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

## Regional Project Coordinator's End-of-year Message



Dear colleagues,

*The year 2020 was still young when we were all confronted with one of the greatest impacts in our lives: The COVID-19 pandemic. Suddenly, the world became small again as offices and airports were closed, working places were vacated and 1.5-meter-distant contacts with others became the new norm.*

*National curfews and other restrictive measures, combined with dramatic drops in economic activity worldwide have resulted in unprecedented impacts on our lives. The way we work and communicate with each other, as well as*

*(Continued on page 2)*

## COVID-19 Impacts on IWEco and the Way Forward

To mitigate potential interruptions to the achievement of project outcomes caused by the ongoing COVID-19 pandemic, the IWEco Regional Project Coordination Unit (PCU) conducted a survey to assess COVID-19 related impacts on the execution of activities by national and regional project partners. This aims to ensure the provision of adequate levels of support in response to reported constraints. The survey was electronically distributed to project personnel at the national and regional levels between September and October 2020.

National survey feedback was that most of the activities implemented by the national projects have been affected, resulting in delays in project implementation. The majority of impacts come from government measures enacted to reduce the spread of COVID-19 (travel restrictions, curfew hours, reduced gathering sizes). Jamaica and Saint Lucia have been affected most, with all (100%) sub-components impacted. St. Vincent and the Grenadines has been 90% impacted, St. Kitts and Nevis 78.3% impacted, and Trinidad and Tobago 50% impacted.

Across all national projects the procurement of international consultants, conduct of field assessments, data compilation, specialized work, access to project sites, stakeholder engagement, capacity building, and training/education components have been negatively affected. Stakeholder engagement, capacity building, and training/education components were the areas identified as needing most additional support, with assistance in the development of communication material and virtual training tools in particular being requested from the PCU. Activities that involve or require regional or international consultants have been particularly affected, due to on-going travel restrictions. As

*(Continued on page 2)*



**2020 just hasn't been the same without seeing our partners... Take care and we look forward to seeing you all soon again!**



Caribbean Public Health Agency

CARPHA

SGP The GEF Small Grants Programme

(Continued from page 1)

*the way we think about our future, and that of our children and grandchildren, have changed.*

*Most frustrating for many has been the uncertainty - when will things be normal again?*

*Being part of a very complex global ecosystem, human beings have multiplied themselves from about 1 billion in the early 1800's to more than 7 billion in a period of 200 years only. In the last 40 years, the human population almost doubled. We have developed an economic system allowing for 'endless growth' resulting in ever growing industrialization and production, new cities and faster transport facilities for the increasing human population.*

*We want more of 'everything', forgetting that the source of this 'everything' is being altered and increasingly threatening our own existence. It has taken a global pandemic to make us realize that 'endless growth' does not exist...some of us still do not realize.*

*'Building back better' is easier said than done. In order to avoid future disasters, our behaviour as human beings need to change.*

*During a recent and uncompromising historic landmark speech on the state of the planet, the UN Secretary General António Guterres, declared that "Making peace with nature is the defining task of the 21st century. It must be the top priority for everyone, everywhere."*

*He replied to a question from a student about handing over part of the vested political power to the younger generation, saying: "power is never given, it should be taken".*

*It seems to me that the younger generation's wishes for the future are already different from ours ...so the hope will be with them. Let's give them all the opportunities we have had! They will ultimately become the driving force to change the world, and hopefully, they will fight for social equity followed by environmental sustainability and a circular economy.*

*'Building back better' should include global systems in which the raw materials, components and products we use lose little or no value. Renewable energy use and 'systems-thinking' above 'short-term-benefit thinking' should be central in future societies. Not 'material wealth' but 'system richness' should become the new norm. 'Back to normal' is no option!*

*I invite you all, as part of the IWeco family, to contribute to the discussion and to practice in your area what you preach for IWeco. The Project was formulated long before COVID-19, but all its objectives and expected outcomes contribute to 'building back better'.*

*Last but not least, I thank you for your contributions to the regional environment during the last year and I look forward to meeting with you all again, but with an important lesson learned: We need to build back better.*

*I wish you and your loved ones, a healthy 2021.*

**- Jan Betlem,  
#CaringForOurFuture  
#NosImportaElFuturo**

(Continued from page 1)

a majority of consultants conduct specialized work, field assessments, baseline data compilation, surveying, and restoration activities have been impacted. Activities involving site visits have also been delayed. National sub-Projects indicated the need for extension of their National-Sub Projects to be able to complete activities and the majority of additional costs are related to salary extensions for national project staff.

