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# Carbon Frontiers 2024 | Episode 3
## Enric Arderiu, Global Head of Environmental Products, Mercuria

**On our third installment of Carbon Frontiers 2024, we welcome Enric Arderiu, Global Head of Environmental Products at Mercuria, into the SmarterMarkets™ studio. Host David Greely sits down with Enric to discuss the range of ways in which market participants – in both the voluntary and compliance markets – are learning from past mistakes and adapting to the realities of the present to develop the carbon markets of the future.**

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**Enric Arderiu** (00s):
I think that's a massive opportunity, and it's an area where, you know, by definition, as it takes time, we need to start investing now. You know, as I said, like seven years, 2024. Now, you know, we are going to be by, you know, earliest 2000 thirties. We're going to start generating the first credits from anything that you start doing now. So the time is now, and it's kind of very, very appealing to see this space developing in the next few years.

**Announcer** (22s):
Welcome to SmarterMarkets, a weekly podcast featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions: are we facing a crisis of information or a crisis of trust, and will building Smarter Markets be the antidote?
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**David Greely** (01m 02s):
Welcome back to Carbon Frontiers 2024 on SmarterMarkets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is on Enric Arderiu, Global Head of Environmental Products at Mercuria. We will be discussing the range of ways in which market participants in both the voluntary and compliance markets are learning from past mistakes and adapting to the realities of the present to develop the carbon markets of the future. Hello Enric, welcome to SmarterMarkets.

**Enric Arderiu** (01m 31s):
Thanks Dave for welcoming me. Really appreciate the opportunity to be here today.

**David Greely** (01m 36s):
Well, really glad to have you here, and I think you have a very unique perspective from your desk at Mercuria. You know, you're in the daily flow of transactions in the global carbon markets, and I really appreciate you sharing your perspective on what's happening in the markets with us. I was hoping to start us off for our listeners, can you describe your role and Mercuria's role in the global carbon markets?

**Enric Arderiu** (01m 59s):
Yeah, so I'm managing what's called environmental products. So that's a team that sits in Mercuria that oversees all the different environmental commodities that we are involved with. That's anything really from kind of a carbon perspective. It could be, you know, allowances carbon credits. It could be things associated, for example, with low carbon commodities. So for example, biogas where the, you generate environmental attributes from biogas. It could be anything from the LCFS which is the low carbon programming in California and it does cover a wide range of geographies, really anything kind of from your US markets, whether it's California or Regi, all the way to kind of your more traditional established markets. For example, the UETS, the emissions trading scheme in, in Europe and even emerging markets, for example, China were very active Australia, New Zealand and, and other markets. So yeah, it's a wide range of environmental commodities and a wide range of geographies, and it's very connected with our business. We're investing heavily in the energy transition. So understanding pricing of environmental attributes is essential for us as we're look into investing in this space.

**David Greely** (03m 07s):
And I wanted to ask you, you know, last year there was fairly intense media criticism of certain projects in the voluntary carbon markets and disappointment in the lack of progress on the article six markets at COP 28 and I would like to get your sense of where we are after all that. Broadly speaking, how do you see the current state of the carbon markets and can you put that in context of other historical ups and downs that these markets have experienced?

**Enric Arderiu** (03m 35s):
So I think we are seeing of two very divergent trends right now. So I would say I would generalize it into both compliance markets and voluntary markets. Compliance markets are, I would say, not just developing, but increasing rapidly in terms of coverage of sectors and geographical coverage. So I think, you know, one interesting example also that I see that is kind you know, it started in a way a trend, which is a lot more activity in the global south. For example, Colombia started one of the first programs effectively put a price on carbon. In Colombia, it's very different to, for example, what we have seen in Europe under a puppetry program over there. They use attacks with an offset to add flexibility into the system and what we are seeing is really kind of at the, you know, very different types of programs being developed around the world, but that trend is increasing.

**Enric Arderiu** (04m 26s):
So we are seeing, you know, whether it's South Africa now actually Brazil is looking into developing their own programs. So it's, it's really expanding. So compliance programs are expanding, which ultimately I think is, you know, what, where you want to be a lot of kind of the externality being regulated and covered by different programs and different geographies. I think also what we are starting to see is a lot more connectivity or the likelihood of connectivity across some of these different programs or geographies and for example, you know, we, you know, the, the, as you mentioned, the article six framework in the un, that is something that from a negotiations perspective has been, has told. But you know, what we tend to forget is there's already an existing operational program, which is Article 6.2, which is fully enabled and already allows market participants, investors to invest in projects that can then help meet country targets.

