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### Demystifying the Carbon Markets | Episode 8

#### Norman Wray, Former Governor Galapagos Islands

**How can we quantify the impacts of carbon emissions on a region like the Galapagos islands and what steps can be taken to offset these emissions? Norman Wray, former president of the governing council of the Galapagos Islands, joins us this week to discuss the implications of tourism and its carbon footprint on one of the most pristine nature preserves in the world. And how we can study these effects to understand our impact on ecosystems around the globe.**

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**Norman Wray** (00s):

Right now is an invitation for the people here listening this program to take the challenge because I think that the things that we can find in Galapagos could be for sure interesting around the world.

**Announcer** (17s):

Welcome to Smarter Markets, a free weekly podcast featuring stories from the entrepreneurs and icons of commodities capital market and technology, ranting on the inadequacies of our systems and riffing on ideas about how to solve them. Together, we examine the questions is capitalism in crisis and will building Smarter Markets be the antidote?

**David Greely** (47s):

Welcome back to demystifying the carbon markets on Smarter Markets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Norman Wray, Former President of the Governing Council of the Galapagos Islands. We'll be discussing, promoting sustainable development, protecting biodiversity and how carbon financing can play a part. Hello, Norman welcome to Smarter Markets.

**David Greely** (01m 10s):

You know, many of us who have never been to the Galapagos Islands still feel a special attachment to them. They're both a living laboratory of biodiversity through evolution and a microcosm of what may be lost if we don't rise to the challenge of climate change, but they're also your home and so the Galapagos Islands face both internal pressures for sustainable development, as well as many external threats. I wanted to talk first a little bit with you about some of the internal pressures and how they're being addressed because the Galapagos have many lessons to share with the rest of us on conservation. Could you start us off today by telling us a little bit about, you know, some of the internal pressures for sustainable development that the islands are facing and your vision for the Galapagos over the next few decades.

**Norman Wray** (01m 58s):

Thank you very much, David, for the opportunity to be with you and all the people that is going to hearing or are listening the, the podcast. First of all I want to ask for forgiveness if my English is not so perfect, sorry by that and but I will try to do my best. Thank you very much. Well, Galapagos as you said, is incredible living lab for many things for evolution, for sure, for conservation, but at the same time is a living lab to understand where the impacts of trying to find a balance between the life of people and the life of nature in a little place, we are human beings out to occupy the 3% or 4% of the territory for human activities

**Norman Wray** (03m 02s):

And also we have 97% of the land is a national park and we are surrounded by 135,000 square kilometers of a protected marine reserve. So it's really interesting because one of the biggest threats to endemism of our species in Galapagos are invasive species that came through all the transportations and systems and all the needs for tourist activity and the life of the people in the islands. We are closer 32,000 or 33,000 people living in Galapagos and pre-pandemic numbers of tourist in 2019 we have a number of visitors of 275,000 people that came in 2019. The pre-pandemic numbers, one of the internal big another big failure in Galapagos is the less of urban planning view. We can say in a way or another in the development of the towns the lack of services and the pressure of the impact of tourist in relation with life of the people in the towns and how the business of tourism could generate more like as a consequence of migration effects of people coming to Galapagos to work because the business before the pandemic was so good, that

is one of the biggest attractions of people trying to live in Galapagos. So this is one of the conditions that I think that could be part of the treasure that we have. At the same time all the thing that maybe not all the time people is aware is that living in Galapagos is expensive and meeting their heritage for the people let them the, to the community for the locals to go and have the opportunity to travel to the jewels of the crown of the islands could be a very expensive trip.

**Norman Wray** (05m 35s):

The locals that we live in Galapagos we have to pay as a tourist to go and meet other place of the island. It means, for example one day trip to go to Bartolome, that's one of the incredible sites in Galapagos, you have to pay not less than \$240 per day per person only. So you have a family of four it's quite expensive to do it and the result of that is that you, sometimes you can find like a disconnection, a gap between the life of the people and their understanding of why are necessary, that restrictions that you have for your life in your economy or in your economic opportunities, because it's difficult to understand why they're necessary because they don't have a strong connection with the natural heritage of the islands, because they don't know the natural heritage they're not so linked because really complicated to them to visit the places and to get connected with the nature. So this is really interesting because in the lack of that it's public policy, but you need a lot of education also to support and how to connect more people that lives there to the natural heritage so they can understand and they can love also the place that they know, because if they don't know what is the importance of the place where you're leaving is difficult to them to get connected to them. So this, one of the examples of what we are suffering in Galapagos and one of the bigger challenge that we have to face.