In contrast, the Regional survey did not reveal significant delays to Agency workplans. The executing agencies - the Caribbean Public Health Agency (CARPHA), the Organization of Eastern Caribbean States (OECS), and the Caribbean Environment Programme's Caribbean Regional Coordinating Unit/Secretariat to the Cartagena Convention (CAR/RCU), all reported that local expertise would be procured where necessary, virtual platforms would be utilized for wider knowledge transfer, and virtual trainings would be considered in response to on-going travel limitations and constraints of face-to-face meetings. Cost considerations related to the hosting of regional virtual trainings include procurement of the appropriate training platforms, translation, interpretation, facilitation, preparation and delivery of training materials.

Executing Agencies will need to manage additional charges to the project management and administration budget lines resulting from any project extensions. It is anticipated that budget lines for field activities will be underspent while staffing costs may increase, although these costs may be partially offset by savings from reduced travel and face to face meetings. Adaptive management since the COVID-19 outbreak has already resulted in the provision of virtual assistance, information exchange and capacity building (*inter alia*, the regular partners' webinars). In 2021, the PCU foresees a continuation of this approach.

Extension of the IWeco Project until the end of August 2023 was a recommendation of the recently concluded IWeco Mid-Term Review (Recommendation 17: "*Consider an additional IWeco Project extension of up to 12 months until August 2023 for technical completion of all activities followed by an additional period for administrative and financial closure*"). The Survey results confirm the need for an extension to enable completion of activities, particularly at the National level, as well as the many Regional activities which depend upon the results coming from the various countries.

The case for Project extension includes preparation of a revised project workplan and project budget, including both national interventions and regional activities. The IWeco PCU is strongly committed to continued provision of support to the National sub-Projects allowing for full project completion within the overall project lifetime. We sincerely hope that partners will be able to achieve their respective outputs and outcomes as originally planned within the proposed, extended IWeco time frame.

## IWEco:TT's Soil Study



Soil study site preparation

IWEco's National sub-Project in Trinidad & Tobago is currently in its second phase of activities to improve the productive and ecological services of degraded quarry lands by establishing additional demonstration sites with a strong focus on scientific research that underlies the scalability and replicability of its past quarry rehabilitation successes.

The Environmental Management Authority, which is responsible for execution of the National sub-Project, recently signed an agreement with IAMovement to undertake the following interventions which also represent opportunities to advance the case for low-cost rehabilitation and effectively demonstrate impact to quarry operators:

### 1) Topsoil amelioration and rehabilitation of an additional 4.05 ha of degraded quarry pits at National Quarries Company Limited (NQCL) via organic mulching:

This activity expands on the observed positive agronomic impact of the addition of grass cuttings, spent brewer's yeast and other organic waste on the growth rates of young trees at the first project demonstration site at NQCL. This initiative aims to:

- Measure the impact of tilling the organics into the sandy subsoil (versus no till operations);
- Increase the total rehabilitated hectareage by 4.05 ha, using vetiver, fruit and forest species; and
- Address existing, complex waste management issues by diverting waste which would otherwise go directly to the landfill.

### 2) Scientific research into the beneficial effects of vetiver and the observed positive agronomic impact of the addition of grass cuttings, spent brewer's yeast and other organic waste on regeneration rates at reforested sites:

- This activity aims to further investigate and validate:
- The apparent ability of vetiver grass to promote faster and healthier growth of young sapling trees when they are planted together on degraded quarry lands. The pioneering research into this symbiotic relationship would further confirm vetiver's value as a bio-engineering tool;

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### The State of the Cartagena Convention Area on Marine Pollution Report (SOCAR)

In 2019 Contracting Parties to the Cartagena Convention adopted and endorsed the Wider Caribbean's first regional reports on the State of the Cartagena Convention Area (SOCAR) on Marine Pollution.

The SOCAR, prepared by the Cartagena Convention Secretariat, seeks to establish a comprehensive baseline to allow countries in the Wider Caribbean to establish targets and indicators for the sustainable management and use of coastal and marine ecosystems. It will also assist Governments to establish and/or enhance monitoring and assessment programmes of water quality, pollution loads and ecosystem health, thereby enabling greater compliance with regional agreements such as the Cartagena Convention and its Protocols as well as other Global Commitments, including SDGs 6 and 14.