**Enric Arderiu** (05m 21s):
And for example, there are countries like Switzerland or Singapore that are already relying on programs like this to help meet their, their own kind of national targets. So I would say a fragmented landscaping compliance, but a clear trend, a lot more happening, a lot more will be happening as more and more of these programs are set up. Then on the other side, as, as you said on the kind of voluntary space, that's been kind of a, a different trend a lot of that criticism that you mentioned last year. I think what it caused our kind of first step was liquidity drying up because people are trying to understand the underlying commodity. Do we, should we have concerns about this type of project or that type of project that didn't help price formation and when you don't have price formation, then, you know, liquidity can have dries up and everyone to a certain degree has been holding on to see where some of the different initiatives out there settle in terms of establishing what good looks like.

**David Greely** (06m 18s):
So there's been kind of a broad pullback, it sounds like, with liquidity and less trading in the markets. Have you seen any interesting shifts in what's being traded you know, for example, are, is trading shifting between the VCM and compliance markets or between methodologies in the VCM?

**Enric Arderiu** (06m 34s):
Yeah, I would say not necessarily between kind of compliance of Ontario. I mean, let, let's not forget the size of each one is completely different. There's $900 billion worth of trading compliance markets market, and the latest number I've heard is $2 billion, right. So it's completely different scale, and I think that's important to kind of keep in mind. I think what we are definitely seeing on the voluntary space is that there's been a much higher focus on what's the underlying commodities. So, you know, it's we used to think as, you know, one, one credit is, is the same. I think now we're definitely seeing very different pricing across different types of projects. I think I would say generalizing maybe two, two kind of big trends. One is the removals done. So that's effectively sequestering emissions. I think that's something that has a lot of demand.

**Enric Arderiu** (07m 26s):
I think it's partially driven by things, for example, like the SPTI, which has traditionally kind of incentivized removals being used. And then on the avoidance space, I would say, you know, that's where most of that liquidity has disappeared. But I would also see there's emerging trends that I think are quite interesting. For example, a lot of the criticism has been based on red projects. I think something

that is also emerging that is quite interesting is jurisdictional red programs effectively doing avoided deforestation, but at national or subnational scale, so much more of a landscape perspective. And we see a lot more interest in this space. It's just takes time to kind of develop the underlying supply and, and generate the associated credits.

**David Greely** (08m 10s):
And I wanted to ask you that with because there has always the discussion about reductions versus removals and reductions. There seem to be more plentiful opportunities, removals, the technologies still difficult to scale. I was curious, where do you see gaps between the types of offsets and credits that people want to buy and what's actually available?

**Enric Arderiu** (08m 30s):
Yeah, so I would say on, on the removal space, there is also kind of a, a broad range. I would say, you know, again, simplifying it, but there is the tech side of removals, so your director captures and X and so on. And you have large, I would say nature removals. So restoration, reforestation, planted trees, I would say very different pricing, right? And effectively it's driven by the underlying cost of abatement. So you know, you have much higher cost on the tech side because it's still kind of a very kind of early stage. The underlying technologies are just expensive by, by definition at this stage. So we've seen very particular type of pricing for those. I would say a lot of it, it has been driven by tech companies buying these credits and incentivizing a little bit, kind of the R&D associated with developing these projects and getting them to bigger scale, which will help reduce abatement cost.

**Enric Arderiu** (09m 26s):
And then on the other side, we have kind of nature related removals. I would say also there has been a shift maybe traditionally that was a space where any type of restoration or reforestation was incentivized. I would say that's we are moving a lot more to more like native restoration. There is kind of increased interest in this, but the underlying activity is lower cost than your tech removals. So effectively pricing is, is lower. But I would say, you know, what's I found quite interesting is that the demand has not really kind of changed. If anything, it's actually increasing on removals. I think companies are trying to build portfolios where things are mixed. It helps both kind of average kind of your underlying cost of purchase, but also it helps kind of diversify so you're not exposed to, to a single technology risk.

**David Greely** (10m 13s):
And I wanted to ask you some more about that. On the demand side, I was curious what is the state of corporate commitments? It seems that corporate commitments are being criticized from both sides. Corporations are being criticized for using offsets to help meet net zero targets and commitments, but they're also being criticized for making those commitments in the first place and for their decarbonization efforts as part of a wider backlash against ESG and I'm curious, you know, how do you see the corporations navigating that tension?

