THE COUNTDOWN TO 2050
a podcast by acción clima

Episode #3

Mitigation

How can MRV help in transparent policy making?

Participants:

- Terrence Gilliard, Chief Energy and Public Utilities Officer in Saint Lucia
- Tiffany Wallace, Scientific Officer at the University of the West Indies of Jamaica,
- Ahyana Bowen, Technical Support Associate at the Caribbean Cooperative Measurement, Reporting and Verification Hub (MRV Hub)

Carolina:

Coasts bathed by the Caribbean Sea, full of majestic beaches, great music, exquisite food, and people committed to their islands. The 13 nations in the Caribbean depend largely on tourism, agriculture, and fishing. However, these sectors are particularly vulnerable to climate change. As part of their commitment to the Paris Agreement, the islands are taking important steps regarding the mitigation of greenhouse gas emissions.

Welcome to our third episode of *The Countdown to 2050*, a podcast developed by the German Development Cooperation GIZ, as part of its mandate as interface project of the International Climate Initiative -IKI- for Central America and the Caribbean. My name is Carolina Solano, and I am accompanying you on this journey throughout the region.

In the previous episode we discussed the Green Watersheds project, which aims to promote the implementation of Ecosystem-based Adaptation and innovative governance mechanisms through a comprehensive model of conservation and resilience to climate change. Today, we shift our focus from adaptation and resilience to mitigation.

With us today are Terrence Gilliard, Chief Energy and Public Utilities Officer in Saint Lucia, Tiffany Wallace, Scientific Officer at the University of the West Indies of Jamaica, and Ahyana Bowen, Technical Support Associate at the Caribbean Cooperative Measurement, Reporting and Verification Hub (MRV Hub), with the Windward Islands Research & Education Foundation.

Ahyana, **how is climate change impacting the Caribbean islands? Why is it important for you to work on mitigation?**

Ahyana:

So, the Caribbean islands, like other small island developing states, have been recognized as being particularly at risk of climate change. We find that climate change has big impacts on us, despite the fact that we are very small emitters and it affects our major sectors, for example, agricultural tourism as mentioned before, the islands are particularly exposed to hazards such as sea level rise, marine heat waves, ocean acidification, coral bleaching, loss of marine habitat and damage to the fisheries industries, and we also have very extreme weather events that include extended dry seasons, extended wet seasons as well, that leads to both drought and flooding, extreme hurricanes.

All of these events affect our ability to maintain agricultural water supply, potable water supply, and food security, and it affects our food chains and definitely impacts our ability to lead the traditional way of life, our cultural and our traditional practices are heavily tied to our relationship with our ocean life and we find that many impacts are tied to the way that we are able to deal with those major sectors. And when it comes to mitigation in particular, the Caribbean countries have all signed on to the Paris Agreement, specifically in 2015, and they've since submitted Nationally Determined Contributions, or NDC's. And within these NDC's, the islands would have pledged to reduce their national emissions by a particular month and to implement adaptation measures that would overtime decrease the impacts of climate change.

Carolina:

What is the Caribbean Cooperative MRV Hub about? What is it focused on and what is it looking for?

Ahyana:

At the Caribbean Corporative MRV Hub, what we do is using our understanding of the importance of each country achieving their NDC targets. We recognize the need to measure the progress of these targets, this helps us monitor how the implementation processes are taking place and it also helps us overall, globally, to continue to measure how we are moving towards decreasing our emissions. We have a target to decrease our overall global warming increase rate, and we find that the more countries that we get to sign on and to push initiatives that would decrease impacts overall, we can move towards negating the negative impacts of climate change.

And through modeling and projections, we can establish these baselines, we can help identify suitable pathways for emission reductions, and we can also identify many core benefits of mitigation policies and actions. So the MRV Hub will focus on capacity building, and we hope to expose technical offers with officers within the countries that we work in, in their environment ministries, their energy ministries, on tools and

technologies that they can use both in the public and private sector to help address these issues.

Carolina:

Ahyana, **what is the support provided by IKI? What are the main activities of the MRV Hub?**

Ahyana:

IKI has been our funder for the five-year duration of the grant and has been a driving force behind the MRV Hub project activities. We produce twenty-four regionally specific tools and guidance documents for use by these countries. These tools are specific to the national context within the region, the circumstances within the region, which are vastly different from larger, more developed countries. We also provide many training programs and activities.