The UNEP/GEF IWEco Project and the UNDP/GEF Caribbean Large Marine Ecosystem (CLME+) Project provided financial support towards development of the SOCAR report.

The Final Report will be widely published during the first quarter of 2021. In the interim, the Draft SOCAR Report is available at: <https://bit.ly/3m6SA1t>



- The value of organic waste mulch, spread and tilled into degraded quarry soils, with measured improvements to soil nutrition and health;
- The ability of vetiver grass to help regenerate topsoil and subsurface soil (through root systems, soil and water conservation, and vetiver leaf mulching), and quantitative values on improvement to soil nutrition and health.

The intervention is being guided by a graduate team from the University of the West Indies, St. Augustine Campus, led by soil expert Dr. Gaius Eudoxie and hydrology expert Dr. Kegan Farrick, who will lead the research on soil hydrology, moisture retention, the potential for symbiosis and nitrification of degraded quarry soils.

### 3) Vetiver System (VS) Installations and Nursery Management Oversight:

Covid-19 negatively impacted the existing vetiver grass installations at the project demonstration sites, as well as the nursery. The rejuvenation and replenishment of the project's vetiver nursery is currently a major undertaking, with the following added benefits:

- Managed harvesting of vetiver for handicraft under the livelihoods component of the project;
- Maintenance of the installations and nursery to highlight vetiver's use for soil and slope stabilization on the demonstration sites;
- Additional capacity building of the Quarry Rehabilitation Champions through hands-on training in propagation, use, maintenance and harvesting of vetiver.

## A Regional Environmental Monitoring Data Portal - Why we need one and how feasible is it?

In June 2020, in an effort to determine the feasibility of creating a Regional Environmental Data Portal (REMDAP), the IWEco Project commissioned an assessment of the current state of environmental data and information warehousing in the Caribbean region, with emphasis on the Project countries and specific to some agreed parameters. It looked at the state of data flows and provided options for transforming data storage, access, distribution and use.

Environmental data is critical for decision making. Caribbean Small Island Developing States (SIDS) however, face many challenges in collecting, archiving and disseminating data due to their size, environmental characteristics and for most, largely tourism-based economies. Strained fiscal national budgets and the low priority afforded to environmental monitoring have resulted in the establishment of very few national databases to collect and manage environmental data. Where databases do exist, they suffer from lack of sustained data collection and where data are collected, it often is only useful for the originally intended purpose due to sampling protocols.

The study, which included data-flow mapping, databases review and stakeholder engagements (approximately 95 national and regional representatives from various institutions), found that while many national governments have designated centralized data gathering responsibilities to national statistical offices, environmental data remain sparse and under-represented in these databases. While efforts are ongoing in some countries in the region to address the data deficit, the cumulative impact of sound data collection is still not fully realized in the Caribbean region.

It looked at the best options to establish a REMDAP, which would house the foreseen data to be generated by the IWEco project as well as other environmental data required for a number of relevant MEAs and international agreements which demonstrate synergies with IWEco project outcomes. There are several data gaps, due mainly to the lack of data available for regional use in existing databases. There are also several clearinghouse mechanisms

which house data, but the majority are specialty databases.

Based upon stakeholder responses, a regional portal was found to be the preferred option.

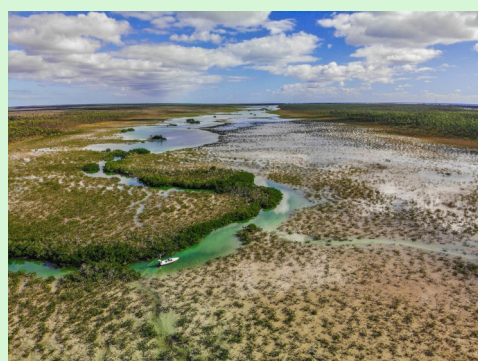
**The study recommended one of two approaches going forward:**

1. Enhance dataflows to an existing database by advancing the national data collection and flow mechanisms; or
2. Establish a REMDAP as a geoportal or in the form of a web-based application. The geoportal would have to be built and hosted by an organisation with a strong geospatial background and support capabilities. An already established standalone geoportal such as the Caribbean Marine Atlas could be appropriate. An example of an existing web application is the St Lucia National Environmental Information System. Architecture is proposed for each option, along with options for the institutional domicile of the REMDAP, identifying the advantages and disadvantages of each option.