**Enric Arderiu** (10m 47s):
It's a good question and it's kind of a tough one to answer is, you know, there a has been a lot of corporates that have been active in this for a long time. I think that has built an element of education and resilience in these organizations. They understand this topic very well. I would say that's not the case for a lot of companies out there. And I think when people were thinking two years ago that there's going to be exponential growth in this market, I think part of it was driven by this kind of further understanding education within corporates of what the role credits can have as part of their kind of climate strategies and I think that's, I would say what has to a certain degree slowed down because that, that kind of peer pressure, that kind of wider know-how has definitely slowed down.

**Enric Arderiu** (11m 35s):
I think that's at the same time is I think we are going to kind of get, we're getting closer and closer to I think the realization that you do need flexibility in the system and I think that's something that credits can bring. For example, traditionally, you know, when people have been taking their own targets, whether it's under SBTI or other type of initiatives, I think, you know, there's always a push for internal mitigation, which is hard to do and everyone has to do, but you will need flexibility in the system and I think that's, I think some of what we have lost in this discussion is, is that you really want action now. You don't want to have to wait 10 years for action to happen. And I think it's not helpful that there's been a, a pushback in corporate using some of these instruments because I think they will have to, and in a way it's a question of, of when that realization comes to, but they will need a flexibility in the system because that effectively brings down the cost of basically meeting, whether it's your own internal targets or, or kind of external set objectives of emission reductions.

**David Greely** (12m 37s):
And I wanted to turn a minute to the supply side. I am curious, are you seeing changes in what's coming to market tightening up of some of the standards and methodologies under which offsets are being issued in order to meet what the demand side needs?

**Enric Arderiu** (12m 54s):
Yes. So I think that's one of the key changes that kind of are emerging. I think we tend to forget that standards go through these processes where peer reviews and kind of continuous improvement and it takes time it takes time for these changes to kind of filter through the system. I think we have especially seen it on I would say the criticism around red projects. We have seen Vera already revising some of those standards. They started this before the actual criticism, so they were reviewing their mythologies like they, they're pathologists, like they always do. So it's a process. It takes it takes time. I think we do need to get better at this too, but it's something that has been evolving over a kind of a long period of time we have been at is a list more than 20 years.

**Enric Arderiu** (13m 41s):
So I think we cannot forget that that's a trend that was already happening and I think what's also interesting is that I think in a way driven by the, the urgency that we need to kind of drive more capital into this space is that we have seen new standards covering areas of supply that were not tackled before. As I mentioned before, I think, you know, for example, there's new emerging standards like art that is covering jurisdictional programs. That's an area that was not tackled until two years ago. No one actually, you know, everyone thought about, you know, how do we approach this on the landscape level, but methodologically you couldn't actually generate an instrument, a carbon credit that would basically be related to that activity and we are seeing more and more of this where areas of the market that need specific focus are having either specific standards developed for them or new mythologies arising. I think another interesting example is, for example, biochar. Biochar is an activity that, you know, until a few years ago was not kind of really on the radar, but actually now it has got attention and there's like you know, more than one standard that has developed basically the underlying mythologies, which is basically the basis of everything. That's how you create a carbon credit.

**David Greely** (14m 53s):
And I wanted to ask you if you could explain for our listeners who may not be as familiar, right, you have brought up a couple times jurisdictional red projects, and of course people have heard the criticism of the red projects in the media. What's the distinction between the two and what makes the jurisdictional red projects more attractive?

**Enric Arderiu** (15m 12s):
Yeah, so I would think the key difference is in a way the, the scale that they are approaching. So a project by definition is specific kind of area that tends to cover, you know, if it's it can be, you know, it could be state land, it could be a national park, but it tends to be private land and it's really the underlying kind of calculations on what would have happened in that specific project if you were not protecting it. The jurisdictional is slightly different in the sense that it's looking at much wider landscapes. There's kind of a minimum size depending on, on what standard, but we're talking about much larger areas. It's national or sub-national. So for example, it could be, you know, a state of Brazil, for example, doesn't need to be Brazil, but it's very, very wide areas and it's based on historical deforestation rates.