**David Greely** (07m 27s):

Yeah tourism, which I am sure is such so foundational for the economy there, you've brought up these many, many challenges that poses between inadvertently bringing in invasive species you know, really sadly you know making it too expensive for the people that live there to really enjoy the natural heritage. You know, I know that in the Galapagos there's been the creation of a sustainability innovation and resilience hub. I imagine the hub is being created in part to try to address some of these issues, but can you tell us about the hub and more broadly, how do you see the role for these types of public private sector cooperation in creating more sustainable development?

**Norman Wray** (08m 21s):

Well two, a little more than three years ago when, when I started my work as the President of the Government Council of Galapagos, by the way is a special regime to govern the islands under their quick and incredible circumstances of nature. This special regime is different in the way other, other provinces in Ecuador in the way they are governing and administrative is quite different. It's like a way to organize the work of the executive power with the work of the local governments inside the islands. You have three majors of the three populated islands, one representative of the rural parties and at the same time, you have four ministers of the cabinet of the government, tourist environment and agriculture and planning and who is the president of the government council is decided by the President of Ecuador.

**Norman Wray** (09m 34s):

And it's like, and also part as a minister of their cabinet. This is the only way in Ecuador that you have these things. So it's really important to know that also because it's that complexity of organizing the life in Galapagos. At the same time the idea of, three years ago I went to a really interesting meeting that was organized by two young students, women from Galapagos that they were studying nanotechnology. So it was really, really interesting that, yeah, so these two girls were right now, they are already finishing their studies and one of them is right now in Germany, in Berlin is studying their master and planning to do her PhD in nanotechnology exactly she came with a lot of the big heads of nanotechnology around the world to make like a congress of nontechnology in islands and was really interesting because we were to not more than 10 Galapagian sitting in this room, hearing all these great minds, talking about what is nanotechnology before the world.

**Norman Wray** (10m 58s):

And this meeting for me was like a great trigger to see what are, the big question was, alright, we have two nanotechnology engineers young women of the Galapagos committed with their community, what we have to do with that. So it comes the, this big word is called innovation and innovation, as you know, is linked with many things you can innovate in the economy, socially, whatever. So it's a great opportunity. So we started to talk with two universities of the UK. One of them is Cambridge through Kings College and also with Edinburgh University from Scotland, and also with two universities in Ecuador, it's called Universidad San Francisco De Quito that they have a campus from since 20 years ago in the islands and also the biggest public university here in Ecuador is called Universidad Central del Ecuador and we also are talking with Foundation Charles Darwin that they are making science for 60 years in the islands.

Charles Darwin Foundation is the name of it and also with the government council and at the same time with the National Secretary of Science and Technology, it's called Senescyt in Spanish and also with the Environmental Investment Fund for Sustainability, that's called FIAS that is closed link to the fight events in invasive species in the islands and we in 2020 we decided to push the possibility to discuss sustainability and resilience with innovation in the islands, as a consequence also of the learnings of the impact of COVID 19 in Galapagos. So we people, the community and everybody started to think, okay, is the first time that in Galapagos all the economic activities stopped. Just an example In 2018 in July, we have 20,000 tourists that came to the islands.

**Norman Wray** (13m 14s):

And in July 2020 that we opened again, the operation of tourists in Galapagos after we controlled the contagious, the community contagious, and do a lot of measures to stop that. They came 48 tourist to Galapagos.

**David Greely** (13m 37s):

48.

**Norman Wray** (13m 40s):

48, and so it was really a tough situation, and we are still not recovering the numbers that we used to have before the pandemic. So the impact in the economy, tourist means more than 80% of the economy of the islands then come public sector and people suffer a lot and Galapagos learned to develop really interesting solidarity processes to secure food security for the people that were living there and also we had to do a lot of public policy and also find a way of working with the private and the public in a solidarity way to find the solutions and to save life of the people and give them the opportunity to, and at the same time generating the protection of the destiny because we were aware that if, the impact of the life of the people, that was the most important thing in that moment will not priority in the moment, the results in the future of the destiny could be a disaster for the future of the activity in Galapagos, for the tourist activity in Galapagos.