Whatever option is chosen, and regardless of where the REMDAP is eventually domiciled, consideration should be given to the following to ensure data flow, efficiency and synchronization and to allow for a sustained mechanism: language; interoperability; timely updating of datasets; capacity development; sustained data collection; common standards and international, accepted data protocols and, not least; sustained financing.

The study noted that, *"There have not been many attempts at a multisectoral/multi partner/multi-indicator initiative - a gap that the REMDAP can potentially address to some extent, as the proposed architecture encourages a more multi-focused approach with respect to environmental parameters. This effort could significantly transform the region's approach to reporting on sustainable development initiatives."*

The full report will be published in early 2021.



August Creek, East End, Grand Bahama, part of the site of the IWEco The Bahamas Project. Photo IWEco The Bahamas Project, 2018.

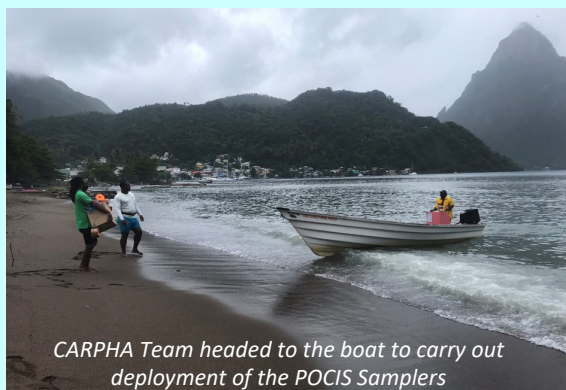
## IWEco:The Bahamas Project Launched!

The IWEco The Bahamas Project was launched on 30 September 2020. It is focused on ecologically important mangrove wetlands and pine forests which encompass East Grand Bahama and will develop further capacity for sustainable livelihoods, implement land and watershed restoration and increase ecosystem resilience.

The components of this Project align closely with the UNEP-implemented GEF-funded Implementing Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco) Project. As such, although The Bahamas Project is coordinated directly by the UN Environment Programme Task Manager to the GEF rather than the IWEco Project Coordinating Unit based in Kingston, Jamaica at the Secretariat of the Cartagena Convention, it is part of the IWEco family and benefits from regionally planned activities and tools being developed under the regional project.

Read more at: <http://iweco.org/countries/bahamas-0>

## CARPHA spearheads a new approach to environmental monitoring in the Eastern Caribbean



CARPHA Team headed to the boat to carry out deployment of the POCIS Samplers

The Caribbean Public Health Agency's Environmental Health and Sustainable Development (CARPHA EHSD) in Saint Lucia, has partnered with Trent University, to pilot collection of environmental data using passive samplers as part of the GEF-IWEco project.

Contaminants discharged into the coastal zone in Caribbean countries may be a significant hazard to marine life, including coral reefs; potentially impacting ecosystem services and livelihoods associated with the blue economy. Currently, there are few data on the concentrations of chemical contaminants in the Caribbean coastal zone. To fill this information gap, CARPHA used passive Polar Organic Chemical Integrated Samplers (POCIS) to monitor for selected pesticides, pharmaceuticals and personal care products (PPCPs) as chemical indicators of domestic wastewater in the nearshore zone, impacted by discharges from the Soufriere watershed.

While use of passive sampling is not new technology, recognition of its value in human impact related eco-health studies is increasing as the range and scope of the contaminants captured can link to specific human activities. Traditional sampling and analysis provide data that can point to fecal contamination, for example, but there is no way to distinguish between the contribution of humans and that of animals in nature. The passive POCIS can detect contaminants such as sunscreen, caffeine, steroids and sucrose that are specific to wastewater generated by humans. This will allow for better mapping and management of human contamination.

The global COVID-19 pandemic has significantly impacted the movement of people. As a result, lead researcher from Trent University, Dr. Chris Metcalfe and his team were unable to travel to Saint Lucia to deploy the POCIS. CARPHA adjusted the modus of delivery of sampler deployment by including a virtual training conducted by Dr. Metcalfe, of technical staff Kareem Charlamagne and Newton Eristhee in the setup and deployment of POCIS. This was followed by a hands-on team effort to craft a cage to secure the POCIS underwater, as well as deployment of the samplers underwater using SCUBA.