**Enric Arderiu** (16m 03s):
So I think that gives comfort to a lot of people in terms of understanding how baselines are set in these projects, which I think has been kind of a, a large source of criticism on, on some of the red projects and at the same time I would say it's a very different type of program you know, the, the underlying activities, the underlying needs to get these programs up and running are very different. Your counterparties are very different. You tend to engage a lot more with governments. But also I think the important thing is that they are compatible with red projects in a way, actually by enabling a jurisdictional framework, you actually provide clarity for projects to be able to nest into those programs. So I think over time, as you see a more and more jurisdictional activity, I think it's also going to support and provide comfort on the underlying accounting of projects.

**David Greely** (16m 53s):
And you know, in in this podcast series we're trying to understand the participants that are moving things forward in these markets. And from your comments so far, it sounds like a lot of it's at the country level, you know, whether it's these jurisdictional red programs and more of the compliance schemes that are being implemented. I think you mentioned Switzerland, Singapore, Brazil, among others. I was curious, when you, when you look at what's happening at the country level, what do you take away from that in terms of how these markets are going to evolve going forward?

**Enric Arderiu** (17m 25s):
Yeah, I think the key is every country is developing their own regulations. They are incentivizing specific sectors and I think we are going to see that diversity of programs that is just going to keep developing. I think we are going to see more areas covered, more sectors. I mean, we're even seeing it in Europe where, you know, there there's new sectors that are going to be covered in Europe in the coming years. It can be also more international sectors, for example, shipping now falling under the UTS, but we are also seeing other international initiatives like for example, the Corsea program for airlines. I think what you see the trend is more coverage across, across all sectors and, and geographies and I think the question is going to be how all these different things are going to interact with each other and it will really depend on how countries cooperate with each other.

**Enric Arderiu** (18m 17s):
What we know is that the more cooperation there is on climate, it's going to be more efficient in terms of pricing because you are going to be able to actually identify lower cost of abatement opportunities you know, certain countries are going to be better at doing certain things than others, but also it's going to drive higher ambition. So ultimately that's what you want to incentivize and the question is how and I think, you know, one of the disappointments we had last year in the, in, in Dubai and the last COP in Dubai was that we didn't move forward with one of the flexible mechanisms called Article 6.4 kind mentioned earlier, but as I said, is there is enough tools out there that countries can already use to cooperate and what we are seeing is countries taking a leap on this because they know they want to be early, they want to kind of develop that engagement, they want to establish those connections. It takes time for countries to work with each other in terms of how trading is going to look like between countries, how you are actually going to do these corresponding adjustments on the credits. It's like there's a lot of details that need to be sorted out between countries and we are seeing that trend now of countries engaging with each other to develop basically those different rules because they agree to each other, how they're going to cooper operate in this space.

**David Greely** (19m 32s):
It's a fascinating, the much more kind of bottoms up approach than many people were anticipating a few years back. I was curious, when you look at the types of country level programs that are happening, it seems like some are more cap and trade, you know, the choices similar to the EUETS, some are more carbon tax, some are more subsidizing certain areas or regulating certain others are you seeing any themes in terms of what types of programs countries are moving forward with or does it really just vary based on, you know, local political and economic needs and circumstances?

**Enric Arderiu** (20m 10s):
Yeah, I think it varies. It varies a lot. I think it really depends on each country how easy you know it is to implement specific policies. I think it also depends how good is the data that each country has. I think, you know, for example, one of the things that has been interesting is, is seeing countries that want to establish cap and trade programs, actually before you do that, you need a lot of data and that's something, for example, you know, China for, for years, they have this period where effectively it was about collecting data and kind of reporting and kind of that, that trend is not going to go away. Data is key in order to have the comfort and the visibility around these programs and for regulators to be able to actually establish programs that work but not everyone is at the same stage in terms of data.

**Enric Arderiu** (21m 01s):
There's also, it really depends on each country, you know, how many facilities are we talking about in each country. What are the key sectors in each one of those countries. It does vary a lot and I think that's kind of the, the, at the end of the day, what we are trying to price is the externality of carbon. So I think from a regulatory perspective, it's really about like, you know, what is the most efficient way to do that and I think the trend that we are seeing is that regulators want flexibility in the system because I think it's part of putting these programs forward and making them successful is businesses need visibility on what that's going to look like from a, from a carbon perspective, what are the targets, what are the timelines. What sort of pricing is that going to drive and I think it's not a linear outcome, but I think regulators aim long term to, to achieve kind of an emissions goal.

