institute for Training and Research (UNITAR).

According to Allison Astwood, Laboratory Specialist, who conducted the Laboratory Assessment and is supporting the capacity building, *"The training modules were well received and overall, the intended objectives of the training recommended in phase 1 were met, albeit as introductions for the most part rather than detailed training. However, the training delivered sets the baseline from which more in-depth studies / reading can be done."*

All training materials are available on:

The Platform for Training on Environmental Monitoring:

<https://chemicalsandwaste.wixsite.com/env-monitoring>



≈ Reflections ≈

...from Jan Betlem, IWeco Regional Project Coordinator

Integrating Water, Land and Ecosystem Management in Caribbean Small Island Developing States (SIDS) is a necessary foundation for sustainable development. Societies should focus on eliminating sectoral approaches and embracing integrated strategies. However, this means leaving the sectoral comfort zone and having real dialogues with each other. It also means diversion of power and inclusion of minority groups.

The IWeco regional project was formulated following a component-based structure: Component 1 supports individual countries with earlier identified key environmental issues; Component 2 provides possibilities to selected regional organisations allowing targeted support to the project countries; Component 3 pays attention to the political level and legislative issues; Component 4 deals with the necessary extensive communication and awareness raising at the regional level.

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Regional Environmental Laboratory Network

IWeco's Fifth Regional Project Steering Committee Meeting, held in July 2021, agreed that an Environmental Laboratory Network be formed within the Region and that the IWeco laboratory consultant, Ms. Allison Astwood, would coordinate this process.

The first meeting of the Regional Environmental Laboratory Network was held on May 19, 2022. The participants who attended virtually were from laboratories of the IWeco Project participating countries of the English-speaking Caribbean. It was agreed with the UNEP/CAR-RCU that a separate network would be needed for the Spanish-speaking laboratories not only because of the language barrier but also because they appeared to be at a more advanced stage of development overall with regards to tests conducted, and national environment legislation already in place.

It is initially thought that the purpose of such an environmental laboratory network, composed of environmental laboratory heads and their deputies, would be:

- to guide and coordinate laboratory strengthening activities within the Region
- to facilitate the exchange of laboratory specific information in the Region
- to provide a mechanism for identifying training needs in the Region
- to facilitate training, albeit initially on an informal basis amongst members by promoting the sharing of information based on members' experiences and challenges in implementation.

The new Network has established an Implementation Committee which is working to determine the objectives of the Network and prepare a draft Terms of Reference for both the Network and for the Chair of the Network. The work of the Implementation Committee is ongoing.

The Way Forward for IWRM in the Caribbean

Under GEF UNEP IWeco Project Component 3 (policy and legislation) the Caribbean Public Health Agency (CARPHA), a project executing partner, has been collaborating with the Organisation of Eastern Caribbean States (OECS) to implement activities towards the development of an Action Framework for Integrated Water Resources Management (IWRM) for the CARICOM Region.

In 2021, the Global Water Partnership-Caribbean (GWP-C) undertook the consultancy to develop the Framework. It focused on establishing an overarching framework for CARICOM's approach to the sustainable and effective management of water resources in member and observer States in order to contribute to a higher degree of IWRM implementation in the Region as a whole, as well as an increased level of IWRM implementation in the individual countries that are member states of the Region.

The Conceptual Framework has been developed with the objective of strengthening the policy, legislative and institutional mechanisms and capacity building for Integrated Water Resources Management (IWRM) and ecosystem services management, while increasing climate and disaster resilience.

The Action Framework was finalized by GWP-C following wide stakeholder consultation and subsequent presentation at IWeco's Third Governance Partnership Meeting in April 2022.

It builds on multiple efforts towards a coordinated approach to IWRM in the region, including a CARICOM resolution in 2008 to initiate the Consortium of CARICOM Institutions on Water to develop a Common Water Framework for the Community, and the Global Environment Facility's (GEF) Caribbean-wide Integrating Watershed and Coastal Area Management (IWCAM) project, (2006 to 2011), which supported the development of national IWRM plans and reviewed the policy, legislation, and institutional structures in IWeco participating states.