The study results will contribute to the overall objectives of the GEF-IWEco project in terms of identifying integrated watershed management strategies that are needed to protect coastal areas and specifically coral reefs in the Caribbean region (i.e., "ridge to reef" management).

This is designed as a pilot study that will inform on whether a more extensive project is required to identify sources of chemical contaminants in more of the partner countries in the Caribbean region. Data are needed to identify the most important point or non-point sources of contamination from agriculture, domestic wastewater, turf-care (e.g., golf courses) and tourist activities.

Without this information, watershed management activities may be misguided or could exacerbate the situation in Caribbean countries. The results of this study will be widely disseminated as part of CARPHA's mandate and continued efforts to support monitoring and environmental health surveillance in the region.



Newton Eristhee holding POCIS sampler

## The Land-Based Sources of Marine Pollution (LBS) Protocol

On 10th November 2020, IWEco's 9<sup>th</sup> Partners' Webinar featured the Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol) to the Cartagena Convention, and, the two Regional Activity Centres (RACs) which provide it with support - the Institute of Marine Affairs (IMA), Trinidad and Tobago, and the Centro de Investigacion y Manejo Ambiental del Transporte (CIMAB), Cuba.

The LBS Protocol is one of three technical agreements supporting the Cartagena Convention, the only legally binding, regional agreement for the protection and development of the marine environment of the Wider Caribbean Region.



Eagle Beach, Aruba, 2019

It was adopted in Oranjestad, Aruba, on 6 October 1999, entered into force on August 13, 2010, and there are currently 15 Contracting parties.

The Protocol includes regional effluent limitations for domestic wastewater (sewage) and requires the development of management plans and implementation of best practices to address agricultural non-point sources of pollution. Specific schedules for implementation are also included.

One of the IWEco Project's aims is to catalyse further ratification and implementation of the Cartagena Convention's Marine Biodiversity (SPAW), Pollution (LBS) and Oil Spills Protocols, as well as assist regional governments to achieve related global commitments such as the Sustainable Development Goals (SDGs).

Implementation of the Protocol is determined by the Contracting Parties with assistance from a Scientific, Technical and Advisory Committee (STAC). The next LBS STAC is scheduled to take place virtually from the 15-17th March 2021, with the next Conference of Parties due in the last week of June 2021.

See the full presentation: <https://tinyurl.com/yc3trvoq>

## Ensuring water security in vulnerable schools -

**IWEco:SK&N collaborates with the Dept. of Environment and other partners**

Climate change continues to pose unprecedented threats to SIDS. In St. Kitts and Nevis, since the historic drought of 2015, rainfall totals reduced by almost 45% have affected all sectors. In addition to this, the need to access safe and potable water supply has become even more critical, especially for children, during the COVID-19 pandemic.

The Department of Environment, following consultation with its partner agencies and stakeholders, and in collaboration with the Caribbean Community Climate Change Centre (CCCC) and with funding through the United States Agency for International Development (USAID) Climate Change Adaptation Program (CCAP), was able to secure USD 205,000 to equip eighteen (18) educational institutions on both islands with onsite emergency water storage systems.

These systems consist of tanks and delivery systems, whether by pump or gravity to allow for transmission of stored water through the piping system, with a total storage capacity of eighty-two thousand, four hundred (82,400) gallons of water. Over 4000 students and staff have benefitted from the project.

In collaboration with this project, the IWEco National Sub-Project in St. Kitts and Nevis was able to contribute to the completion of the emergency water storage system at the Beach Allen Primary School, one of the largest schools with over 400 students and 40 staff.

In addition, IWEco provided funding through the GEF Small Grants Programme, to a community group in the parish of St. Peters to install an emergency water storage system at the Bronte Welsh Primary School and to develop a public education and outreach programme related to the importance of water for the school and the community.

Both of these schools are located in the environs of College Street Ghaut and within the Basseterre Valley Watershed – IWEco's main target area in St. Kitts and Nevis.

IWEco:SKN has also funded training seminars for maintenance and school staff on both islands to ensure the systems are well operated and maintained into the future. IWEco funding provided to these activities is in excess of 40,000 USD.



