

# Season 3.12 Mathilda D'Silva

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## SUMMARY KEYWORDS

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## SPEAKERS

Eric Benson, Narrator, Mathilda

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Narrator 00:00

This podcast is a project of the climate designers network.



Eric Benson 00:03

Hey, this is Eric. I hope all of you are having a great start to summer. In fact, the summer solstice is June 21 in the Northern Hemisphere. That's today. So happy summer everyone. And one thing many of us love to do when it gets warm out this head out to the water. But what if that idyllic summer beach vacation nearly turned deadly, yet gorgeous blue ocean was hiding a toxic secret. That's the beginning of the activism story for today's guest, Mathilda D'silva. The tilde runs a great nonprofit in Singapore called the ocean purpose project. And it would have never likely been both for one fateful day at the beach that turned toxic, sickening her for the rest of her life. Today, she has put down her microphone from her comedian singing and TV days and picked up a new passion to make sure what happened to her doesn't happen to anyone else. by conserving and regenerating our oceans and beaches.



Eric Benson 01:02

Mathilda was a really fun guest. She's also really funny. But what I love most about her is that she cares. She cares a lot. And if you agree after listening to this episode, it Jen to our nonprofit, or simply joined the ocean conservation movement that she is helping to lead.



Mathilda 01:22

Hi, I'm Mathilda D'silva, and I'm the CEO and founder of ocean purpose project. We are a social enterprise that's based on the beaches of passers in Singapore, and we work in ocean conservation, as well as turning ocean pollution into solutions. You can find out more about us on our website, [www.oceanpurposeproject.com](http://www.oceanpurposeproject.com).



Eric Benson 01:48

Mathilda, welcome to Climify It's wonderful that we were finally able to connect and have you on the show today.



Mathilda 01:56

Thank you so much, Eric, thanks for inviting me. Yeah, no problem. Your journey into becoming a sustainability advocate is, is one that first of all, I found inspiring, just have to say that just at the start here. And it's it's something that you put front and center on your website, and the other kind of media about you online. And I find that that's actually really important for folks to see. Because all of us are in on this fight. And we got here from somewhere. And so can you tell us more about this journey and how that led to the ocean purpose project, becoming what it is today? I know, Eric, how much time do you have? Yeah, well, this is a long story. You know what we can we can go as long as you want. Because your story is so interesting that I think it's important to tell yet thank you so much. You know, Eric, for sharing that and like, you know, for asking me as well, like,



Mathilda 03:04

it's one of those things where I tell the story a lot. And it's interesting to kind of see the reaction of, of how people react to that, especially people who've known me for a long time or they've seen me on TV. I used to be on television a lot a comedy show. I used to also be on Singapore idol. I know that is so awesome. So you know there's there's a kind of a perception of of me in Singapore, based on you know, what they saw on television.



Mathilda 03:34

I used to work as a TV producer. I used to be the head of social media for international broadcasters, telcos banks and stuff. So it's, it's one of those things where like, there is like a public perception of me there is a corporate perception of me. And then there's a sport perception of me. I mean, I'm not the I'm not an athlete by any measure, but, you know, I used to represent Singapore and in dragon boating, I used to,



Mathilda 04:02

you know, I used to cycle like 35 kilometres to work and 35 kilometers back. So, I mean, that's an athlete on my book right there. That's an athlete for sure. Yeah, not too shabby. I mean, like,



Mathilda 04:16

till about 2am or 3am. Like you know, back in the good old days.



Eric Benson 04:22

You don't you take it for granted. I guess I was just gonna say like, the the story about you, coming from media is one that I find truly fascinating. And I feel like it's, it's probably you can correct me if I'm wrong been been pretty helpful in your new path at the ocean purpose project.



Mathilda 04:44

Well, to a certain extent, so I mean, I came from that background. I am not a scientist or an engineer. I'm not a marine biologist. I don't come from that field. But, you know, in 2015, I was representing



Mathilda 05:00

My country in a Dragonboat race in Boracay in the Philippines. And thank you, you might have heard about this place, you know, on CNN, you know, everybody talks about it as the place to be beautiful beaches, party atmosphere. Yes. Dragonboat race that happens there every year. And like, you know, all the celebrities descend on the island, it's a big deal as well. And



Mathilda 05:23

it just so happened that that year, I was there for about just three days, like a weekend. And when I came back home to Singapore, I was in the hospital because my immune system had shut down. I was



Mathilda 05:37

yeah, like, it was terrible, like, everything that you could possibly think of. I couldn't keep anything in everything was like, you know, leaving my body like, you know, it was it was horrible. I was just like,



Mathilda 05:51

in complete disarray, I was like, Okay, wait, hold on, if this is a bad hangover,



Mathilda 05:57

like, you know, it's kind of, you know, persisting for over a week. You know, what's, what is happening here. And in fact, I wasn't the only person that fell sick. You know, quite a few members of my team from Team Singapore were really sick. And some of the, like, months later, when I found out that, you know, the, there were quite a few Filipino dragon voters who had to be, you know, who fell very sick and had to be airlifted out. Oh, no, you know, and so, this was where I was like, okay, the official story was that there was, you know, kind of bad rice,

