



A good balance?

Voluntary climate action

CFCs in Honduras Tradewater and the non-CO₂ gases

Don't write it off Interview with Donna Lee



4

CFCs in Honduras
Tradewater and the non-CO₂ gases



6

Better: Climate responsibility
Offsetting greenhouse gas emissions

A necessary reform
The market in crisis

8



EDITORIAL

3 **Carbon washing?**
By Christof Timpe, CEO, Oeko-Institut

IN FOCUS

4 **The Honduran tanks**
Finding and destroying non-CO₂ gases

6 **First the strategy, then the certificate**
Voluntary climate action

8 **Carbon offsetting in crisis**
The quality of carbon credits

12 **Profiles**
Dr Lambert Schneider (Oeko-Institut),
Mandy Rambharos (EDF),
Kristin Qui (Climate Analytics Caribbean)

13 **"I see signs of improvement in the voluntary carbon market"**
Interview with Donna Lee (Calyx Global)

Carbon washing?



Christof Timpe
CEO, Oeko-Institut
c.timpe@oeko.de

Climate-neutral hand washing – have you ever tried it? For a while, this was apparently possible, according to a major drugstore chain, which used a “climate-neutral” label to advertise its products. But how much truth was there behind this claim? Is it really feasible to compensate – sustainably and permanently – for all the emissions produced during the manufacturing, transportation and use of the soap? And does it make sense to advertise goods in this way? Once the EU’s new Green Claims Directive enters into force, this kind of generalised advertising of products as “climate-neutral” will no longer be permitted.

In fact, the most important step that our society can take towards climate neutrality is to reduce greenhouse gas emissions as much as possible. This can be achieved by expanding renewable energies and making efficient use of energy and resources. We all have a responsibility here: policy-makers must define clear goals and, if necessary, regulate the markets or promote innovation. The private sector’s task is to develop new ideas and invest in sustainable products and business models. And civil society should be pioneering responsible lifestyles and consumption patterns.

Only then, as the next step, should we be talking about how to deal with emissions that cannot currently be avoided. We need to look carefully at voluntary climate action that is based around the purchase of carbon credits and aims to offset emissions via mitigation projects. The fact is that quality in this voluntary carbon market often leaves a lot to be desired, as we reveal in the following pages. We also profile some of the people who are working to improve quality in this context and thus aim to advance climate change mitigation effectively via a market for emission reductions – including the Oeko-Institut, incidentally. A better option than offsetting residual emissions is the principle of climate responsibility, which we also cover in this issue. Here, a responsible price is paid for remaining emissions.

As for climate-neutral hand washing: that’s a little less straightforward these days. Ruling against the drugstore chain last summer, Karlsruhe Regional Court held that expectations were being raised that the products concerned did not fulfil.

Yours,
Christof Timpe



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Phone: +49 (0) 30/4050 850,

redaktion@oeko.de, www.oeko.de

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The Honduran tanks

Finding and destroying non-CO₂ gases

Refrigerators for climate action? At first sight, this doesn't seem a likely proposition. But carbon dioxide is not the only substance driving climate change. In fact, ozone-depleting substances and fluorinated gases even have a far greater global warming potential per unit substance – in the case of F-gases, it is 100 to 24,000 greater than that of CO₂. “We'll miss the Paris Agreement targets if we lose sight of these substances,” Tradewater CEO Tim Brown explains. “The Montreal Protocol has succeeded in banning the production of ozone-depleting substances. Their use, however, continues.” Tradewater tracks down the halogenated hydrocarbons such as CFCs which are contained in cooling and air-conditioning systems and destroys them. This is financed via the voluntary carbon market and its carbon credits. “We're also tackling methane. This con-

tinues to escape from abandoned coal mines or orphaned gas wells.” To date, Tradewater has developed more than 70 projects around the globe which have prevented emissions amounting to 7.5 million tonnes of carbon dioxide equivalent.

