



Season 3. Episode 19: Placebo or cure? Assessing the Net Zero reality of carbon credits with Paolo Vaggi

This podcast is sponsored by DevelopmentAid.org, your gateway to international tenders, grants, and the largest job database in the aid sector. Secure free registration and access funding opportunities, calls for partners, exclusive insights, and weekly news digest. Become a member today to achieve your sustainable development goals

Hisham Allam: Hello everyone, and welcome to DevelopmentAid Dialogues. I'm your host, Hisham Allam. Over the past few years, carbon credits have gone from a niche climate idea to a multi-billion-dollar global market. Governments are investing in them; companies are buying them, and banks increasingly see them as part of the path to net zero.

But here is the puzzle at the heart of it all. A factory keeps pumping smoke into the sky, while somewhere far away, a machine quietly pulls carbon back out of the air or a forest sucks it up. Credit is bought and sold, and on paper, the two cancel out. But do they really, or are we just moving the problem around the board?

Carbon credits are one of the most talked about, and most argued about tools in climate finance today. Everyone from oil majors to small farmers is now part of this market. So, what actually stands behind that credit? Where does the money come from and who really benefits? To help us think it through, I'm joined by Paolo Vaggi of BAIA Advisory.

Paolo works at the intersection of climate finance, nature-based solutions and resilience, and has spent a lot of time on the policy and market side of carbon credits.

Paolo, one quick note before we start. Everything you share today is your personal view as BAIA Advisory, not on behalf of FINCAPES, and you come at this from the policy and market side, not as a technical carbon expert. That's exactly the perspective our listeners want. Paolo, welcome to DevelopmentAid Dialogues.

Paolo Vaggi: Thanks, Hisham. Thanks for having me on the podcast today and for clarifying this with the audience. I will share what I can around carbon credits and carbon markets from my perspective as founder of BAIA Advisory, my own consulting firm, rather than as director of FINCAPES, which is the project I'm currently working with.

Hisham Allam: Paolo, let's start from the very ground floor so no one feels lost. In the simplest possible terms, what actually is a carbon credit? If I buy one, am I really canceling out the pollution from, say, my flight, or is it more complicated than that?

Paolo Vaggi: I think the simplest way to think about a carbon credit is the, as a financing mechanism linked to one ton of greenhouse gases, right?



DevelopmentAid Dialogues

So somewhere in the world, there's a project that either is avoiding emitting one ton of CO₂ or is removing one ton of CO₂ from the atmosphere. Then an environmental outcome can be purchased by someone else, and that is a carbon credit. The assumption of does it cancel out the pollution I produce?

Yes, and no. I don't think it's entirely true because even though you purchase a carbon credit, your flight still happened, so pollution has still happened. So, climate change is not better off for it. I think a better way to think about it is that by purchasing a carbon credit you help pay for the equivalent reduction or removal somewhere else.

If it's meaningful, then it will depend a lot on the quality of the carbon credit, and we can talk about it later. But they do play a positive role in the equation overall if they are, generally good products. If not, they're just nice piece of papers, unfortunately.

Hisham Allam: Now that we know what certificate represents, let's talk about where it comes from. How does a carbon credit actually get created? Walk us through the journey from a real world project, a forest machine a cleaner cookstove, to credit that a company can buy.

Paolo Vaggi: All right. Okay, let's start from a project. Let's say a community wants to restore mangroves, or a company wants to be, like a director of capture facility, right? They can do the project, but they cannot then simply claim carbon credits because they did this project. First of all, the project needs to comply with a specific set of scientific rules that are globally defined and that identify how emissions or removals are measured.

Then external independent experts need to validate the project before it starts. Then the project gets registered in an official carbon registry, and it gets monitored over time. And at the end, there is another external verification by an independent auditor that confirms that the reduction that is claimed by the project has actually happened.

At the end of these steps, that's when the carbon credits can get issue, and each one is given a unique serial number. An important part of the serial number, the important role of the serial number is that once the buyer uses the credit to make a claim, then this credit is retired, then is no longer valid.

So, this is to prevent double selling of the same credit. And in the past, I would say that the biggest challenge at the beginning of the whole concept was the integrity and the doubling of the purchasing of some credits, or how do we make sure that this doesn't happen?

Hisham Allam: Absolutely. Paolo, there is a big philosophical point in your writing that I'd love you to explain. You have argued for rethinking the role of carbon credits, seeing them more as a financing tool than a climate strategy in themselves. What do you mean by that, and why does this connection matter so much?