that he served in the catering, and that's why everyone felt sick. And I say, I don't know about y'all, but I was pretty sure none of us was eating no rice in like, you know, we're just serving late, like, San Miguel's set will egg surviving off beers. So, you know, in 2018, a friend of mine sent me an article that said, Hey, have you seen this like, actually going to close the island of Boracay for like six months? So this is kind of like where I was like, Woah, what are you talking about? Like, you know, how do you even close an island, right? For six months and Burundi like, you know, President? Yeah, for six months. And, you know, this was bizarre, because, you know, this happened, I think, around April, in 2018. And the official reason was that the government government of Philippines was going to close the island. This has been this was unprecedented. And President Rodrigo, Rodrigo Duterte, they actually call it a cesspool. In fact, you know, the reason for this was that they were going to, they discovered that you had a massive amount of from sewage and all forms of waste, that was literally just going straight into the touristic beaches. So for example, there was an increase in coliform bacteria level, you know, there was fecal contamination. I mean, it was just like, you know, sewage, wastewater, everything was just going in, you know, untreated into these turistic beaches. It was insane. Like, you know, and if you realize, like, and I went back, you know, and looked at photos from 2015, we were like swimming in debt. We were diving in, and we were paddling on that stuff. Like we were painting. It's when you look at that, and you think you're like, Whoa, okay, this is insane. Now, here's the thing that that kind of also hits, where we're talking not just about the ecological damage to the area. I mean, you know, while we were there year after year, I would go to Boracay, and the people who run dive resorts, you know, they would just tell me that they have to keep going further and further out to see any kind of like, you know, marine life because everything was almost in a dead zone. So if that should have told us that some thing was going wrong, but like, you know, it's insane that, you know, in that six months of them closing, you know, 1.4 billion Singapore dollars, right, of tourism revenue was gone. You know, this is like, sir, like, it brings in at least about 100 billion pesos of revenue to the Philippines. And the thing that I couldn't understand was like, Wait, why is this happening to me? Like, I didn't do anything like, I'm, I'm a singer, I'm a performer I'm on, you know, I'm giving I just kind of went at a battle and represent my country. Like, this is not fair. You know, like, first of all, yeah, definitely. The second bit is for an island that is bringing in close to 100 billion pesos of tourism revenue, you would think that, you know, like, the different government agencies and even the hotels and the different kinds of tourism,

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Mathilda 09:42

you know, activities would get together and make sure that they're not just really seeing like, you know, like,

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Mathilda 09:50

untreated sewage into their money making machine so I was just kind of like, okay, this doesn't make any sense. Now, if you

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Mathilda 10:00

kinda do a little bit of digging and research on your own. One of the things that indicated that there was an excess of nutrient in the water.

 M Mathilda 10:10

And we can see that in pictures off the races, there was a, like a green kind of tide that kept washing up on the beach. So a lot of the Dragon boaters, we assume that that's because, you know, it's the, it's the week or the wash from us paddling. But that green stuff was actually Allah overlook Touka. And it was actually an alligator that started to bloom that, you know, should have kind of pointed towards the direction that there was an excess of nutrients in the water. And, you know, this is again, where, you know,

 M Mathilda 10:44

for me, I was trying to understand, Okay, I'm only exposed to this for three days, how could my health completely, you know, like,

 M Mathilda 10:54

go into the toilet, so to speak, I developed vitiligo within a month. So my skin started turning white, my hair is actually all white, a diet, black pets, if I've got to go on stage, that's terrifying to imagine, you're just just a normal day, like you had, and then

 Eric Benson 11:16


it completely changed your life based on something that you would never have have expected in this and in the ocean. It's, it's truly terrifying.

 M Mathilda 11:27

Yeah, I mean, it's one of those things where we read about people who are victims of air pollution or water pollution, ocean pollution. And they are usually people that, you know, kind of, are on the front of a magazine, we read a story about it. And there is a disconnect a natural disconnect. But when it happens to you, and I really don't sit well with this word, victim of like ocean pollution in the air, it really drives me nuts, like, you know, like, I hate to be looked at as, like a victim of any form, like, you know, even when people can look at me and I get, I get asked about my face, like, Why is your face half white and half brown, oh, supporting blah, blah, blah, it really drives me up the wall because I, you know, I'm just not of that character at all. So this is again, where I was thinking to myself, Okay,

 M Mathilda 12:19

again, like I was upset I was, I was, you know, just kind of shocked in not understanding what I was supposed to do with this incident. And then I realized that there were a lot of people.



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Mathilda 12:33

I mean, even children, you know, on the island of Boracay who are starting to develop some of these white spots. You know, and, and this is again, where, like, you know, I realized that this, this conversation about ocean pollution also needs to come from the people that are most affected by it. Yeah, I live by the coast, I do live in front of the beach. And I do believe like the 2 billion of us who do live in coastal areas, we have a responsibility and a duty and also a very important way of articulating why ocean conservation, you know, the prevention of ocean pollution is so important. I mean, just to put this in perspective, switch, and swell as farmed runoff make up a little bit over 50% of the total ocean pollution type. You know, you've got litter, maybe about eight to 10% marine litter. And, you know, you've got about 30% of that. That's sewage, Geno's. So it's literally, you know, this topic isn't talked about a lot, we don't really spend a lot of, you know, our waking hour chatting about it, it's very fashionable to kind of like, you know, keep referring to plastic, as the major issue with our oceans, which we hear all about in the news is the plastics, and you know, how we're trying to clean that up and the Pacific garbage patch, but we don't hear about it. And this is also where I felt that I wanted to, I wanted to do something our typical producer, TV producer and media person, fashion, I was like, Alright, I'm just gonna go for all the beach cleanups with all of the different NGOs. And we're just gonna, like, you know, try and clean the beaches, and I'm going to do my part. And one of the things that I felt while I was doing a beach cleanup was like, Okay, where's all of this going? Right, right? What about the stuff that we can't see the same kind of chemicals? Or, you know, like, biological materials that made me sick? What do we do about that? And I couldn't find answers. And, you know, this is also one of those things where, you know, I'm not a very patient person. In fact, anybody that knows me, will definitely say that I'm probably one of most impatient people that you've ever met. You can call it like you're not just a remnant of being a TV producer because

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Mathilda 15:00

as well, I will not turn, let's get to it real.