The Framework was developed through the consultation of stakeholders in IWeco participating states, and, given that it is intended to support the CARICOM region, this document serves as a first draft. The next step includes the revision of the Framework to ensure the needs and priorities of all countries within the CARICOM Region are incorporated. The revised Framework was presented to the Council for Trade and Economic Development - Environment (COTED-Environment) in June 2022 for formal endorsement.

The Action Framework is available at:

<https://tinyurl.com/yjxzsesa>



A strategic overview of the major milestones of the Regional Action Framework for IWRM in the Caribbean Region.

Source: Action Framework for IWRM in the Caribbean Region

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The project is now 5 years in execution and due to end in August 2023. While some countries have made good progress; others have experienced a delayed start. Where do we stand now?

In Cuba, the project supported the execution of a range of demonstration projects in forestry, sustainable agriculture, and wastewater treatment. Environmental baseline studies have been conducted as contributions to management plans in four catchment areas. Execution is in full progress.

The Dominican Republic was a late starter but is steadily catching up with planning and execution of an integrated management plan for the Higuamo River watershed to improve the management of the land, water and biodiversity resources of the watershed and its associated coastal zone, taking into account climate change, sensitive ecosystems and ecosystem services. A huge task and still a lot of work ahead.

Saint Lucia has seen the progress of various sustainable water, land and ecosystems management interventions as well as a number of livelihood-enhancing support actions to relevant communities, such as 'below forest canopy production systems', greater farmer engagement and the development of agro-tourism opportunities. Replication and upscaling will be the focus post-project.

In Saint Vincent & the Grenadines, which began project implementation late, riverbank stabilization, forest management to diversify existing forest, and, an exhaustive parrot census which has found remarkable growth in the parrot population on the main island, are all underway. There is certainly more to come.

Saint Kitts & Nevis have almost completed their national project with larger scale land degradation control works in the College Street Ghaut which runs through the capital, Basseterre. Community-based environmental monitoring has been supported and reforestation and forest rehabilitation works in Nevis have progressed with significant support from local communities.

In Trinidad and Tobago rehabilitation and maintenance of quarry demo project sites at National Quarry Co. Ltd have been completed, combined with capacity building and public awareness and outreach.

Barbados recently started its 'Hedgerow Rehabilitation' project to avoid land degradation and run-off of sediment to the

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Barbados returns to traditional methods with hedgerows

In Barbados, over the years, the familiar hedgerows that were once so much a part of the island’s rolling landscape have been disappearing. Their physical removal for development or farming, as well as their unintentional destruction through herbicide applications, have contributed to an increased risk of soil loss during intense rain events, a major issue due to its consequences upon land management practices.

To address this, the Ministry of Environment and National Beautification launched a “Clean and Green” initiative in September 2020 within the overall National Beautification Programme, and with funding support from the GEF UNEP IW Eco Project.

The overall objective of the project is to reintroduce and encourage the practice of planting hedgerows, establish nurseries for the Khus Khus (a.k.a. Vetiver) and lemon grass, and to reinstate hedgerow between agricultural fields, roads and gully systems. Khus Khus and Lemon grass can serve to support the soil stabilisation where hedgerows along cane fields, gullies are reinstated to improve the aesthetics around farming areas, reduce storm water runoff and erosion of soil.

The reintroduction of hedgerows can also reduce soil and land degradation, protect agricultural assets, and contribute to terrestrial biodiversity protection with a view of maintaining healthy terrestrial and marine ecosystems.

Its inclusion under the wider National Beautification programme is expected to help with rapid mobilisation and replanting of hedgerows as well as increasing public awareness.

Among expected outcomes are: a 2-acre plant nursery at the National Botanical Garden; 10 - 20 km of hedgerow planted within the National Park and community parks; expansion of the Germplasm laboratory to include Khus Khus and Lemon grasses; preparation of a training and operations manual for hedgerow reinstallation; fifty staff trained in installation and maintenance techniques; and, 30 hectares of land stabilised in agricultural areas prone to soil loss.



The Constitution River, into which runoff from the Botanical Gardens drains, will benefit from reduced sediment load due to the planting of hedgerows. This project will contribute to addressing some of the elements identified in Annex IV Agricultural Non-Point Sources of Pollution of the LBS Protocol of the Cartagena Convention which Barbados ratified in 2019.