Honduras provides a good example of this work. Here, Brown and his team identified a stockpile of dichlorodifluoromethane, commonly known as Freon, a potent greenhouse gas. Weighing in at 6,410 kilograms, its warming potential corresponded to 61,350 tonnes of CO₂-equivalent. “The owner, a former importer of CFCs, no longer had any use for it. So we bought the entire stockpile off him,” the CEO says. “This is something I like particularly about our projects: they combine climate benefit with economic benefit, often for individuals





and small enterprises.” Locating the sources and stocks of non-CO₂ gases poses major challenges. “We’ve set up a comprehensive network for this purpose, and also cooperate with governmental agencies.” The Tradewater team repeatedly discovers leaking tanks and Honduras was no exception. “Happily, in this case only a few were leaking. But it does underscore the urgency of dealing with these substances as quickly as possible – for once they’ve entered the atmosphere, we can no longer recapture them.” Sometimes, the logistics involved

in getting the substances to places where they can be destroyed safely are immensely challenging. “Such facilities need to meet high standards – unfortunately, there isn’t a single one of this kind in Honduras. Moreover, the Basel Convention imposes strict requirements upon the transport of hazardous wastes. In the end, however, we succeeded in shipping the gas cylinders to France and destroying their contents there.”

Anyone looking to purchase a carbon credit generated by the Honduran project will be disappointed, for demand is brisk and the last credit was sold in January 2024. “We ensure high carbon offset quality, as our projects are always additional, their impact is permanent, and their contribution to climate change mitigation is very accurately measurable,” Tim Brown says. Anyone wishing to use refrigerators for climate action knows where to go. Tradewater continues its work around the world to track down and destroy greenhouse gases.

Christiane Weihe

tbrown@tradewater.us
www.tradewater.us



First the strategy, then the certificate

Voluntary climate action

Whether we're printing postcards, booking our next holiday flight or mailing a birthday gift – these days, we can buy countless products and services that claim to be climate-neutral. The underlying mechanism enables greenhouse gas emitters to offset their emissions by purchasing mitigation certificates in climate projects based around activities such as fo-

rest replanting, expansion of renewable energies or utilisation of landfill gas. But can this genuinely cancel out the harmful climate impacts of corporate and individual action? Not really, say experts from the Oeko-Institut. In their view, what is needed instead is an approach based on climate responsibility, with appropriate pricing of greenhouse gas emissions.

The market for carbon credits – or carbon offsetting – has surged in recent years. According to a market survey by the German Environment Agency (UBA), the volume of allowances sold and retired in Germany almost doubled from 22.1 million tonnes of carbon dioxide equivalent (CO₂e) in 2017 to 43.6 million tonnes CO₂e in 2020. Indeed, from 2016 to 2020, it increased more than sixfold and a further rise is expected.

But is it a sensible approach? "Using carbon credits may make sense, but only if every effort has already been made to reduce emissions as far as possible. Any emissions that can be avoided must truly be avoided," says Martin Cames, a Senior Researcher and climate expert at the Oeko-Institut. "In practical terms, this means that we must develop strategies showing how we can act in a climate-compatible manner – both as individuals and in corporate and other institutional settings. Private citizens have more influence here than they might think – when choosing an elec-

tricity supplier or mode of transport for their next holiday, or when voting for a party that is committed to mitigating climate change. We should always ask ourselves what we can do to protect the climate." As he sees it, companies need a long-term overarching strategy. "They need a transparent, publicly accessible roadmap showing how they intend to reduce their emissions to zero, with monitoring to track whether they are reaching their goals. It's not an easy journey – it takes time, as well as financial and human resources." But as Martin Cames points out, there is only limited potential to absorb CO₂ from the atmosphere. "This must be used for those emissions that simply cannot be avoided – from agriculture, for example." And he also recognises the possibility of rebound effects: "If someone can ease their conscience by buying carbon credits, they may decide to take more frequent flights in future."

The adoption of the Paris Agreement also poses further challenges for the

concept of voluntary offsetting – because every country now has climate targets to reach. As a result, reductions achieved through carbon credits are claimed not only by the end buyers but also by the countries where the projects are implemented. "This issue can be addressed under Article 6 of the Agreement, but implementation is still a work in progress. This kind of double counting puts a question mark over climate neutrality or offsetting of emissions," Martin Cames explains. "That's another reason why we should be rethinking the offsetting model." On top of that, there are numerous problems with the quality of the traded certificates – as the article "Carbon offsetting in crisis" on p. 8 reveals.

GREEN CLAIMS

The voluntary use of carbon credits is currently an unregulated area both in Germany and at EU level. However, the

**Between 2016 and 2020, the volume
of allowances sold and retired
(i.e. permanently cancelled)
in Germany increased sixfold.**



EU's new Green Claims Directive shall at least set standards for environmental claims relating to goods and services. "This could mean that in future, certain phrases, such as advertising claims about climate neutrality, will no longer be permitted or are restricted," says Martin Cames.