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Mathilda 15:03

This is where I felt that I wanted to do something. But I wasn't going to quit my my great job at a bank. So over at a telco you know, working, being the head of social media, I wasn't gonna quit that a steady job to go off and do something crazy, like starting a social enterprise. And I don't know what possessed me. But you know, I felt at the end of 2019 that 2020 was the year to go off and start an ocean conservation social enterprise. And then I quit my crit job, and I did it in 2020. And then two weeks later, the whole world went into lockdown, right. And we were not even allowed to go on to the beach, let alone outside of our houses. And I was like, Oh, my God, I made a mistake. Take me back.



Eric Benson 15:47

I tried to beg for my job back. But they were like, no, no, that's not working. Yeah. Yeah. Well, 2020 was actually probably the perfect year to do it, because it was a complete reset, right?

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Mathilda 15:57

I don't know, my mental health wasn't like, you know, like, perfect at the time, because I was like, how am I supposed to do that?

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Mathilda 16:06

You know,

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Mathilda 16:07

we had 200 confirmed clients into at the end of 2019. We lost 199 of the 100. Yep. 199 We only had one client less. It's awful.

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Mathilda 16:25

Yeah, I can't imagine being in that situation. That's, that's scary. I lost a lot of hair, I can tell you that. Oh, thank God, like we weren't able to go outside of the of the house. So nobody really saw how horrible I look. Now, no. But it was one of those things where, you know, if I come to the building blocks of what, what I wanted to do, you know, this is again, where I'm, you know, I'm really intrigued by inventing, in fact,

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Mathilda 16:53

you know, I did a couple of these profiling things, you know, like a Gallup profiling, where they try to understand what your, your character is about. And apparently, one of the characteristics of me is, I'm a futurist. And as I was sent me, I'm not trying to shoot a rocket to Mars or anything. But this is again, where like, you know, I got to understand a bit more about myself, and why maybe I get irritated or frustrated with people not understand. What I'm seeing is because then I'm seeing things come together in a way that don't necessarily seem apparent. So I'll give you an example. I couldn't Dragonboat anymore. And I used to be a Dragonboat coach as well, this, I developed muscular spasms as part of this autoimmune issue. And it was just embarrassing. I kept losing my battle. I wasn't emotionally able to deal with it. Although most of my teammates were like, it's fine. We can just buy another battle. And I would say, No, no, I, I'm not in the right headspace. I haven't kind of had my Oprah moment. Like, you know, I just want to battle alone. So if I can have a muscular spasm, or just drop it in the seat and get back on the board, and this sorted out myself. And while I was paddling in my beach town of batteries, I noticed that the same kind of seaweed there was washing up at Boracay was also growing in my town. And I was like, Okay, wait a minute, are we also facing this excess of nutrients. But another thing that I noticed is that the seaweed in the muscles, they were attaching themselves underneath flotation devices, they were growing in and among each other, creating natural ropes, you know, like, you would have grasses area and muscles attached to that. And then you know, grassy area attaches to those muscles, and they start to form their own ropes. And I was like, Okay, this is interesting. And then I would observe a lot of the local fishermen who paddle out on kayaks, the recreational fish beat tended to go towards where these, these so called curtains of similar muscles were growing. And I was like, why are

you what, you know what's so special about this area? And they were like, oh, you know, there's a whole lot of small fish that come here, they hide among the seaweed and the muscles.

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Mathilda 19:05

You know, they, they attract bigger fish. And that's why we're here. And you can see the water, the visibility is actually clearer here than just two or three meters away. So this was where I was like, Oh, this isn't interesting. And so, you know, this kind of began the journey where I felt that I wanted to build something, which is ocean purpose project today that addresses all forms of ocean pollution, but really looks at the source of the pollution and understands a little bit deeper. So for example, when we talk about

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Mathilda 19:39

Alva Lactuca, or sea lettuce, right, that's what we lose. Yeah, I don't know what that's what's Yeah, that's the common name of that. Basically, it's an edible green algae that's in you know, the felt family oversee. I don't know if I'm pronouncing it correctly, but it's in a genus of ova. Now, what's interesting is, the alga is agnostic. It's neither

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Mathilda 19:59

Bad, no good. It just is right. As humans kind of like, oh, you know, the algae bloom in Barkai is where like, you know, this is what's adding to the problem. Whereas Avila Touka does occur naturally in this part of the world. And in fact, you know, it's, you can find this at any aquarium shop and things like this. And this is also kind of where you'd I found it very interesting. And I was trying to understand like, you know, Okay, what about this Elva is able to maybe write a lot of the wrongs with regards to sewage in the water, or excess chemicals, you know. So for example, in the place that I live in the north of Singapore, during this period of time, actually, from December, late December, until about January, we had heavy rain, even until February, terrible, intense rain, there was a massive flooding that was happening now, just above us in Malaysia, Johor, and, you know, we, I think about two weeks ago, we encountered, you know, thick orange scum on the top of, you know, the seawater, like, literally, it expanded from like the entire northern, north eastern seaboard of Singapore. And what I was trying to understand, and what I've been talking about for the longest time is, how do you know things like agricultural runoff chemicals, from fertilizers, you know, from oil, palm plantations, or other kinds of plantations in the north erode when heavy rain comes in, it washes into our neck of the woods, and it does cause an excess of nutrient in the water, which does lead to algae bloom, right. phytoplankton bloom, this is a this is again, where how do you? How do you solve that? Right now is known, like tech solution, there is no big AI solution, we can kind of identify roughly when this is going to hit. But we don't have like a solution right now, I think, to give an American example, all of that Sargassum, that's washing up in Florida right now.