A germplasm laboratory, for the maintenance species diversity and protection from disease, and a plant nursery for Khus Khus and Lemon grasses, to propagate commercially viable stocks for distribution within the National Botanical Gardens at Waterford, St. Michael has been established.



The germplasm laboratory under construction. This will be used to germinate the seed for the Khus khus and lemon grasses.



Growing shelves in the laboratory with multi-spectrum lighting.



Controls for the humidity and other environmental parameters.

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Growing beds at different stages after separation. Multiplication is done through root division and stem cuttings of the selected grasses. These are to be expanded to increase Khus khus grass production for the rainy season.



One of the areas to be planted in the Barbados National Botanical Gardens.

Benefits of the project include:

- A sustainable national source of germplasm for Khus Khus and lemon grass
- Increased water retention and infiltration on farmlands
- Storage facility for all species of grasses for future development
- Increased staff capacity/building
- Improved soil quality
- Reduction in soil loss from agricultural fields
- Reduction in turbidity of the marine environment
- Improved storm water quality from agricultural fields
- Increased discharges of storm water to drainage wells
- Increased recharge of groundwater aquifers
- Improvement in reef quality
- Improved aesthetics
- Cottage industry development (e.g. lemon grass can be used in soaps, teas and other products)
- Erosion mitigation and control using nature-based solutions
- Increased biodiversity
- Carbon sequestration
- Public awareness of the importance of soils and challenges of soil loss

The Power of Local People and Communities

Under GEF UNEP IWEco Project Component 3, the United Nations Development Programme (UNDP) coordinated GEF Small Grants Programme (GEF SGP) partnered with IWEco to directly disburse funds to its programmes in the IWEco participating countries. Among IWEco objectives is to enhance livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning. The GEF therefore allocated US \$1 million in funding to be matched by the UNDP SGP which then provided direct financial and technical support to communities and local organisations in the participating countries to address the project objectives at the community level.

On 24th May 2022, UNDP convened the GEF/UNDP-UNEP IWEco Community Component Closure Workshop. Sulan Chen, in summarizing the workshop, noted that the presentations made by the SGP Coordinators, and discussions which followed, highlighted the important role of partnership and SGP in achieving IWEco's success. In all, 55 community initiatives were implemented. She highlighted the following:

- The power of local people and communities.
- The importance of aligning community projects with national and regional projects for better results; this should be encouraged in programming.
- The role of integrated programming and the ridge-to-reef approach.
- The importance of having a clear sustainability plan.
- Sustainability could be constrained where there are no direct economic benefits to communities; in such cases, continued support is needed to enhance uptake of sustainable environmental practices.
- The necessity of continuing collective work to empower communities through capacity building initiatives as this enhances long term sustainability.

Sulan Chen stressed that the work of scaling up good practices must now be done and that UNDP/SGP looks forward to exploring partnership opportunities to scale up good practices from local to global level.



Local producers take part in a basic course on beekeeping, Upper Higuamo Watershed, the Dominican Republic

See the Final Report at:

<https://tinyurl.com/2p9dwj2d>

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Jan Betlem (left) with a colleague in Suriname, 1982

Caribbean Sea, and Grenada is being supported through a regional intervention to improve uptake and use of ecosystem valuation info by a range of stakeholders, towards improved natural resources management.

Jamaica has further enlarged the knowledge base of the Negril Great Morass ecosystem but has yet to face challenges to implementing the field work needed to have a real impact.

The IWEco interventions in Antigua & Barbuda were stopped and the Project is awaiting new proposals which are consistent with the IWEco approach and can be executed before project closing.

Regional support has been regularly provided to partners but the Component 2 approach, unfortunately, did not work out well due to institutional changes in the organizations involved. Longer-term project intervention could overcome this challenge.

Component 3 of the project is progressing with the development of an Integrated Water Resources Management (IWRM) plan for the Caribbean Community (CARICOM). This high-level intervention must now be followed up by country specific adjustments to legislative and policy instruments.

IWEco partner UNDP, through Small Grants Programme (SGP) Projects, has funded 55 small scale projects since the inception of the IWEco Project (22 of these have been directly funded under IWEco, while 33 are SGP-funded projects in support of IWEco implementation).