**Enric Arderiu** (21m 50s):
And then each country will have effectively a different price point to get there because the, the, the sectors are by, by definition different. But I think, you know, what regulators want also is that flexibility in the system and that's, for example, what we're seeing in a lot of the kind of the programs emerging is the flexibility to use offsets within that and offsets come from, they could come internationally from other countries, but they could come from the same country tackling sector emissions or opportunities to

generate sequestration from areas or sectors that are not covered by specific programs and I think that's, you know, interesting because that's where nature in a way fits in. I mean, you know, it's very difficult to cover emissions from, from nature, from deforestation or sequestration. How do you incentivize that. Agriculture is also a sector that is very difficult to cover. So I think bringing incentives to those sectors in order to kind of drive abatement or sequestration, I think is a way to drive capital towards that sort of activity. But also it's a way for regulators to build that flexibility within the system so that you have enough tools to be able to meet your compliance requirements.

**David Greely** (23m 01s):
And all these mechanisms are means to an end and that end is meaningful progress on decarbonization and more sustainable environmental practices and ultimately that will really be about investing money in carbon reduction and carbon removal, whether it's internally within companies or through markets. I was curious, how are you seeing the current flow of carbon finance into projects?

**Enric Arderiu** (23m 28s):
Yeah, I would say it's kind of interesting is back to that division around both the avoidance and removals. I think we see very different capital flowing into it. By definition they are different avoidance. You tend to get quicker paybacks by definition just because of the, the underlying type of activity but for example, on removals, you are talking about the need for a much longer term capital because If you are starting for example, a restoration project today, it depends, you know, what you are doing, which countries and so on but you know, let's say it does take seven years maybe to start seeing kind of the outcome from a, from a carbon generation perspective. So the type of capital that you need is, is very different. I think what we are also seeing is because of that complexity there is more tools needed from a finance perspective because you want to try to bridge that gap between kind of that initial phase and that that kind of 70 years, you also need to think about performance.

**Enric Arderiu** (24m 23s):
This is a new area. Like we have not done restoration at the scale that we will need to do in a net zero world, because I think, you know, we always need to, to think about net zero there are emissions and there are removals. So we will always need those removals in a net zero world and, but it's not a space where you've had this sort of investment at scale. So thinking about that, you know, and bringing different tools different types of finance into this I think, you know, what are the roles, for example, of some of the multilateral institutions that are going to play in this, the insurance sector also, how are they going to step forward and provide kind of new tools. I think it's a very interesting space. A lot of innovation is happening. I see tools every, you know, month that are developing that actually start tackling the gaps that we need to fill in order to kind of drive the sort of investment that, that we need in this space.

**David Greely** (25m 18s):
And I want to come back to that with you, but you mentioned something that I wanted to ask you about, which is in kind of classic commodity markets where you need to invest over a period of five, 10 years now, there is often trading out the forward curve that's used to de-risk those projects. So if your project isn't going to start producing till year three, you know, you would want to hedge that out in year three, four, and five to de-risk the project. When you look at where the trading's actually occurring in carbon markets right now are you seeing much ability to trade out the curve or most is most of it kind of existing credits in very near term?

**Enric Arderiu** (25m 56s):
Yeah, I think, I think it's the latter. It is one of the issues in a way that we need to tackle. I think the way I kind of, I see that we should evolve to is what effectively we are doing in renewables where you have like long dated PPAs that provide the sort of visibility for investors, but also provide that visibility on what is pricing on this on the long term. We don't have that in carbon at all. You know, I think, I mean, some products maybe you get visibility kind of one to years, but really it's very kind of short dated and I think that's an issue in terms of driving that capital because it's very difficult to hedge, it's very difficult to manage your underlying risk and you know, we're seeing trends where, you know, neo players, for example, you know, we are seeing regular announcement from some of the tech companies, for example, providing long dated carbon purchases, but those don't tend to go further than 10 years. So we need more of this, we need more of this because that's going to help price formation and that's effectively then what drives liquidity into this space and more products developing that can be traded.

**David Greely** (27m 00s):
And I wanted to come back to you on some of the other big issues in carbon markets, you know, in particular. I was curious for your perspective, you know, what do you see as some of the big issues that need to be resolved for us to really put these markets to work at scale for meaningful progress on decarbonization?