**Norman Wray** (15m 09s):

So we do a lot of things and then opening this opportunity to think, okay, we have to work in water, energy, food, education and see how we can link all these things to develop knowledge for the islands, but also knowledge for other island states around the world. We believe that the things that we can do in Galapagos could have a great impact in other places around the world and could we are really living lab reference, important reference to do all the things in the worldwide, because we are human beings living inside a natural heritage inside a national park and learn and we have developed knowledge around living with restrictions and climate change is going be a great restriction for human beings around the world. So this, I think that is a great opportunity to, so we thought that this is a great opportunity to start, to make Galapagos a place where we can sit together with other you around the world to find the solutions that we were searching in the planet.

**David Greely** (16m 35s):

And it's fascinating because so many of us over the past few years of the pandemic have, you know, had the life we were accustomed to taken away and it's led many people to reevaluate how they're living and it sounds like for the Galapagos, it's also allowed for a reevaluation of the extent of the reliance on tourism and looking for new ways to develop the economy and create I imagine jobs and a way of life and as you put it living with restrictions, so that's fascinating to me and of course living with restrictions is likely going to apply to many of us in terms of trying to deal with some of the pressures that we're all facing globally with climate change and, you know, I wanted to get into that a little bit with you, and, you know, obviously the Galapagos, you know, are one of the more vulnerable regions to these types of external threats. When we think about, you know, islands amongst the time of rising sea levels, you know, increasing plastic waste in the oceans invasive species, as you mentioned earlier, you know, when you look often for those of us who aren't living in areas that are as vulnerable, the impacts of climate change can feel like maybe something in the future, you know, they don't feel as tangible are you experiencing effects of climate change and other, you know, environmental changes now and, you know, if you are, can you share some of those?

**Norman Wray** (18m 12s):

For example, the increase of sea level is not so clear right now in Galapagos. We are not suffering that kind of impact, but we know that because we had in the past in 1982 and also in 1998 I guess the impact of a phenomenal El Niño and we learned a lot about what could happen if El Niño came again to Galapagos and the impact that we can have in the marine life and also in the life, in the land. What we knew in that moment is that all the food ecosystem for the biodiversity in islands could be incredible damage in the sea. Right now Galapagos, is really interesting because Galapagos has some special conditions. We have four marine currents really important and

one of them is Humboldt Current that come from the south of South America and in front the Coast of Peru and Ecuador, they turn left to the west and then and then get into Galapagos and you have another current that came from the South Pacific other, but it generates we have a warm, and cold currents, but this balance generate incredible wellbeing situation for the life in the oceans and also in the islands and at the same time that we have a protected marine reserve of 135 square kilometers, where is not allowed the industrial, the fishery industrial activity only small scale fishery. It means that the Galapagos is like a nursery of life in the Eastern Pacific and that's one of the reasons because it's so incredible place, to see marine life and also the life on the land

**Norman Wray** (20m 41s):

And it's also the reason because you can, I was reading something about it and I found that in in the other parts of the equatorial line that passes in the North Part of Isabela that's, one of the biggest island in the Galapagos. The tutorial line passed through Galapagos also in the other parts of the world in the tropic zone and in the island ecosystem in the sea are suffering of the impact of climate change in the seas in the oceans, species are going to the poles trying to feel more cold water and to have more better weather conditions, but they're still coming back to Galapagos. This is really interesting what's going on, but at the same time we know that we are incredible vulnerable for climate impacts and if they change the temperature of the water. Right now conditions are not getting so hot and we are not having a strong winters yet, but we know that if we are going to have extreme climate conditions as phenomenal El Nino, they are impacting our nature and our biodiversity and our fauna and vegetables is gonna be a huge impact because in El Nino, a lot of iguanas marinas, marine iguanas, there is really important for all the ecosystem and also sea wolves and other marine birds and all the ecosystem, this word trophic chain may be is the name trophic chain could be damaged by the impact of climate change. So we are incredible vulnerable for that and at the same time as a consequence of that invasive species, that one that is the biggest threats for endemism, could have that incredible opportunity to spread in a more aggressive way in the land and also in the sea.

**Norman Wray** (23m 31s):

So this is the conditions that we can suffer when these extreme climate conditions could happen in Galapagos and at the same, because we are kind of a nursery of ocean life in the Eastern Pacific, we also suffer a lot of pressure of fishery industry in the limits of our economic exclusive sum that is 182 miles from the limit of the protected marine reserve of Galapagos. So as I told you, Galapagos is a nursery of life of marine fauna, but the pressure of big international fleets in the limits of the marine exclusive sun, even the Ecuadorian, even the Chinese and even other fleets is going to be bigger and bigger, because if we are still going to have better weather conditions that other parts are on the equatorial line and the tropics as a result of our marine currents it means that, you go to fish on the poles, or you go to the Galapagos for find for example, just for an example know, and that is one of a big, the other big threat that what we have, and is because we need to push more, more sustainable management inside the economic exclusive some Galapagos and outside of them in international waters.