DevelopmentAid Dialogues

Paolo Vaggi: Thanks for reading my thoughts on LinkedIn. I think this is a very important point for me. Reading about and exploring carbon markets and the carbon credits concept, I can see that a lot of perspectives and companies can see them as a climate strategy themselves, but they're not.

They're a tool. They are, they're a mechanism, and this is a very different thing. For example, if a company buys carbon credits but then doesn't do any additional effort to reduce their carbon footprint, then I think, the risk and accusation around greenwashing become more real because there's not a real positive impact on our climate change or climate action.

While if a company is instead investing already into reducing its own emissions, making operations more efficient, investing in renewable energy or redesigning products, and then also uses carbon credits to finance mangrove restoration, peatland protection, or any innovative strategy or technical strategy for removal, then it's a different story.

Then there is a positive impact on the climate, but that's why the carbon credit itself is part of a broader strategy. That's where the impact is. So internal reductions, I think, should become the priority and the core of a strategy, while carbon markets are, again, additional tools that strengthen the whole, the overall strategy. That's more or less in, in short what I think, what I believe.

Hisham Allam: Yeah, this is clear enough. Let's bring that idea down to Earth with the comparison everyone wonders about. On one side, you have high-tech carbon capture and storage. On the other, simply planting trees. From a pure CO₂ standpoint, is one genuinely more effective than the other, or are we comparing apples to oranges?

Paolo Vaggi: They are very different approaches, right? From a pure CO₂ standpoint, ideally, engineered solutions are designed specifically for that. So, if we think again about a direct air capture facility, they are designed to store carbon for extremely long periods, potentially aside from external major events.

They could store carbon in the underground for hundreds or even thousands of years, ideally. And there's a major advantage. But on the other end, we have nature-based solutions that also remove carbon but are much more fragile. They can be subject to forest fire, they can be degraded, land use can change over time, so they are at higher risk that the carbon eventually gets released again in the atmosphere in a shorter period since the capture.

But nature-based solutions don't do only that. They also generate much more benefits beyond simple carbon capturing, and they are obviously much cheaper, as nature already exists. It's not an entirely manufactured solution. So, each approach has strengths and limitations. At a country level, of course a serious climate strategy would involve ideally both and everything in between of course.

Hisham Allam: You've mentioned forest and there is a catch I want to press on here. A machine mostly stores carbon. A forest stores carbon, but also gives you biodiversity, water, soil, and livelihoods. When we chase the cheapest ton of CO₂, do we risk undervaluing those whole ecosystems?



DevelopmentAid Dialogues

Paolo Vaggi: Thank you for asking. I think that the lead to this point was perfect.

I think when we think only about carbon storage and we think about only the economy where is to undervalue what natural assets really bring into the equation. If we think about biodiversity, if we think about reduced erosion, if we think about - soil quality prevention of floods, landslide nature solutions have a much bigger impact than anything else in this field.

And they're also central sometimes to people, cultures, and identity. So, there are multi-side tools that satisfy a lot of different needs. So, carbon is one of the services they provide, and yeah, we cannot just measure that in terms of the tons of CO2 that they capture.

It's understandable from a carbon market perspective because it's very measurable, while biodiversity and social benefits are a little more, are a little more nuanced and difficult to compare. But I think coming from an international development and nature-based solution background we need to maintain those additional benefits into the picture in order to assess a project.

Otherwise, we just go for the cheaper carbon ton cheapest ton of carbon that we can capture. We're missing a much bigger value for the community and the ecosystems that we are interacting with.

Hisham Allam: I got your point. But this next one is the question that first got me curious about this whole topic. If a factory in one country keeps polluting but pays for a capture project on the other side of the world, does that reduce global warming, or does it just let the pollution continue while the problem gets shifted elsewhere?

Paolo Vaggi: I would say this is a pretty big criticism that the whole carbon markets have encountered in their history, in their brief history. From a climate perspective, of course, CO2 doesn't really follow borders. Polluting or removing CO2 from the atmosphere has a global effect and contributes to a global climate system regardless of where it happens.

I would say that the biggest challenge is that the impact of emissions is not just CO2, but is also local pollution, so it has an impact on the quality of life and the health of local communities, and that's a problem that carbon credits cannot tackle at all.

So again, there is a contribution to climate mitigation globally but reducing emission will remain the better strategy if we're thinking locally.

Hisham Allam: Paolo, let's put a price tag on all of this because listeners will want the numbers. For a regular business, not an oil giant, what does this actually cost? Roughly what would it take to offset a year's worth of a mid-sized company's emissions?