As part of its "Study on existing initiatives to inform potential climate-related delegated act(s) under the Green Claims Directive" on behalf of the European Commission, the Oeko-Institut is currently investigating how greenwashing around offsetting can be avoided, what can be done to ensure that consumers are not misled, and which options exist to regulate the market. "In the study, we are looking at what are known as delegated acts, which the European Commission can use to supplement elements of legislation. There is scope here for more specific climate-related provisions," explains Lambert Schneider, Research Coordinator for International Climate Policy at the Oeko-Institut. "For example, the Commission could stipulate which information must be provided and which conditions must be met when making certain environmental claims." Based on an analysis of existing initiatives in the voluntary carbon market, the project team is developing specific recommendations for these delegated acts.

In addition, as part of the EU Horizon project "Achieving High-Integrity Vol-

untary Climate Action (ACHIEVE)", the Oeko-Institut and numerous project partners are currently looking at frameworks to support voluntary contributions to climate change mitigation. The use of carbon credits is a key focus of attention here. "We are analysing not only the integrity of carbon credits but also how they are used. The aim is to produce specific recommendations showing what can be done to reform the voluntary carbon market," Lambert Schneider explains.

CLIMATE RESPONSIBILITY

From the Oeko-Institut's perspective, effective climate action involves much more than offsetting. One mechanism which may have positive impacts here is the principle of climate responsibility: instead of compensating for remaining emissions through purchases of mitigation certificates, as with offsetting, these emissions are multiplied by a carbon price necessary to achieve the objectives set in the Paris Agreement. "The resulting climate budget can be used to fund innovative climate action based around e-fuels, for example," says Martin Cames. But what exactly is an appropriate price? "The spectrum ranges from the price of emission allowances in the emissions trading system, currently 50-60 euros per tonne of CO₂, to the costs of the damage caused

by greenhouse gas emissions, which the German Environment Agency (UBA) estimates at more than 200 euros per tonne of CO₂. We would like to see companies competing with each other over the best approaches here. Through the pricing mechanism, they would thus demonstrate to what extent they are genuinely willing to take responsibility." The Oeko-Institut itself is keen to take responsibility as well. "We have already embarked on the task of embedding the principle of climate responsibility. We can see that this is not an easy road to travel, but it is one which we will – and must – pursue."

Christiane Weihe



*National and international climate policy is central to economist Dr Martin Cames' work. His areas of expertise include flexible mechanisms in international climate action such as emissions trading; greenhouse gas trends and projections; and instruments for reducing emissions in international maritime transport and aviation.
m.cames@oeko.de*



Carbon offsetting in crisis

The quality of carbon credits

It normally takes just one click – just before I complete my purchase. But does ticking the “offset emissions” box really benefit the climate? The short answer, in many cases, is “sadly not” – because many carbon credit schemes are not backed by actual emission reductions. The carbon credit market is in crisis: increasing numbers of studies show that many

mitigation projects would have been realised even without the offset schemes or that the emission reductions are vastly overestimated. The Oeko-Institut is not only researching the quality of carbon credits: with the Carbon Credit Quality Initiative (CCQI), it has also launched a project that identifies quality risks and thus aims to contribute to a market reform.



Mitigation projects operating in the voluntary carbon market are required to register with offset programmes which, in turn, define the standards applicable to aspects such as project approval and how emission reductions are calculated. "Unfortunately, these standards are often quite inadequate," says Lambert Schneider, Research Coordinator for International Climate Policy at the Oeko-Institut.

For example, a key quality criterion is additionality – in other words, whether a mitigation project was initiated solely as a result of the carbon credits or whether it would have been implemented even in their absence. "A robust appraisal of the emissions reductions actually being achieved is also extremely important," says Lambert Schneider. "The same applies to permanence of

the reductions. If a forest is replanted but is later destroyed by fire, the stored carbon is released, so there is no climate benefit." Various other factors are also important in ensuring high quality. They include avoidance of double claiming of reductions, compliance with environmental and social standards, and the degree of care invested in independent project assessment.

To genuinely ensure quality, a mitigation project must perform well across the board. "Often, the carbon credits are poor-quality because only one of the factors is in place. For example, if there is robust quantification of emission reductions but the project does not offer any additionality, there is no benefit," Lambert Schneider explains. "However, if the project offers additionality, but the reduction effort is greatly

overestimated – and this often happens on a vast scale with projects to avoid deforestation, for example – then quality goes by the board."