**David Greely** (25m 21s):

It's amazing. So sounds like the greatest threats right now are to the biodiversity and some are subtle, or would seem subtle in terms of the changing of the temperatures of the currents and migratory fish needing to move closer to the poles to stay cool, but also it's fascinating, right where you have an area that is doing well then becomes encroached upon you know, as, as we look for grounds to go fishing, as other areas become you know less, less productive and I know at the COP26 meeting in Glasgow last year, that the governments in the region announced an extension of the marine reserve to protect some of that species protect from the overfishing and, you know, increase the boundaries and it sounds like a very important initiative. But when I heard about that, I couldn't help, but wonder, you know, when you think about these large international meetings, like the COPs what is it like for smaller countries like Ecuador that are bearing, you know, a disproportionate burden of climate change being an international negotiations like COP26 that are seemingly dominated by larger countries, you know, like the US and China that have benefited far more from the economic growth you know, that's come with a lot of these environmental impacts.

**Norman Wray** (26m 50s):

Well, always historically has the test, because I believe that it's true that we have different responsibilities that we have to face against climate change and in the case of Galapagos as I told you, the big pressure over, as a result of these incredible conditions that we have, the message that Ecuador was trying to, put on the international discussion is that even this little country want to generate a sustainable management of their resources in the economic exclusive zone. This is a concept that, you know, this is a ocean there is a sea international agreement it is called (**inaudible 27:50**) is the convention of the seas of United Nations and in this convention that more than 160 countries signed it, China also signed that convention. I think that United States not, but China, yes and a lot of other countries around the world. They have this concept of economic exclusive sun in the sea and the economic inclusive sun is not the same concept of territorial waters no, that it was the old concept. It means a place that you can develop your economic activities and



also allow to other, if you one to two other fleets to do the same to other countries, but in practice it is like international waters under the jurisdiction of the national country. I don't know if you can understand it's knowing land, could be a knowing land in the ocean and for the national fleets, you know, so they say that they have the opportunity to have like and this is one of the greatest discussion with national industry around this stuff. They say okay, our comparative conditions to deal with other industries, fisher industries around the world is that we have economic exclusive sun 100 kilometers from our national coast. So our energy effort is not have to be so hard as other fleets that travel around the world even the colonial fleet travel around the world, the tuna fleet, no is one of the biggest in the Pacific, in the Eastern Pacific, but they say that if we create another marine reserve in the area that could harm their economic opportunities in relation to the other ones, but at the end through a dialogue process not easy process, but at the end, they understand that this school also is a way to manage in a better way that our resources, because there's data of the incredible impact, good impact of the marine reserve of Galapagos was declared in 1998 because the Galapagos was declared part of the UNESCO natural heritage in 1978.

**Norma Wray** (30m 28s):

But the protected marine reserve were declared in 1998 and they know, because that about, of the positive impact, even for the commercial species for the fishery that the main reserve has in all the Eastern tropical pacific sea escape, but they were aware of that, and at the end they understand the importance of making these messages and I think that the big, the biggest step of the current government is to say, because we have been working on these since the former government too, but this government decided and say, okay, let's go with this and let's send this message off first. We can generate a valuable process with the industry and at the same time, we send a message of the necessity of having sustainable management in the economic exclusive sun.

**Norman Wray** (31m 31s):

So what happened is that there is no long line, a 30,000 square kilometers of no long line activity and also a 30,000 area of no take sun, a 30,000 square kilometers of no take sun in the economic exclusive zone and the idea is to that this area could be connected also with a migratory way that connects with Costa Rica, Isla de Coco, and also with Columbia and Panama with their own ecosystems. So we can prevent a way of protection for the migratory species in this corridor. So this is the big dream, the Presidents of Columbia, Costa Rica, Panama, and Ecuador, they say that they want to generate like a biosphere a protected area under the International Regulation of UNNCO of this corridor as this was a consequence of the declaration of Ecuador of generating these protected area, link to Galapagos alas is a new area that can be the opportunity to discuss this connection of protection in the oceans, under the objectives of the 30% of protection of oceans until 2030. So this, I think that was an amazing decision, a lot of things to do yet. Everybody will like to get a better protection, but it's really interesting what happen in the way of open a precedent that we need to have sustainable management in economic exclusive some and this is not easy issue because fishery industry around the world has a lot of opposition of having sustainability management in their economic exclusive zone even, or for, for sure in the international waters.