Paolo Vaggi: This might be one of the most difficult questions around carbon credits, because putting a price is very difficult because there is a very wide range in terms of the cost of a single carbon credit. You can



DevelopmentAid Dialogues



Episode 19 Season 3



literally find credits trading for under 10 euros a ton, while others, especially those related to high-tech engineer carbon removals facilities, can go for several hundred euros, sometimes in cases over 1,000 euros or dollars each.

But let's say that, and this is a disclaimer I needed to say because it's a very broad range. Let's say that for a medium size.

Hisham Allam: There are no fixed criteria measurements for this?

Paolo Vaggi: It really depends on the quality of the credits. The integrity, the verification systems. But let's say let's work in hypotheticals, and let's say that a medium-sized company emits around 5,000 tons of CO₂ per year.

So, if you're probably looking at a few hundred thousand of euro annually if the company's buying a credible portfolio of high-quality credits. But the biggest cost again is not related to how many credits itself, but to the quality of the credits, and this is an increasingly important aspect of the market.

Having better monitoring, stronger verification processes, and then therefore a greater confidence on the credit and the benefit that it generates for the climate is becoming the real value, the real cost of the credits.

Hisham Allam: And cost is very wildly depending on the method from what I understand. So why is there such a huge price gap between, say, a cheap forestry credit and an expensive engineered capture credit? And does a higher price actually mean a better or more trustworthy credit?

Paolo Vaggi: I see you were expecting my answer before. In terms of what influences the price, of course, there are technology, high-tech projects are just more expensive to build, to operate, to maintain, although they do offer a much longer carbon storage, which increases the overall price of the credits one can purchase. Nature-based solutions, on the other hand, are much cheaper. Because nature exists already and is already doing the work, whether we include it in a project or not. But they come, as we said, with more risk in terms of forest degradation, land use changing, and measuring outcomes is a lot more complex than a tech facility that is designed specifically for this and gives us the exact number as part of its own process.

So, I would say technology permanence, monitoring cost, and market demand, of course, drive the price. In general, more expensive ones will be better and higher quality, and over the years has become more of a trend and has confirmed this because there's more effort onto quality and integrity of the credits, which is a great thing.

But sometimes, buying a very well-designed, very well-monitored nature-based project can be more valuable than getting a high-tech, poorly governed one. So, it's case-by-case.



DevelopmentAid Dialogues

Hisham Allam: To discuss the criticism that follows this industry everywhere it goes. Critics say carbon credits give polluters a comfortable excuse to keep emitting. In your experience, do companies genuinely cut their own emissions after buying credits, or is there a real greenwashing problem here?

Paolo Vaggi: It depends, right? 'Cause again, carbon credits are a tool, and then it depends how you use them.

There's a lot of cases, of course then hit the press where companies either invest in not real projects or projects do not deliver the climate benefit that they claim, and they really damage the trust in the market. But at the same time, it's not an assessment of the entire market.

So, if, again, the company is using carbon credits as an additional tool to their own decarbonizing process, then there is an addition, there is value, and there is a contribution to climate change. If instead it becomes a way to allow yourself to continue polluting, then you're evening it out.

That is not a real benefit for the planet. It's not a real benefit for the global climate. So, it goes down really to how we decide to apply these resources, these tools.

Hisham Allam: How would a buyer know a credit is real, that the carbon was actually removed, and that it wouldn't have happened anyway? Or in other words, what separates credible credit from a worthless one?

Paolo Vaggi: I think there are usually three questions that we can look at to understand the quality of credit.

The first one is whether it is additional. Is the project behind the credit, is it representing an additional value that wasn't there before, or was already an existing value? If it's an existing value and we are just monetizing it, then we are not really creating a climate benefit.

The second point will be how durable the credit is, right? Again, some realities have less lifespan in terms of capture than others, so that's also an indication as we saw. High-tech solutions that store for longer periods could make carbon credit more reliable and more expensive.

And the last point, and I think it's a very important one, and is it unique? So, the genuinity of the carbon credit, the serial number that's very important for the whole credibility system. The credit cannot be sold twice and should, be generated, be emitted, be issued, and then be retired from the market once it's claimed.

And proper registries and retirement of credit mechanisms are what has been improving the most in the market in the last ten or even just five years, which is very encouraging, honestly.

Hisham Allam: So, let's follow the money now because this is a development podcast at heart. Beyond private companies, are the big development players, the World Bank, the African Development Bank, and others actually financing carbon credit projects, or it is still mostly private money or government money?