*Staff from the Department of Environment, Ministry of Education, members of Cabinet and dignitaries at the Closing Ceremony, St. Kitts, 16 October 2020. Photo IWEco SKN.*

## Mobilizing local communities with the help of GEF SGP



The UNDP GEF Small Grants Programme's considerable experience in building economic livelihoods through community-based initiatives supports one of IWEco's key objectives, that of enhancing livelihood opportunities and socio-economic co-benefits for targeted communities from improved ecosystem services functioning.

GEF IWEco allocated US \$1 million in funding to UNDP GEF SGP to enable activities in alignment with the respective IWEco National sub-Projects which build capacity for enterprise development and implementation amongst local community groups in support of its overall objectives. This funding is matched by GEF SGP, which also provides technical support.

The result has been a mix of very interesting projects, some of which are closely associated with, and supporting, the National sub-Projects; and others which support wider IWEco objectives. These are bearing fruit for local communities in the participating countries; proof that supporting local people to act for themselves, and in the interest of sustainable development, can be both empowering and transformative.

Read more at: <http://www.iweco.org/node/327>



*Apiaries established in the Higuamo Watershed, Dominican Republic. Photo UNDP GEF SGP*



*Establishing a biogas generator in the Cienfuegos Watershed, Cuba*



### Seasons Greetings!

*As 2020 draws to a close,  
we reflect on the beauty and life  
that surround us,  
and upon our responsibility  
to protect and preserve it for  
future generations.*

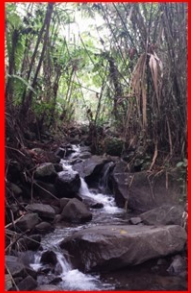
*We wish you and yours a  
Happy and Healthy  
Holiday Season.*

*May we all greet the New Year  
with Hope, Determination and  
Renewed Energy  
as we work together for  
a better environment!*

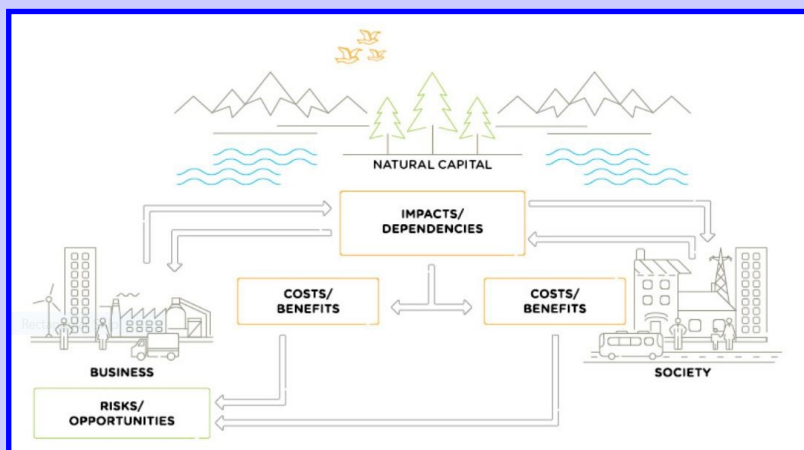
*- the IWEco Team*

*#CaringForOurFuture*

### Happy New Year!



## IWEco Partners' Webinar Series will be back in January 2021!



Source: <https://naturalcapitalcoalition.org/natural-capital-2/>

For more information on the next webinar contact:

[nicole.ceasar@un.org](mailto:nicole.ceasar@un.org)

On 19th January, we will kick-off IWEco's 2021 Partners' Webinar series with a presentation by Mr. Jake Kuyer, on **Natural Capital Accounting (NCA)**.

Mr. Kuyer, an Environmental Economist, and Principal Consultant with the UK firm, EFTEC, works closely with several Caribbean SIDS to build internal capacity to establish accurate natural capital accounts to guide sustainable environmental policy and ecosystem management.

This session follows the success of our September 2020 Ecosystem Service Valuation (ESV) training. Natural Capital Accounting (NCA) and Ecosystem Service Valuation (ESV) are both used to demonstrate the value that the natural environment contributes to society. Quantifying a country's environmental assets and services in monetary terms, supports the monitoring of environmental conditions in-country, informs policy making, and promotes sustainable development.



### Stay safe everyone!


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

IWEco thanks GEF SGP, CARPHA, IWEco:TT, IWEco:SK&N and other Project Partners for their contributions to this issue.

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 [@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.



# IWEco

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

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