**David Greely** (33m 42s):

Certainly to get numerous countries to agree on areas where they would normally be competing with each other to get industry to agree with government when, you know, to some extent government is telling industry well, you can't fish here to be able to for them to see the overall benefit even to them of having a more protected reserve. It's a great accomplishment and it sounds like as well, you know, what was the reception of it when this was announced at COP26?

**Norman Wray** (34m 13s):

Well, I heard to the environmental ministry of the UK his name is Zach Goldsmith and he said that and many other leaders and all the, for example, I heard from Dona Bertarelli, that is one of the special United Nations ambassador for the protection of the oceans and Sylvia Earle and a lot of people that were aware of this kind of the creation that the cup of Glasgow that one of the, of the big moments of the cup of Glasgow was, was this decision of, of Ecuador and the decision of, the other countries to go to the biosphere protection in the area of the, of the Marine corridor of the Eastern tropical Pacific seascape. So for me as a citizen of the world, maybe and one of color it was a incredible decision because it has the impact in Glasgow at the same time has a really interesting impact here in Ecuador and also in Galapagos, because in 2017, this is really important to remember a ship, a big cargo ship, Chinese ship called the Fu Yuan Leng was captured inside the Marine Reserve Galapagos.

**Norman Wray** (35m 54s):

There's no possibility to have a industrial, national, international industrial activity inside the marine reserve. All the people knows that around the world is in the maps, and they know that they are incredible sanctions for it. I don't know what happened, but they found this. It was not a fishery vessel was a cargo vessel, a big refrigerator vessel, if we can say it in a way or another. More than 6,000 species

were there, 6,000 sharks inside the vessel and some of them like less than two, I think so, no were, whale sharks. So this was an incredible impact and Ecuador developed a really important trial against the owners of the ship. China says that this was a decision, is not a decision of of, of the country, the responsibilities from the owners of the companies of the vessels that they respect Galapagos limits and they understand the diversity and the role that galas has in the oceans and all this position, but in that moment the community of Galapagos said that this important to increase the protection of the seas in the islands, because we are facing a lot of threats and then I link it with another problem that we have is rubbish and plastic rubbish that came to Galapagos, most of the rubbish that came to the Galapagos comes through the marine currents and comes from the continent you know, it says that maybe closer 50% of it, but at the same time, you find a lot of bottles with trademarks that comes from Asia, but the rubbish of these bottles by currents ends in Hawaii is proven. So what's going on is that also the impact of the way international waters that international fits manage their own rubbish in the seas and at the end it stopped in Galapagos. A lot of references our community also to prevent close marine cleaning processes, a lot of things going on around it but plastic is another big threats that we face in the external impacts in the island so it's really interesting how everything at the end is kind of linked, so that's really interesting.

**David Greely** (38m 42s):

Yeah it's all connected it all finds its way to you for good and for ill and as you know on this series we have talked a lot about carbon markets and you know looking for ways in which they can help the world move towards net zero carbon emissions and limit the climate change that's creating some of the external pressures on the Galapagos. And to the extent that the, the, the rest of the world can handle its trash better handle its carbon emissions better, that will certainly make the efforts that the Galapagos are undertaking you know, much more successful, but is there a more direct role for the private funding and investment that you know, carbon markets or environmental markets can provide, is there a more direct role for that type of funding and investment in the Galapagos?

**Norman Wray** (39m 49s):

Yes, for sure and I think that it would be really interesting to find links between for example the protection of native vegetation in the islands. There's a really not so well known tree and that is called is colocasia in the islands, and these have been having a lot of impact because invasive species like blackberry. Blackberry, Blackberry is a invasive species that came to Galapagos many years ago and is one of the biggest threats against is colocasia and is colocasia is really important for the life of turtles to keep the protection of water and to generate all the ecosystem conditions for the life in the islands and I think that it will be really interesting to find a way to restore and really interesting processes that have been leading by the national park and also linked with project with the organization as Charles Darwin Foundation, then trying to see how to push or recover of this own vegetation that is strategic for the life in the islands. So there's a incredible possibility to link them the carbon markets with the Galapagos directly. Also in blue carbon initiatives for example, for man groups, it's really important and also for the protection of all the wetlands that we have the islands in Isabela, for example, and also in San Cristobal there are four populated islands. The biggest is Santa Cruz, the other one is San Cristobal, and there comes Isabela and there comes Floreana and each of them have different ecosystems.