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Mathilda 22:02

Yeah, but he sketched on the seaweed. Yeah, that's right. Like, you can tell that it's coming, you can kind of predict. But you know, today, we haven't been able to figure out how we



you can kind of predict. But you know, today, we haven't been able to figure out how we prevent it from even, you know, kind of blooming in the first place. And this is really where our work at Ocean purpose project in creating curtains of seaweed and mussels that grow on floating fish farms, in the north of Singapore. They basically like, you know, kind of biohack the properties of the seaweed and this muscles, where they are absorbing, like, you know, the, from the external of the farm, they're absorbing all of this excess fertilizers. So for example, a lot of the ammonia, a lot of the nitrogen based substances, and it's create, exactly, and you cannot consume that. So that's not for eating. And so this is again, where, for the fish that grow in the nets, that are submerged in the sea, inside of this curtain, they are far more receptive to, you know, the sea and Masuka buttons, as opposed to very loud, you know, like machine based water filters that use these round plastic pellets to kind of filter through the water. Yeah, and, you know, of course, those plastic pellets, they do end up washing up on the beaches. So, you know, this is again, where I felt that I really wanted a systems approach, I wanted to understand what the issues are, I wanted to grow up in the community, which is our traditional fish farmers, who have been there from generation to generation. And I also wanted to, you know, get information from indigenous people used to live in my town, the last one who was still working at one of the farms, you know, he would tell me stories of how certain types of seaweed could be boiled and turned into a jelly, you know, certain kinds of wild boar love to eat that overlap to cut that green seaweed, because it's like a, it's like a sweet, it's like a treat for them interest and, you know, all the stories, all of the science, we're working with universities like James Cook University, you know, it really allowed us to be able to understand a little bit more about the ecology of the place. And this is again, where we are already seeing data that explains very clearly that there is a market reduction of Emily's nitrates and nitrites work where our seaweed muscle lines are planted as oppose, it's working. It's not like, you know, kind of removing everything, but it's reducing. And I think, you know, having a native species do that, and really getting nature working hand in glove with nature, as opposed to oh, you know, Bloom is bad. You know, all of that stuff. You know, like I said, there's no better good in nature, nature just is. You know, and this is again, where I felt that as a TV producer, I interview a lot of people from different nexor Woods, whether they are researchers or government agency people



Mathilda 25:00

or whether they are community leaders, NGOs. And you know, that way of working in the creative sphere? Well, you're in design, I guess, this will help that we have working and roping in different viewpoints, you know, was really something that I wanted to bring to each ocean purpose project. So, you know, that gives you a bit of an explanation. I think,



Eric Benson 25:23

you know, what we do and why you weren't kidding that this was a long but interesting story. And I saw a bio of you online, that I love because you called yourself, the farmer and chief of seaweed corals and mussels that will save our seas. Oh, now, that sounds to be full of. Did you write that one? Or is that something from another like news organization or something? Because the farmer and chief of seaweed corals and mussels?



Mathilda 25:52

Yeah, I mean, I am kind of a farmer and chief. OPR. But I want to be honest with you, I

Yeah, I mean, I am kind of a farmer and chef. OPR. But I work out to be honest with you, I work closely with with the with the fish farmer himself. So he's probably the farmer and sheep. I'm more of like, you know, like the assistant in chief, the so like, whatever, they got it. Yeah. Right. You know, it's, it's also trying to get a lot of the traditional farmers on board. Because if you've been growing fish, all your rearing fish all your life, they don't necessarily know about seaweed. And it's kind of interesting, because I'm in the same boat, I don't know much about it. And I'm wondering is that I'm on one of the three pillars that you have on the ocean per purpose project is bio remediation, is that rare bio remediation that you're doing with these floating



Eric Benson 26:42

things in the ocean?



Mathilda 26:45

Definitely. So you know, what we've been trying to do is to use the living organisms that grow natively and pass series. And we don't just refer to academic research that is written about this, to verify whether they have been native to the area, we speak with a host of traditional Fisher folk, we speak to indigenous people in the area, we speak to residents in the area, we do a lot of observation work. And so this is really where we get an understanding of, you know, how these organisms, such as seaweed, and mollusks, such as mussels, how they can, you know, remove contaminants or pollutants from the water, and what we can do with those materials. So, the bioremediation pillars kind of interesting, because, you know, it's something that I mean, I've had a couple of young people interviewing to be interns, and they're like, No, it seems to be complicated. I never heard of it before. And like, you know, sounds very sciency, can you kind of like, Give me something simple. And, you know, this is, again, where I think there's so much possibility for us to spread this message, you're working hand in glove with nature, with these kinds of regenerative concepts, especially with native species. And, you know, what we're also learning about bio remediation, is that, you know, this is not just something that we do in our little town in PA service. But, you know, it's already been done in, you know, many different kinds of incidences. I mean, you know, like, there was the Exxon Valdez spill where bio remediation was employed. You know, there's, there's so many different types of bioremediation, you know, bio stimulation, bio augmentation, intrinsic bio remediation, so many ways in which this could work. But for us, what we're doing is all that simulate muscles that grow in the periphery, we are trying to build the case for us to take some of that material and turn that into biostimulants, and bio fertilizers and even compost that can be used for herb garden. So if you come to our beach offices in batteries, it's the first beach office in Singapore that, you know, it's upgraded. You know, it's specifically on like, on the beach itself, like from our base, you can literally see the sea. Just next to it, you know, yeah, we're in a national park. It's, it's wonderful, you know, so we work hand in glove with NParks, Singapore, and we're really trying to create this link, where, you know, we don't need to use chemical fertilizers anymore, where we can very clearly explain how seaweed and algae as well as, you know, mollusk shells, or waste shells can be turned into, into, you know, fertilizers for plants, and not just any I heard someone say that healthy soil can lead to healthy oceans. And, yeah, and what you're doing with with the seaweed and what would be considered, you know, waste back on land as fertilizer is super smart. 100% I mean, you know, like, this is again, where I felt that, you know,

we I mean, don't get me wrong, we do beach cleanups in in ocean brothers project, you know, that's kind of what pays everybody's salaries and, you know, keeps our solar lights on, so to speak.