Have we made progress in terms of increasing societies' sustainability and all-inclusive integrated development?

I think so. The project has shown that - if we are all willing to take action - successes can be noted in terms of inclusive, integrated, sustainable development and sound ecosystem management which supports greater resilience.

However, we have seen remarkable differences between countries in terms of project approach, commitment and ultimate results. What has caused these differences?

I personally think that a government should represent its population. Decisions taken should be for the good of the people, the society in general and (for a UNEP executed project) for the environment in particular. The Global Environment Facility's (GEF) main pillar is its 184 member countries. Representatives of all member countries are from government, and they meet every four years during the GEF Assembly. The GEF Assembly is as effective as the sum of its members.

If a government is not representing its population (and their requirements in terms of resilience to climate change and true sustainable development) project execution suffers. This seems to me to reinforce the need for full commitment by government, a key factor in project execution.



Jan Betlem, with Foresters from Grenada (Dillon Palmer) and St. Vincent & the Grenadines (Fitzgerald Providence), in the Dominican Republic, 2019

SIDS are characterised by: small size, with implications for pressure on resources and limited economic diversity; remoteness and isolation, leading to challenges for trading but at the same time, to a unique biodiversity and cultural richness; and a maritime environment, leading to strong tourism assets but vulnerability to climate change as well as to environmental degradation by tourism.

The public sector in SIDS has been described as "bloated and inefficient" by the World Bank (Horscroft, 2014). Political interference, patronage politics and ethnic affiliations can compromise small scale government structures which as a result, may not represent the population or be effective in project execution. The reality is that projects are add-ons to the already substantial responsibilities of government agencies which have human resource and other challenges.

If we are serious about getting positive results, the GEF, as Donor, as well as UNEP, as GEF Implementing Partner, should, in the case of SIDS, reconsider its present strategy and consider executing more through Non-Governmental Organizations (NGOs). Such an approach would still allow governments to provide oversight, to monitor interventions, while allowing capable and dedicated NGOs to work hand-in-hand with local stakeholders.

The IWEco experience has furthermore shown that relatively smaller projects are more manageable for national authorities and their national stakeholders, and therefore more likely to succeed.

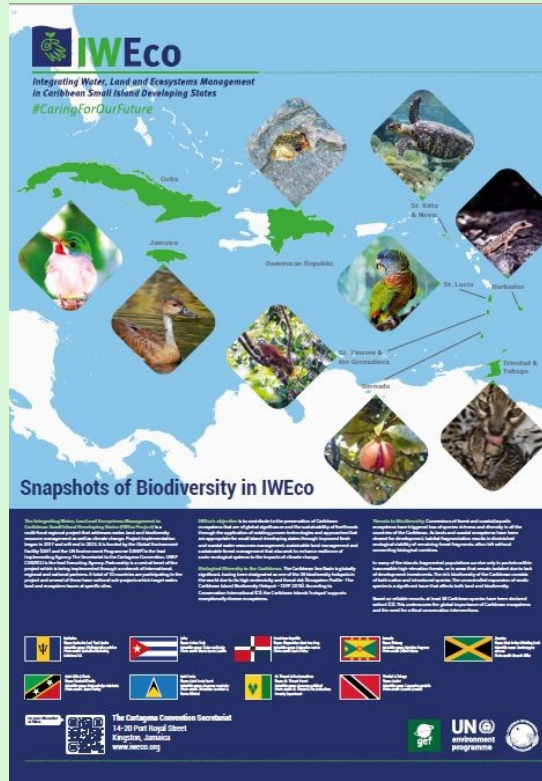
The IWEco Project started in 2017 for a period of 5 years. Donors define the maximum duration of donor funded projects. Reality, however, shows that an integrated and sustainable approach is likely to take at least twice as long to achieve. Given the particular challenges of Caribbean SIDS, it may require even longer.

Five years since project implementation started, most partners are just accelerating execution of activities. In my view, the project should have been twice as long, with double the amount of funding, to really start making a significant impact.

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Jan Betlem has been IWEco Regional Project Coordinator since 2017 and retires at the end of July 2022.

The expressions and opinions provided in this essay are the personal views of the author.