Our mitigation and projections program are very important for mitigation reporting and for supporting the Nationally Determined Contributions or NDC's of the countries. We have a yearly or annual MRV hub summer academy, both in an in person and an online capacity within that program we train new personnel in ministries in an overarching cross cutting way so that they can learn all of the basics of MRV reporting and all of the basics around the national reporting requirements. We also provide training within our MRV Hub work crews, which are thematic expert groups. We pull together a group of experts within various sectors, for example agriculture, forestry, data management systems or forestry and other land use, for example.

And within the groups we provide trainings that help them improve the quality of the work that they're currently conducting, or it can also help enhance the career so that they can move to new positions. And through that training and mentorship programs they get opportunities for one-on-one pairings with some of our greenhouse gas management experts and they're able then to help us from underground within their countries, use their countries data and then produce information that can be used for that country's report.

Carolina:

Terrence and Tiffany have been part of the project as beneficiaries, participating in services and programmes offered by the MRV Hub.

Terrence, Tiffany, **how is climate change affecting your countries?**

Terrence:

Within our region, we have, for example, seen an increase in average annual temperatures by up to 0.7 degrees Celsius. We've also seen a decrease in average annual rainfall in some of our territories, I mean in some others there has been a slight increase, but regionally, in general there may be a decrease in rainy days and a slightly shorter rainy season. The frequency of hot days, those days about 35 degrees Celsius, have increased in many of our territories. As well as the intensity of Atlantic hurricanes since 1980.

As we've also discussed earlier, annual sea level rise rates have been steady and are projected to increase. The impact of these is having a negative effect on tourism through degraded coastal ecosystems, and decreased access to ecosystem services which we enjoy so much in the Caribbean region. Of course, our coastal resources are being damaged and coral bleaching and so on, as well as damaged coastal infrastructure since.

Many of our communities within the region are coastal by nature and so heavily impacted during extreme weather events and so on. The fisheries habitat, fisheries are as well, is affected through habitat degradation and loss and of course a general loss in biodiversity, which includes changing fish migration patterns. It is notable to mention that our region is one of a very high level of endemism, so we have lots of endemic species within our region and this is tied to our social, and economic lives and livelihoods are being affected by climate change.

Our water resources are as well projected to decrease in quantity as well as quality, and agriculture is no exception, which we will be expecting greater crop losses, and the loss of land and water resources. Not to be left out, the health sector is being affected and projections are that we will see shifting infectious disease burdens, quite a bit of heat stress, some of which we were experiencing already and lack of access to health services. These are the climate change effects we are seeing and some of the projections we expect in the future.

Tiffany:

The cascading effects of climate change is evident in Jamaica. As with the other territories in the Caribbean region, we can see short-term erosion facilitated by sea level rise, which is negatively affecting our tourism sector. We see the marine ecosystem being turned upside down, as fish migrate from the tropical waters to higher latitude due to warming and this has effectively devastated the livelihood of the highly dependent and already highly vulnerable coastal communities.

And I think most obvious is the increase in the intensity and the frequency of extreme weather event as Terrence mentioned such as droughts, hurricanes, storms and flooding. So, I would definitely say that climate change has negatively affected our island and all small island developing states.

Carolina:

How did you learn of the Caribbean Cooperative MRV Hub and why did you participate?

Terrence:

I received a few years ago in my capacity as Chief Energy and Public Utilities Officer, an invitation to nominate a participant to take part in the Caribbean Cooperative MRV Summer Academy training program, which at the time comprised both an online and in person component. This was being coordinated in collaboration with a leading climate change agency in Saint Lucia, the Department of Sustainable Development, which at the time would have been preparing for a national greenhouse gas inventory.

The Energy and Public Utilities Division, which I lead, contributes to the greenhouse gas inventories and therefore an opportunity to meet the capacity building needs of the division to accurately assess the mitigation potential of various policy measures being considered by the government at the time was favorably considered by myself and our team. Saint Lucia's mitigation strategies are mainly focused on the energy sector, since the majority of emissions, like everywhere else in the world, occur in this sector.

As well, the key aspect of Saint Lucia's path to reducing emissions is the integration of renewables into the electricity mix. Saint Lucia's National Energy Transition Strategy and Integrated Resource Plan identifies the most suitable mix of renewables while ensuring service reliability at affordable cost to consumers. Energy efficiency is also a very important component of Saint Lucia's approach to emissions reductions, and spans interventions in the transport and building sectors as well. Broadly, these fall within the following broad groups, energy demand, electricity generation and transportation.