DevelopmentAid Dialogues

Paolo Vaggi: No definitely the development finance institutions have increasingly become active in carbon markets, and they see it as one of several tools that can help countries finance climate action. The World Bank, in particular, has supported conservation, clean energy, and carbon market readiness for many years through different programs, fundings.

Also, other multilateral regional banks are exploring ways to help countries participate in high-integrity carbon markets. But I would say that most developing countries will still need a mix of public finance, private investment, and international support to be able to meet their climate goals.

So, this fits as a piece of a bigger puzzle. But yeah, there's definitely a spread interest beyond the private sector.

Hisham Allam: And that raises the fairness question at the center of development. Could carbon credits become a real source of income for developing countries in Africa or the Gulf, for instance, that are rich in land and natural carbon? Or does most of the value still end up in wealthier nations' hands?

Paolo Vaggi: Many developing countries, also Indonesia, where I live, for example, have an incredible portfolio of natural assets. We're talking about forests, mangroves, peatlands, coastal ecosystems, and they provide benefits globally and beyond pure carbon capturing.

So, in principle, carbon markets could create additional revenue stream for these countries and support local development. The big challenge is who owns the value of the carbon markets, 'cause as in any market, there are developers, brokers, consultants, investors involved, and at times value may end up outside.

Oftentimes value may end up outside of the country that originated it. I think strengthening governance around it will matter. It matters a lot now, and it will matter more and more, and in particular in terms of clear land rights when we talk about nature-based especially, transparent contracts and fair benefit sharings will really determine if the country producing the credit is getting a benefit from the credit itself or not, I think.

Hisham Allam: Paolo, let's think about the people who live where these projects actually happen. When a carbon project lands in a rural community, what does doing it right look like so that local people genuinely benefit and are not just spectators to a deal made above their heads?

Paolo Vaggi: I think in this case, we would approach this type of project as we approach any other development project.

The first step is always to involve communities as partners, not just as beneficiaries, and from the start. So having consultations where they are aware of what the project entails, what is expected of them, what benefits are coming, what risks can happen, and what's also the aftermath of the project, 'cause they're still gonna live there after when the project ends.



DevelopmentAid Dialogues

And going back also to what we touched upon before, we need to clarify also governance, land rights, and benefit sharing so that the communities are part of the project. And I would add also a system for them to raise concerns if they are unhappy with something, 'cause it is their home.

And last, I would say that this kind of project needs to leave behind at the end a better ecosystem, stronger local institutions, and possibly having generated more opportunities for the community in the area. Because if they are just generating millions of dollars in carbon finance, but there's no ownership and there's no tangible benefit for the communities, then we have missed a lot of the point of the project, I think.

Hisham Allam: Before we wrap, let's turn and face forwards, looking at 2026 and beyond. What is one shift in the carbon credit world that gives you real hope, and one thing you think listeners should watch with a healthy dose of skepticism?

Paolo Vaggi: So, I would say that in terms of hope, I think I have mentioned this already, and I'll link to that. I think the fact that the conversation has been growing exponentially even in the last five years definitely in the last ten years, and the focus is going more and more towards integrity, transparency, and community benefits of the credits process and projects, not only on the amount and the economic value which is great because we're not only working on creating more credits, but on creating better quality credits.

And that's essential to the system and to the sustainability long term of the system. And that's great. And it's a short period if you think about it, and we already see this much development. Skepticism, maybe not, but cautious a little bit about the temptation to see carbon markets as a solution to climate change.

I don't think they are. I think, again, they are part of it. They are a tool, and as we discussed, a company that uses the resource to carbon credits is not necessarily doing good to the whole climate change. Maybe it is not. It largely depends on how they decide to use them.

So yeah, if this is part of the focus but is accompanied by additional actions like reducing emissions across economy, then carbon credits can definitely help support this transition, innovate, support innovation, but they cannot replace the decarbonization processes.

Hisham Allam: Paolo, thank you. I think the big takeaway I'm walking away with is that carbon credit is not a magic eraser. It's a financing tool. Unlike any tool, it is only as good as the integrity and the intentions behind it. To everyone listening, the next time you see a company proudly announce it is carbon neutral, you now have the question to ask: Where does that credit come from? Who benefited? And did anyone actually stop polluting?

Huge thanks to Paolo Vaggi for sharing his thinking so openly, including where the open questions still lie. This has been DevelopmentAid Dialogues. I'm Hisham Allam. Keep asking the harder questions, and we will see you next time. Goodbye!