THE CARBON CREDIT QUALITY INITIATIVE

With the Carbon Credit Quality Initiative (CCQI), the Oeko-Institut, Environmental Defense Fund (EDF) and WWF-US have launched a project which is designed to help improve the quality of carbon credits. "We want to provide transparent information about their quality, so we have developed clear criteria and an assessment methodology," says Felix Fallasch, one of the project managers. In a second step, the project team applied this methodology to a

total of 11 different project types, including landfill gas utilisation, wind power and efficient cookstoves. The focus is on the five largest carbon crediting programmes: the American Carbon Registry (ACR), the Clean Development Mechanism (CDM), the Climate Action Reserve (CAR), the Gold Standard, and the Verified Carbon Standard operated by Verra. Also within the CCQI framework, the experts have developed an online tool which enables users to assess the quality risks for various types of carbon credit. A set of factsheets summarises this information in clear and accessible language.

As well as the CCQI, there are numerous other initiatives that focus on the quality of carbon credits. For example, the Integrity Council for the Voluntary Carbon Market (ICVCM) is currently developing a global meta-standard for the quality of carbon credits. "There are also several companies that assess individual mitigation projects, such as Calyx Global and Sylvera," says Lambert Schneider (see interview with Donna Lee on p. 13).

EFFICIENT COOKSTOVES

The CCQI's assessments bring to light many of the problems and challenges that have led to the crisis of confidence in the voluntary carbon market. Efficient cookstove projects are an example. These projects now account for a substantial share – 15 per cent – of the project pipeline in the voluntary carbon market and can improve quality of life for people in the Global South. The CCQI analysis shows that efficient cookstoves can contribute to several Sustainable Development Goals (SDGs). With more efficient combustion, indoor air pollution is reduced and less time is spent collecting fuelwood, particularly benefiting women and children. "These cookstoves also increase energy efficiency and reduce fuel costs while easing the pressure on forests, enabling them to function more effectively as carbon sinks," Nora Wissner, a researcher at the Oeko-Institut, explains. Another plus point is that emission reductions from cookstove projects in rural areas are likely to be additional. However, these emission reductions are overestimated substantially. "Multiple

problems arise simultaneously here," says Felix Fallasch. "For example, the fraction of collected fuelwood that counts as non-renewable biomass – in other words, the amount that exceeds annual growth rates – is systematically overestimated. And studies have also shown that the new stoves are used less frequently than assumed because the old cookstove continues to be used alongside the new one." What's more, the permanence of reductions is not necessarily guaranteed. "Reduced use of fuelwood

supports more carbon storage in forests. However, these forests may be destroyed anyway – through land conversion for agriculture, for example," Felix Fallasch explains. And if a forest project operates in the same area as a cookstove project, there is a risk that it will claim the same emission reductions. "Systematic checks must be carried out to identify these overlaps." To maximise the benefits of efficient cookstoves, the rules applicable under the carbon crediting programmes must be substantially improved.





lutions?" The voluntary carbon market is in crisis: quality, trust and credibility are at stake. "It needs a fundamental reform to ensure that it remains relevant in future and carbon credits are not used solely for the purpose of greenwashing," says Lambert Schneider. Various developments could come into play here. "There is now very strong public pressure, including from end buyers, so this might get things moving. Many people are now willing to pay higher prices for higher-quality carbon credits." Initiatives such as the CCQI and ICVCM and the new ratings platforms like Calyx Global are creating more transparency in relation to the quality of carbon credits and increasing the pressure on the programmes to improve their regulations. Many countries are also introducing legislation to curb greenwashing in the voluntary carbon market (for more details, see "First the strategy, then the certificate" on p. 6). The numerous lawsuits relating to misleading advertising that have been lodged against companies which adorn their products with "climate-neutral" labels send a further important message. "And the Oeko-Institut will also continue working on creating transparency in relation to existing shortcomings and identifying options for market reform," says Lambert Schneider.

Christiane Weihe

NO FINANCIAL INCENTIVES?

A fundamental problem, as Lambert Schneider sees it, is that none of the market players has a financial incentive to improve quality – apart from possible reputational damage. "End buyers want to acquire credits at the most favourable price, project developers want to accumulate as many credits as possible as a way of generating revenue to fund their

projects, the independent certification service providers don't want to lose their customer base, and the carbon crediting programmes want to avoid yielding any market share to their competitors."