So this is to reinforce the point that, in developing the various scenarios and to accurately assess them and to provide direction to our policymakers, the capacity building provided by the MRV hub did contribute meaningfully to this process, which is why we participated and we hope to participate in future opportunities with the MRV hub, thank you.

Tiffany:

Well, I had just joined the team at the University of the West Indies, Mona, and at the time we were working on a Forces of Nature project that had to do with the assessment and economic valuation of mangroves as it relates to coastal protection.

And I was tasked with estimating or calculating the carbon stocks in all mangrove ecosystems in Jamaica. And so, I started to ask a lot of questions surrounding the quantification of carbon stocks and was directed to Mr. Wiley Barber, Senior Project Director, and he, enthusiastically shared with me the resources available through the Caribbean Cooperative MRV Hub.

And that's when I realized how significant capacity building is and how it fosters a sense of ownership and empowerment. And so, I decided to dedicate myself to understanding climate change, specifically developing accurate and transparent inventory as it relates to greenhouse gas emissions and removals, and my focus was in the Afolu sector, as the forestry sector is one of the only sectors that has feasible mitigation option that can significantly reduce CO2 level and achieve carbon neutrality.

Carolina:

Tiffany participated in the MRV Hub Work Crews, learning about the production of national reports as part of a collaborative construction process involving national experts and mentors through working sessions.

Tiffany, **what was the experience of this participation? What have you learned and what are you taking back to implement in Jamaica?**

Tiffany:

OK, thank you for that question, Carolina. Well, as you mentioned before, I participated in the MRV Hub work crew, but I also utilized as much resources as made available by enrolling in the courses on the learning management system, registering for the Summer Academy and subscribing to the newsletter of the social platform. Every resource that I could get from the Hub, I tried to make the most of it, and the experience has been exceptional.

I've learned so much through formal training and also indirectly through my interactions with colleagues from the other islands who face similar challenges and have similar socioeconomic issues in their countries. We actually learned a whole new skill from this program as Doctor Anak Joshi who was our team lead, actually taught us remote sensing, which we employed to generate activity data for the inventory. We also visited the landfill in Grenada during the Summer Academy Program and since returning to Jamaica, I've been in dialogue with the stakeholders at the National Solid Waste Agency in our country to share some of the adaptation system used in Grenada's landfill.

I've also used the remote sensing skills gain through this program to map land surface temperatures across Jamaica and to investigate the correlation between land surface

temperature over the years and greenhouse gas emission. So, I tried to partner with the relevant stakeholders in Jamaica to implement the training received through the program and to share whatever skills and knowledge that I have received through the program, with other colleagues, or in the same field.

Carolina:

Terrence was part of a training process, about the assessment of mitigation and the use of essential modelling software to carry out the projection of Greenhouse Gases.

Terrence, **what was your experience in these trainings and how do you now implement these skills in Saint Lucia?**

Terrence:

Thank you for this question, Carolina. Our team through the MRV hub was introduced to the Leap modelling software. This has equipped us with a tool to assess the effectiveness of various planned policy measures and initiatives within the energy sector. Importantly, it does not only consider the mitigation potential, but also allows for the modelling of costs, benefits and related externalities, very important feature.

This is a powerful means for supporting presentations, too. Our policymakers, the politicians, and other stakeholders on the virtues and vices of planned measures to inform decision making in an objective and non-political manner, which is quite salient for us within the energy space at this time. But also, to comment that the training sessions were very interactive. The facilitators from the MRV hub were obviously very knowledgeable and very helpful in the support they provided to us in ensuring that we understood how to use the modeling software and importantly, how to implement it in our day-to-day processes.

I would also like to mention that our country is in the process of revising its Integrated Resource Plan to include a resilience aspect. So, we are expecting to develop for the energy sector and Integrated Resource and Resilience Plan, and this process is being led by the Caribbean Center for Renewable Energy and Energy Efficiency of Caricom, and they are actually using the very same Leap software to prepare the various models. So, this is very useful for us on our end. We are actively engaged in the process and our officers are well trained to understand and to contribute to the process of revising our integrated resource plan to include now resilience into this planning tool. Thank you.