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Mathilda 29:59

Um, you know, pays for the rent and all of that stuff. And we got to do that. We got to do that. You know, of course, we also, you know, take things one step further with our beach cleanups where a section of the plastics collected, the ocean plastics, the stuff that cannot be mechanically recycled. You know, we are basically trying to create a system that converts that ocean plastic into hydrogen,

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Mathilda 30:25

and mobile system salt, sharing a little bit about that in a moment. But, you know, it's really also about seeing for us,

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Mathilda 30:33

let's say, for somebody who's a part of a community that is facing ocean pollution, you know, I feel it's so important for people like us, around Southeast Asia and around the world to be thinking about how, as a system, were able to reinvent disrupt existing systems of how ocean pollution is thought about how it's treated, right, bring that connection between the land and the sea? Because you know, you're absolutely right, what we do on land affects our oceans.

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Mathilda 31:05

What we do in our oceans affects our land as well. So if you know agricultural runoff is what's causing chemicals at sea, that is also causing algae bloom, then, you know, pollution at sea is also washing up in in droves. On our beaches. I mean, this first half of the year, we see, I believe in one corporate cleanup, we actually picked up 500 kg, in just like, under 45 minutes, we did a beach cleanup 500 kgs. of plastic and it wasn't seen, you know, I felt bad for the people that were doing this cleanup, you know, they went into office said,

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Mathilda 31:42

Yeah, I was like, Y'all better stretch with me. Like,



31:47

I'm like, I'm touching 40 I know, I'm gonna hurt like, you know, you're better make sure you don't get to stretch on and drink some ice with Tony, because we got to pick up a lot. Yeah, well, I wonder like, you talked about disrupting the systems. And I think that's totally right. Like, if you want to change the system,



Eric Benson 32:05

right, you have to do something pretty radical, right? Girls will just continue to function. And I'm wondering, like, as a designer, or someone making something what, what can we do better to prevent some of these things that you're seeing in this in the land and then back into the oceans? You know, I think this is really interesting that you're coming at this from a design perspective.



Mathilda 32:30

You know, there's so many different principles of design, contrast, balance, emphasis, proportion, your rhythm, pattern, repetition, all of that stuff. You know, I think the, this is also something that's interesting to me, because repetition is something that like, you know, kind of catches my eyes. So,



Mathilda 32:51

you know, with us, and each project that we do, it's really about solution focused, you know, a lot of our staff working in ocean purpose project is sometimes like, Oh, my God, if I asked Matilda a question, she's literally just gonna, like, throw the question back at me and go, like, but what do you think we should do? You know, like, down, and very often,



Mathilda 33:14

I start to see, like, you know, like how a lot of the issues around pollution are repeating themselves, you know, and so this is, again, where what we're trying to do is to disrupt the existing system and create communication strategies to create ideation strategies to create systems in place that that would create brand new strategies that are repeated to you, that requires us to really kind of reinvent the wheel. So, you know, I like to use our town as an explanation. So a lot of people are like, I want to do a beach cleanup at this location and another location, why do I always have to do this at your beach and pasture is? And so, you know, what we've been trying to do is create a prototype of our little beach town, which actually passes in Malay, when you translate translated into English means white sense, you know? So in order for us to really have white sense, what's it going to take? And, you know, like, the imagery that comes to mind of these coconut trees by the side of the beach, it's not just a g4 aura, or a picture, you know, actually, it's, it is what we experience in our, in our beautiful beach town, enter every day, all of our communications, the pictures, the videos. Yeah, we're trying to basically use the, the imagery, use the even use music, you know, get people to understand that beauty of the tower. You know, in fact, we did a beautiful storytelling strand series. So there's a couple of ways that we use design, to tell the story and to get people to treasure what it is that we have in our beach town. So one of them is working in with a school called



Mathilda 35:00

School of the Arts. And although they called School of the Arts, they actually do a fantastic science program. You know, when we have a wonderful student there who has been creating comic art, pro animals that live in Yeah, that live in our beach town, and through the comic art, you know, for example, there's douchey the dugong or manatee, I think you would call them in in the manatee. Yes, that's right. Yeah. So do she loves seagrass and do she communicates a lot about seagrass and blue carbon systems? You've got me and neither mudskipper who doesn't realize that she's wearing noodle packets. And she thinks it's fashionable. You know, comics, they sound they sound super cute.

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Mathilda 35:44

Three, yeah, you can find them on our Instagram. And it's really interesting, because the characters

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Mathilda 35:52

are basically playing the characters of a minute people in our town, that addressing issues that we have

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Mathilda 36:01

around plastic waste around seagrass and, and stuff. But it's also a way for us to, to when we do our school programs, with preschool kids, through songs, I sing songs, and I do a storytelling with these cartoon characters. And we get our children to understand what's happening in our beach through these characters. So that's one way of how we do that. We're about to launch our Tiny Desk concert pipe series. Beach office. Yeah, it's we're looking forward to that we've already got like, amazing solar powered DJs called Wild Pearl who come and speak why solar power DJs Yeah, exactly. Like, you know, they even you have the coolest organization and now have a solar panel that they bring to the beach itself when we're doing a beach cleanup, and then they bring it back to our office, and then they just, they're just spinning, creating different kinds of music while we're, you know, doing our beach cleanups and stuff. And, you know, this is again, where that creativity, that music, that the artwork, you know, it's it's blending into the science of what we do. Yeah, you know, I mean, we do that. Yeah. And it's, it's touching people in different ways, and starting to open up conversations that might not have all links that might not have come. So for example,