**Norman Wray** (42m 20s):

No, for example, San Cristobal is the only area that have a lot of drinking water you know, the other ones have the majority of water is salty water and you have to invest a lot of effort to transform the water for the world consumption of human beings in the islands. Also for agriculture, that is really important because right now we depend on 70% of import foods and goods from outside and it means a risk for invasive species too. So we have to develop a lot of resources, quarantine processes and control. The state of Ecuador do a lot of that to prevent invasive species get into the islands. But historically they already came and they're already, still there, even that we are doing a lot of things of eradicating and in some cases, aggressive processes against goats in the 90, for example, that is part of the history of the world people going to hunting goats, because there were plenty of them and they also was a threat to the life of the islands, right now there is incredible fight against, for example, a mosquito it's called felony is the fly the la mosca felony,. because they put their eggs inside the nets of the birds, so it is a big issue and there's a lot of research on that. What I'm trying to see is that science is important around the world and for Galapagos is a key and we can find a way to generate carbon markets, investment link with science research against the threats that of the islands is suffering. We can find a way to push a better recover from man groups, the protection of wetlands, and also of Asian vegetation in the islands. We can find interesting ways of linking the carbon markets with activity in and even we have to be innovating.

**Norman Wray** (44m 39s): To innovate how to link all these efforts also with the protection of the oceans against illegal fishery and the pressure of fishery in the oceans of around Galapagos and also education of the people and then we can find really interesting connections for example with energy and also with water. Galapagos right now is using not more than 20% of solar and Aeolic energy. The other part of it is oil energy, thermoelectric energy, I don't know if with diesel. So i remember, I remember that when I was the

President of Government Council that one of my first decisions of public policy in Santa Cruz is to stop the importation of electric cars because there wasn't a local producing of solar energy for the batteries. The problem is that they were connecting in the night to the diesel infrastructure and we were paying electric cars with diesel. We are charging but that was a mess so I say no way until we develop the capacity to generate our solar, home basis or a big plan of it is a weird thing to keep doing these things because it's absolutely contradictory and this is the big impact also if we can find the connection between the biggest the biggest consumption of oil in the islands of diesel in the islands is for the transportation of tourism and transportation of people in Galapagos.

**Norman Wray** (46m 42s):

It means sea activity. So there is a lot of things to do in the research and to link. If there is a way to connect research of carbon markets you know, link it with solutions for these so sensitive places where you can innovate research and to see how it can work for the solution of transportation and mobility in a very clean way that will be really interesting challenges to find the way to do it. We are going to have a big project of solar energy in Galapagos 20 hectares of solar panels in in the island of Baltra that is close to Santa Cruz where's the airport. This is going to change the relation between solar energy and diesel energy, but at the same time it's important to say that the way people build their houses and infrastructure in Galapagos is pushing is an increasing needs of energy of power of 7% each year so we need to change that also. So any carbon market solution for Galapagos have to get connected necessarily with research and to find concrete solutions also to the development of better infrastructure with less impact in the increase of needs of energy and power in the islands and changing the matrix right now of how we work. So I think the innovation challenge is there because if we don't do it that will be really complex uh for the future broken it each time that we need more space to put more solar panels we affect the national park limits you know, because we don't have enough space to do things there. This is one of the reasons because it's a great challenge to do okay what we can develop understand it that we live in a place with restrictions human beings inside a natural heritage in the national park. Okay so right now is an invitation for the people listening this program to take the challenge because I think that the things that we can find in Galapagos could be for sure interesting around the world.

**David Greely** (49m 15s)

I can't think of a better place than that. So that was fantastic. It is fascinating to learn about so much what's going on and how it's all connected, the thoughts are all it swimming around in my head.

**Norman Wray** (49m 33s)

It is, it is. Maybe we have to have more podcast discussing each of the points one by one.

**David Greely** (49m 43s)

Thanks again to Norman Wray, Former President of the Governing Council of the Galapagos Islands. We hope you enjoyed the episode. Join us next week when will continue to explore the carbon supply chain, moving on to the role of the intermediaries and end users of carbon markets.

**Announcer** (50m 00s):

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