Carolina:

Ahyana, **why did you decide to commit to gender parity, and what has been the outcome?**

Ahyana:

Well, Carolina, there is a fundamental need to end gender inequalities in all countries around the world, and I've been fortunate that the MRV Hub shares my belief in this importance. As you can see, I've benefitted from many of the opportunities in this field that may not have been readily available to women before. At the Hub, in all of our initiatives, we recognize the importance of gender parity in capacity building activities, and we request gender balance lists when receiving nominations for workshops and other trainings. What we have noticed, however, is a rise in the number of women in this field, and that is such a positive change from the historical norm in this area.

Carolina:

How does the project seek long-term sustainability? what will happen when it concludes?

Ahyana:

Yes, you're correct. The project will end. It will end this year in fact. It has always been our vision for our member countries to have the project as an institutionalized resource that is sustainable and that continues to provide support to them. Because of many of the capacity and resource constraints identified in the region, the Hub has become a staple for information sharing, networking, guidance and data archiving.

It is our aim to continue providing these services based on our continued conversations with our member country government representatives. And based on the highlighted gaps and needs identified in the member countries, although our technical work will not significantly change, we will be moving from a project to an institution as a registered NGO, and we have prepared the relevant policies and agreements to support continued interactions with countries in the region, I am happy to say that we will continue conducting capacity building activities as this is something that we will always require in the region and we hope to continue to provide as a service at the MRV hub.

Carolina:

Our podcast is called The Countdown to 2050, referring to the global sustainability goals for 2050, including the commitment to zero emissions as established in the Paris Agreement, and the contributions IKI projects make to achieve these targets.

As a final question, Ahyana, Tiffany, Terrence, I'd like to ask you: **What is your vision**

for 2050 in the Caribbean and what do you believe is still needed to fulfill these goals?

Tiffany:

Well, Carolina, my vision is the same as all persons involved in this fight against the adverse effect of climate change, and that is to see us meet our targets and keep the goal of 1.5 degrees alive. I believe to do this we must dramatically increase the pace of implementing mitigation actions and rethinking economic development in such a way that it seriously takes into consideration environmental and climate concerns.

This means ramping up the application of solar and other renewable energy sources, promoting coordination amongst. Everyone, and I mean everyone. That's government, private sector, academia, communities, individuals, particularly our youths. But at the forefront of this, we must ensure that while implementing our plans, we prioritize the needs of marginalized, poor and vulnerable communities. But I do believe that it is feasible, it is possible for us to achieve these goals and while it may not be easy, if we all play our part, then we can achieve the goals set out for 2050.

Terrence:

Thank you, Carolina. I see a prosperous region and people in 2050, where our natural environment is preserved and thriving. Terrestrial, marine and aquatic ecosystems are teeming with life and biodiversity. I also envision a very conscious and conscientious populace which includes the private sector following principles of sustainability, and a public sector which leads by example.

The energy sectors of the region must thus be self-sufficient, relying on indigenous renewable energy resources at low and stable cost for consumers. In order to meet these goals, the private sector must be fully enabled so that innovation and investments in green technology thrive. Stakeholders must be constantly engaged and educated accordingly. And perverse practices must be penalized and discouraged. Thank you.

Ahyana:

I want to agree with my colleagues Tiffany and Terrance and just emphasize that I believe the vision would be commitment and prioritization. For me, we want to see our government sticking to the implementation timelines and we want to see all of our countries meeting their NDC targets and surpassing it.

It would be great for all of us to adopt a sense of personal responsibility as global citizens, and for all of us to do our part in big and small ways, however we can in addressing the ongoing impacts of climate change. Together we can do it, is possible.

We have set some realistic goals, it will take some changes and it will take some effort, but I believe that we can do it.

Carolina:

Thank you for being agents of change, it has been a pleasure to learn about the work you do for your islands.

We invite you to follow the Caribbean Cooperative MRV Hub on Facebook at Caribbean Cooperative MRV Hub, to email them at info@mrvhub.org or visit their website www.mrvhub.org.

Don't miss out on our upcoming episode, where we will discuss From Fark to Fork, a Costa Rican project focused on sustainable agricultural production.

To learn more about the IKI portfolio in Central America and the Caribbean, follow us on Twitter at @IKI_CAC or on www.iki-cac.org.

This was *The Countdown to 2050*. We look forward to seeing you in the next episode!