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Mathilda 37:18

I kind of had an idea of how I wanted to take the hurt the sound of our seaweed muscle lands, they do release a sound out of

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Mathilda 37:27

bubbles and Stein Island pecan popping, like, you know, we wanted to have an undersea microphone

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Mathilda 37:36

and record that. Yeah, and get our DJs to mix that event. Yeah. This is again, where like, any takes one step further, we have, you know, members of the Down Syndrome Association, who reached out to us and said that we, they, they have their own dance instructors, who are, you know, individuals who have special needs, who want to come and spend time with us at our office, they want to learn what to do, they want to observe the seaweed, and they want to create a dancer, teach it to us, and teach it to our community. And, you know, they, I think it's beautiful, how we're, you know, where we're spreading into different things in the community starting to jam with us. They are like, literally, with with your DJs Yeah, that Jamie like, you know, it's, it's that, I mean, you have a concept about movement, about variety about unity and design in, you know, it's, it's, this is again, where, like, you know, we're bringing that in. And what's really interesting is that the most active people are the people that are also giving us intriguing insights and asking crazy questions about the science behind our projects. So I'll give an example. I'm one of the religious leaders in our town, was a priest. You know, he, he loves all the music stuff. He's Filipino, he enjoys music, singing, dancing, all of that. And, you know, he was talking about the movement

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Mathilda 39:08

of the plastic debts at sea and how it's approaching the shore. i He He gave an interesting example of how, at different sections of the shore, you see different sizes of plastic waste. At a certain section, you'll see like the microplastic type stuff, and another section, it's all plastic bottles, and another section, it's all

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Mathilda 39:29

you know, fragments of plastics. And, you know, he was kind of like that, is there a way to be able to, you know, at at sea itself, does it see it's all mixed rain, figuring out how well you know, you could capture that movement of the wave and you know, prevent it from even ended up on shore.

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Mathilda 39:50

You know what, I think it's amazing. How, you know, when we put people in that space, that creative space when we when we get

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Mathilda 40:00

them to start, you know, thinking,

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Mathilda 40:03

you know, laterally, when we get them to start realizing that we're not just yet and doing beach cleanup is ocean conservation,

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Mathilda 40:11

you know, but we also do mention things like, for example, seaweeds in our town grow at a rate of 14% per day, you know, that just triggers some creative stuff, you know, somebody wants to do an artwork on it, somebody might want to read a song. Yeah.

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Mathilda 40:31

You know, somebody might want to deep dive and understand exactly why, what are the conditions that are causing that, you know, so this is also the kind of jamming environment, that creative environment that I want to create, in our beach office, where you just have that, that greed vibe that attracts that tribe,

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Mathilda 40:50

who are just, you know, ready to kind of get stuck in and create? Yeah, one of the things I think that you do really well, is this co creation, with the community. And I think that you can tell me how this has been working for you. But I really think that that is, as one of your pillars as behavior change in your, in your organization, I feel like that co creation is really helping people see, right the forest for the trees, or in this case, the ocean, and what they can do to help. Definitely, I mean, you know, one of the key issues that we are having is really, how do we, in order for you to drive behavior change? It has to be fun, whatever it is that we're trying to do, right? I mean, yeah, you could slice it many ways, but they, you know, standing in the sun, in like, absolute, like, smelly trench, the coffee is not fun for a lot of Singaporeans let alone for a lot of people. Nobody is how do we, you know, how do we use behavior change messaging? How do we create, you know, like, a very clear call to action? How do we, you know, express how the action of just removing that plastic and on the beach is a small step towards a possible solution being derived from it? Let's see, like large scale plastic to hydrogen? How do we explain the relevance of it? You know, so this is again, where like, you know, when people are like, what's the big deal, man, I can just bring my own garbage bag and a bunch of dogs that just clean up the beach, myself, I don't need the line, you know, like, pay you and NGO to do all of this stuff. And anyway, plastic, the hydrogen sounds real highfalutin, and you're not even an engineer? What are you doing? I mean, I get this on a daily basis. So it's also were explaining the relevance of why, as an NGO, we really need to like, you know, step outside the zone, or the box that we've been assigned. You know, how we need to do more than just raising awareness.

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Mathilda 42:53

You know, we're not going to change the world through a tick tock dance alone, Gleaners step that up and say, like, you know, what else is coming from that? How do we use you know, these things, or these platforms of social media? Or, or even like, you know, different artistic platforms to, to, you know, explore big ticket issues? Yeah, energy, food, water. This is when

the world is grappling with in sustainability. You know, when we see all of that ocean plastic that nobody wants to touch, we could turn that into hydrogen. Right? You know, it's so simple, but it's so complicated. But if we had enough people, let's say all of the people who, you know, keep trying to figure out how we can do the small iPhone, we had those kinds of people working on on this kind of project, we would be able to crack that and like a year max, yeah, I'd be I'd be down to help with that. Right. And I think you said earlier on that, that you're not a scientist, you're not a marine biologist, but you're a creative person. And I think that that creativity that you're bringing into this, I think, is even more important, really, than the science and I really commend you on that. Thank you so much, Eric, dig in, I can understand the struggle for let's say, somebody who's been, you know, dedicating, and I'm literally like, you know, mentioning like two individuals who have spent 10 years a decade of their life, you know, literally just like in a lab, day in day out focused on like thermal catalytic and bioconversion of biomass or of plastics of you know, understanding how syngas production relates to hydrogen, trying to create the, the hydrogen classification system. So I mean, you know, a lot of my life and

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Mathilda 44:37

is also spent with these people who, who are the scientists who've, you know, dedicated a significant portion of their life and, and, you know, and they, they brain capacity towards developing these systems, but because they're less so plugged in to that stuff. I find it riveting, but a lot of people are like, well, that's a lot unsaid. There's a lot of

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Mathilda 45:00

Eight words, I'm seeing a lot of graphs, I don't understand that give it to me, yeah, you can tell the story, right, you're good at that, like two sentences. And, you know, that kind of like oversimplification, you know, of, of some of the big scientific issues around sustainability is also what's getting the scientific community really put off in irritated by it. And I do believe that, like, you know, my role maybe is to, is to kind of like, you know, like, decipher, and to figure out how we can pull different kinds of researchers from different universities around the world, how we can pull them together, and how we can kind of get them to jam, the way that we've been jamming with our, you know, arts and community people.