**Enric Arderiu** (27m 18s):
Yeah, I would say, I mean in terms of kind of issues to fix, I would focus mainly on the voluntary market. I think what we're seeing there is different initiatives out there. You know, we have CVCM thinking about, you know, how the supply side looks like. We have VCMI thinking how the demand side looks like, what sort of claims can you make and how those look like, I think that will, to a certain degree provide visibility to corporates that want to start thinking how do they use these instruments and what sort of instruments can they use, but it will still take time for companies to get educated on what are the different outcomes, what has improved, what has changed, what's different and I think it's a process that will take time and it's important to think about it how, you know, kind of what's the end goal and how to get there because I think we need to be able to provide those instruments sooner rather than later. So it starts becoming part of the strategy. You know, they are not the only way you can meet your targets, but they are a key element to it and I think the sooner we expose climate strategies to using those instruments and kind of driving that demand that then provides price visibility, the more capital we will get invested in this space.

**David Greely** (28m 36s):
And you know, one of the great things about markets and kind of more decentralized approaches are, is the experimentation. You know, different people try different things in different places and you see what works and emulate that. I'm curious, when you look around the world these days, are there areas where you see the best progress being made on some of the issues we have talked about today that you would point to and say, we need to do more of that?

**Enric Arderiu** (29m 01s):
Yeah, I think I mean there's a lot of innovation in this space. You know, it is actually difficult to keep track of everything. I think there's a lot better MRV measurement, reporting verification than we had ever in the past. I think anything that helps provide that visibility, that transparency helps I think, for example, some of the innovations we're seeing around geospatial is absolutely fascinating. It provides you kind of a level of kind of visibility understanding on things and very fast at much lower cost than you've had in the past. So I think kind of developments in this space are fascinating. I think actually AI is also quite interesting. It's helping the space in a way by, by kind of developing or bringing together a lot of the different databases out there that kind of, we are not talking to each other and thinking, how do you kind of create value out of this?

**Enric Arderiu** (29m 51s):
I think also very interesting, which we tend to view from a carbon market perspective as a co-benefit, but I think it's emerging as a market on zone is, for example, biodiversity. I think you have some re regulators out there already that are incentivizing biodiversity and it can take different shape. Sometimes it's kind of through mitigation, banks, others through specific types of credits. But you have, you know, bits and pieces here. Australia is testing, model testing is actually developing a biodiversity market. Columbia, similarly, others are trying different avenues and I think that's the sort of stuff that, you know, it was very difficult to envision how that would look like, you know, just a few years ago. But now you have all these underlying technologies, whether it's EDNA or acoustics that are actually being combined through AI and kind of helping provide the visibility for the underlying kind of instruments that are developing and I think, you know, we're going to start seeing a lot of these benefits in a way. Like, you know, they're going to become tangible. I think we have to move away from this is just a marketing exercise, you know, and we're going to tell you all the things we're doing on things like biodiversity, but other factors and actually provide real data. And I think that data, having a low acquisition cost does help a lot because that's basically what you need in order to get scale and drive that transparency.

**David Greely** (31:09):
And first, I want to thank you very much Enric for being here with us today. I have one more question before you go, and that of course is as someone who's trading markets investing capital, what has you most enthusiastic in terms of the opportunities in the space to put capital to work and make money by doing good?

**Enric Arderiu** (31m 29s):
I think the most interesting thing is the opportunity on the restoration space. I think, again, when I think about that kind of negative emissions side that we will need in net zero, we know that removals are going to be essential and we know that they are going to be essential at a very large scale and I think it's such a kind of small industry in a way now that I think there's a massive opportunity out there to create basically what will be kind of one of the biggest industries in a net zero world and I think we are just at the very, very beginning of this, which makes it challenging in a way because we are seeing if you want to move capital into this space, there's only so many places that are ready to take that capital. There is so many people out there that know effectively how to do this properly and at

scale and provide that visibility from an investment perspective. So I think that's a massive opportunity and it's an area where, you know, by definition, as it takes time, we need to start investing now, you know, as I said, like seven years, 2024, now, you know, we are going to be by, you know, earliest 2000 thirties. We are going to start generating the first credits from anything that you start doing now. So the time is now and it's kind of very, very appealing to see this space developing the next few years.

**David Greely** (32:46):
Thanks again to Enric Arderiu, Global Head of Environmental Products at Mercuria. We hope you enjoyed the episode. We will be back next week with another episode of Carbon Frontiers 2024. We hope you will join us.

**Announcer** (33m 00s):


**Announcer** (33m 34s):
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