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In recognition of the rich biological diversity found amongst Caribbean Small Island Developing States (SIDS), the IWEco Project asked partners in participating countries to submit photographs of selected species of flora and fauna which could be featured in a series of posters. The resulting collection includes endangered species as well as some that are faring well. It wasn't easy selecting the species which are featured - there are so many wonderful plants and animals inhabiting our islands.

The posters may be seen and downloaded from:

<https://www.iweco.org/node/394>

For details about the species featured, as well as photograph credits, click the QR codes on each poster.

The introduction poster (above) as well as those of Cuba and the Dominican Republic are available in both Spanish and English.

We hope you find them both enjoyable and educational and we wish to thank all who contributed their beautiful photographs for helping us to reflect upon, and appreciate, biodiversity and to consider the importance of **"building a shared future for all life"** – the theme of Biodiversity Day 2022.

Prints of the posters will soon be available. If interested contact: donna.spencer@un.org





Celebrating 35 years since the entry into force of the Cartagena Convention!

The year 2021 marked 35 years since the entry into force of the **Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region**. Since 1986 when the Convention entered into force, 26 governments in the Wider Caribbean have pledged their political commitment to the region's only legal instrument for "collective action to protect the Caribbean Sea."

Thanks to financial support from the European Union-funded project Capacity Building Related to Multilateral Environmental Agreements in African, Caribbean, and Pacific Countries, a commemorative video was commissioned in 2021 to highlight the importance and benefits of the Convention and its Protocols to the governments and peoples of the region.

The video supports the efforts of the UNEP Cartagena Convention Secretariat to encourage ratification of the Convention and its Protocols by Non-Contracting Parties.

The video was produced by Mayers Media Inc. in Barbados. The UNEP Cartagena Convention Secretariat invites you to view and share the video which was launched on **June 21, 2022** under the theme **Collective action to protect the Caribbean Sea**.

<https://www.youtube.com/watch?v=vDvgHBF1Ubc>

It's time for IWEco RPSCM 6!

IWEco's 6th Regional Project Steering Committee Meeting (RPSCM 6) will take place from 18 –20 July 2022 in Port of Spain, Trinidad & Tobago.

Our last face-to-face RPSCM was in April 2019...! We look forward to seeing many of our partners again, to checking in, to brainstorming challenges and celebrating achievements in person!

In addition to providing an update on the status and progress of national projects and regional support initiatives, and reviewing the proposed draft work plan and budget for the project's final year of implementation, 2022—2023, RPSCM 6 will be Jan Betlem's last meeting as Regional Project Coordinator—he is retiring at the end of July 2022!

As difficult as it is for us to imagine the project without him, it's time to say goodbye... but who can forget Jan's no-nonsense approach, openness and readiness to assist, willingness to share from his vast experience, (always) frank advice... and great love of chicken or "kuku"!



Stay safe everyone!

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

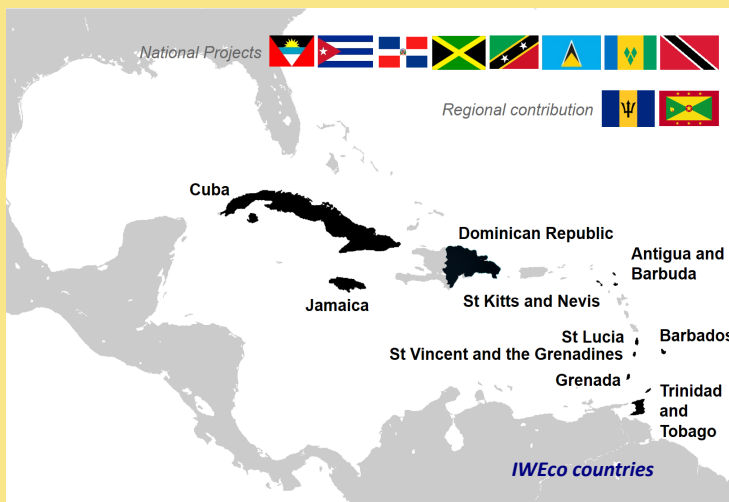
IWEco thanks its partners, both regional and national, for their contributions to this issue and for their continuing support.

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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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