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Mathilda 45:43

And I think, you know, this is also a chance for them, you know, two researchers that we work with, who always stuck in the lead, I actually invited them for a tire can clean competition where they had to represent the, the university and in when they were out on the water, looking at what washed out, they had a brand new perspective about marine plastics, about how prevalent it is about why the work is important. You know, and I think our role is also in bringing that

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Mathilda 46:11

that kind of behavior change, you know, about, you know, from from the people who, I would say, it can be a bit Gee, like, you can get jaded working on this stuff, because, you know, in between trying to get a grant to fund your research, you know, in all of that stuff, explaining to



between trying to get a grant to fund your research, you know, in all of that stuff, explaining to, to, you know, influencers who get science wrong, people are trying to sensationalize things, just so that they can drive investment into certain areas, you know, it can really be very heavy emotionally on the science community. And this is, again, where what we're trying to do is just sort of light that sparking and figure out how, if we're struggling to do it alone, maybe this partnership and ecosystem approach is what's needed. Here, that leads me to a question for you. And that is, you know, you've talked about a lot of this projects you've done. Do you have one that's your favorite, maybe he was very successful. One that I've someone can emulate somewhere else in the world. That's fantastic, Eric, you know, basically, our there's lots of projects, there's the, the plastic, the hydrogen bead is a little bit slow. But we're so lucky that

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Mathilda 47:27

our government in Singapore chose us to speak at COP 27, not unveiled end God or on Water Day, but on energy day, you know, and you had a lot of people just kind of, like, oh, no, we should go to slam all of us. And I was like, No, I'm here to talk about how plastic can be turned into hydrogen gates, you know. And so this is, that was a great success. You know, we're really thankful for that kind of government support from different divisions, you know, from Prime Minister's office, from Ministry of Sustainability and Environment, from National Parks from any aid, National Environment Agency, that just kind of like, you know, like, puts a bit of seal in our winds and helps us to, you know, have a little bit more authority when we speak to the international agencies and governments. But, you know, a project that I think I should mention, and I think I've talked about our seaweed stuff, I love working with our farmers. But a project that I should mention that can be replicated is our beach office. So you know, I, I hated working in an office building.

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Mathilda 48:33

With Afghan and having to wear like, a heel shoe and all of that, I hit it, I just, it drives me up the wall. Yeah, the cubicle is like, you know, I'm like, Neo in the Matrix, like, you know, I'm like, just want somebody who just can't stand it either. cannot stand cubicles. And I keep dream I dreamt of the day when I could go to work with no shoes, and work on the beach. And, you know, what I'm so proud of is that, you know, we had many iterations of a beach office. And I think that's something that anybody that's working in oceans, you know,

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Mathilda 49:10

I'm really sorry for all of you who want grants, you know, where they've put you in a in a commercial factory building. And you know, and you've got another free co working space there. But I'm just about to tell you that you can't work for Oceans, if you're not on an ocean, you need to be there you need to be you need to see it, you need it. I mean, get a boat if you can, maybe if somebody can sponsor you a boat, and I'm just putting this out there, Eric, anybody that's this thing, if you've got a boat and you want to send it over to us, and we'll put your sticker on your face on it, but you know, that would really help.

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Mathilda 49:41

You know that beach office is so important. And that's something that I'm so proud that the materials used to build our beach office, every single piece of furniture, it's all recycled materials, you know, the panels outside of our building, you know, they it's made out of s one event structures and

 Mathilda 50:00

I'm what holding it all together is a technology called tubular, it's a Singaporean technology, we have plug and play like Lego. And it's like, kind of like sticks that allow you to plug all the Lego pieces together. Oh, we have recycled solar panels from a wonderful research team, Nanyang Technological University solar research team, that's what powers us. I mean, you know, like, plants, we have plants that have been donated to us from even some of our interns as well, you know, it's, that's, I think, something that can be replicated when you're building your, your beach office, or your ocean conservation office, you know, think about what materials can be salvaged and can be used to build your little, you know, your workspace, you know, figure out how you could work on the oceans, how you could actually, you know, have a space where the community can come see you. Because, you know, like, one of the things that we realized, when, you know, we are, we are popular on social sort of, we're not very popular, but okay, but once we had a beach office, you know, the curiosity from people from children from, you know, elderly that come up to us the questions they ask the learnings that they have, you know, I think that's something that, if you're going to be doing ocean community work, you need to have a community presence. So I would suggest that that's probably a big success that we've got,

 Mathilda 51:31


you know, and working out, we are in a national park. So, you know, having that relationship, it's not always easy, but it's something that both parties really take a lot of effort to work on. And really understanding, you know, how important this kind of, of movement is, for our oceans. You know, I think, you know, those are things that can definitely be replicated, ya know, I can see that it's a great selling point to get more people involved in the kind of work that you're doing is, so many people love the beach, right? Well, hey, come move to the beach, and you'll be part of saving it.

 Mathilda 52:08

We're gonna write that down.

 Eric Benson 52:10

Write that down. That sounds real good. You're welcome. Yeah.

 Eric Benson 52:14

Well, we're coming to up to the end here. And the question that I ask all my guests, as is one that I'm even more excited to ask you, because I feel like you have so many good solutions to

and I'm even more excited to ask you, because I feel like you have so many good solutions to too many different problems that this is going to be a pretty, pretty amazing



Eric Benson 52:36

idea here. And what I'm wondering is, if you were asked to switch places with me, and you're a design educator, what kind of what what kind of project or projects would you assign knowing what you know, and the work that you do?



Eric Benson 52:56

Well, me



Mathilda 52:58

and mine doing?



Eric Benson 53:00

Mind blown? Yeah. And



Eric Benson 53:03

it's a tough one. What's the what's the profile of students that you usually encounter? Oh, yeah. Well, my listeners, right will encounter students from undergraduate to graduate. They are either maybe from the country



Eric Benson 53:23

living in the city. It's kind of a wide variety, right? It's not just one type and ethnicity and experience. It's diverse. So



Eric Benson 53:37

that doesn't really help you does it? But that's,



Eric Benson 53:40

that's who we deal with on a daily basis.



Mathilda 53:44



Mathilda 53:44

Well, I guess if I was Eric Benson



Eric Benson 53:48

is it Prof. Eric Benson? Dr. Eric Benson. I have nobody ever call me Professor. But



Mathilda 53:55

oh, I don't know. You can call me Professor. That's fine. Yeah. So if I was Professor Eric BENSON  
Yeah, I think one of the things that we've realized from let's say students who who are from  
overseas universities, who who come over and, and they do, like, research tourism with us.



Mathilda 54:16

You know, I realized that a lot of



Mathilda 54:21

a lot of students from different universities are looking for projects in sustainability that they  
can get hands on.



Mathilda 54:30

You know, they don't want to approach things from a very theoretical model anymore. Yeah,  
they want to get hands on. They want to understand what they can contribute to a particular  
project with their relevant expertise. So for example, we had someone who's from engineering  
background and another bunch of students from



Mathilda 54:51

agricultural background. And so they looked at our herb garden and they they gave us some  
tips and examples and ideas of in their country.



Mathilda 55:00

mean, you know how they would do allotments, you know, the flow of the allotments how they  
should be built, etc. So that was really interesting for the Singapore team, because we were  
like, Okay, that's cool, that's a nice exchange of information, they got very hands on with us. So  
they were actually, you know, in the mud, building stuff. And I think, you know, that, that also is  
a way of, of, you know, getting people from different countries, different thought processes,  
different departments of learning, to start figuring out how they can jam with each other and  
work on things. It doesn't all have to be, you know, like, okay, come in, and help us, you know,

figure out how we can crack, we'll find a more efficient way of emission capture for our plastic to fuel machine or, or common plant seaweed muscle lines, and, you know, capture data on the water quality. When we do a water quality assessments, I mean, you know, it can also be creative things, you know, creation of

 **Mathilda 56:01**


Tiktok educational videos, that are less than a minute that really, you know, help these very esoteric concepts or, or hard to grasp. Words such as bio remediation, such as, you know, some chemical conversion, understanding these kinds of things. So, this is again, where, like, for us, what we tend to do is, with all students that work with us, we, I do a presentation, and I share what it is that we do. And from there, you know, we create, like a kind of a jam session, where the students themselves, identify what they feel are the problems and the challenges.

 **Mathilda 56:41**

You know, they come on site with us, and then again, they refine what those problems and challenges are, and then we just go off and see, okay, share with us what kind of project you want to do. And then, you know, we can help you along. But you guys own it in like, you know, and take it to the to the, an example for is how we had a group of students from the School of the Arts, you know, and they wanted to work on research. And so they created a fantastic research paper around seaweed, Asian seaweed species, carbon sequestration potential, some of the challenges in place, and the research paper was so good, we were able to take that and turn it into an Asian Geographic article, we're able to present that at the UN ocean conference. And he's, I'm talking about like, 17 year olds, yeah.

 **Mathilda 57:29**

Five or six of them, and three of them. Yeah, three of them actually, are working as interns with us right now. So it's amazing, because I didn't expect that they were going to deliver such an amazing body of work. They were so motivated. And, you know, for us, we were able to really take that and make that go a long way.

 **Eric Benson 57:53**

Wonderful project. That domain, clearly, right, you have a really good framework there for someone else to emulate in in a similar type of scenario. So thank you for that. That was great. It was also great having you on the show today. It was very entertaining, and very informative. I've learned a lot about what you're doing, and I really appreciate it because it needs to be done. Someone has to do it.

 **Mathilda 58:23**

Thank you so much, Eric. You're most welcome to come over to Singapore and to passers and bring on your students with you. Oh, yeah, they'd love that. I would too. That a lot of stuff to do. Yeah, well, before we go. Where can we find you online again, so you can learn more about us

mean, well, before we go, where can we find you online again, so you can learn more about us on our socials that's at Ocean purpose project. You can also find out about us on Instagram, LinkedIn, Facebook, Tik Tok YouTube. What else have we got?



**Mathilda 58:52**

Everything we got an everything in the kitchen sink. You can also find us on our website at Ocean purpose project that's WWW dot ocean purpose. project.com



**Eric Benson 59:03**

This podcast is CO produced by Bianca Sandiko and me a big special thanks to Ellen Keith Shaw and Christine Piolet for their gorgeous work on our new branding Batul Rashik and Marc O'Brien for their continued design now, Brandee Nichols and Michelle Nguyen, for their strategic guidance and always supporting me on this podcast.



**Eric Benson 59:25**

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