So how can the existing problems be resolved? "Right now, the market trajectory is highly uncertain. Will it lose significance or will it continue to grow? Are the problems being talked down or will efforts be made to find sustainable so-



*Dr Lambert Schneider was a researcher at the Oeko-Institut from 2000 to 2009. After holding various posts at the United Nations and the Stockholm Environment Institute, he rejoined the Oeko-Institut as its Research Coordinator for International Climate Policy in the Energy & Climate Division in 2019. Here, his areas of work include the UN climate negotiations, international carbon market mechanisms, and quantification of greenhouse gas emissions.
l.schneider@oeko.de*



Dr. Lambert Schneider
Research Coordinator
at the Oeko-Institut

Dr Lambert Schneider first came across the Oeko-Institut in a Hamburg bookstore in the late 1980s, when he picked up a copy of the “Energy Turnaround” study when he was just 18. “I applied for an internship at the Institute while I was still a student – unsuccessfully at first, but then it worked out.”

“The Oeko-Institut has repeatedly drawn attention to shortcomings in the trading of emission allowances and advocated for more robust rules. This has had a direct impact on the regulation of the market.”

Dr Lambert Schneider was initially employed at the Oeko-Institut until 2009. “Then I moved on; I wanted to broaden my horizons. I led a team at the UNFCCC secretariat, among other things.” He rejoined the Oeko-Institut in 2019 as the Research Coordinator for International Climate Policy. He is also a long-standing member of the EU delegation at the international climate negotiations and is involved in various international bodies working on integrity in international carbon markets. “This topic is particularly close to my heart; that’s why I worked with WWF and Environmental Defense Fund on setting up the Carbon Credit Quality Initiative.” *cw*

l.schneider@oeko.de



Mandy Rambharos
EDF Vice President

Climate action will require thousands of billions of dollars, says Mandy Rambharos. And what’s more, these funds are unobtainable without carbon markets. “These markets are the vehicle by which we can integrate the private sector in essential processes of transition and through which companies can make a credible financial contribution to climate action,” Mandy Rambharos explains. The funds are needed urgently for investment in renewables and development of infrastructure in the Global South.

“Climate action needs to be not only environmentally and economically worthwhile, but also socially just – particularly with a view to the communities in the countries in which action is taken.”

Responsible for global climate cooperation at Environmental Defense Fund (EDF), Mandy Rambharos is working hard to safeguard high quality in voluntary carbon markets, including social aspects. “To that end, we have developed a framework which, for instance, charts how local stakeholders can be empowered to participate in climate action. Part of a successful approach is to consult with local communities before a project begins. But it also has to do with tangible involvement, which may, in turn, require retraining and upskilling activities.” The reason is that thousands of billions of dollars must not only be disbursed, but deployed effectively. *cw*

mrambharos@edf.org



Kristin Qui
Climate Diplomacy Advisor
with Climate Analytics Caribbean

A significant increase in the number of extremely hot days. Far more frequent floods. Coastal erosion. Coral bleaching and die-off. For Trinidad and Tobago, the impacts of climate change are severe. “At the same time, we are unprepared for it in many respects,” says Kristin Qui, who lives in this Caribbean island state. “For example, our drainage systems collapse when flooding occurs.”

Kristin Qui is involved in the international climate negotiations, where her work focuses mainly on supporting the Alliance of Small Island States. Key topics are the bases for carbon markets, as provided for under Article 6 of the Paris Agreement, and international cooperation.

“There need to be clear rules determining how emissions reductions achieved by a climate project in one country should be credited towards another country’s climate targets.”

Countries of the Global South can benefit from locally implemented climate projects, says expert Kristin Qui, provided that projects go beyond zero-sum offsetting. “It is also important for project developers to understand the social and political reality in these countries – only then can a project make an effective contribution to sustainable development.” *cw*

kristin.qui@climateanalytics.org



“I see signs of improvement in the voluntary carbon market”

A quality crisis, a credibility crisis, a crisis of confidence: a glance at the voluntary carbon market does not always give cause for optimism. But should it be written off altogether? Not at all! After all, good-quality carbon credits do exist, of course – along with players who are making efforts to improve overall quality and thus leverage the major potential of the market. One of them is climate expert Donna Lee, who worked for the US Department of State for many years before becoming an independent consultant. In 2021, together with Duncan van Bergen, she set up Calyx Global, a ratings platform that assesses whether climate projects are genuinely able to meet their emissions offsetting claims and thus enables businesses to access high-quality carbon credits.

Donna Lee, what prompted you to set up Calyx Global?

I have been working in the climate field for quite some time and in my experience, it has always been short of money. And then this voluntary carbon market came along and businesses were genuinely willing to invest large sums of money in offsetting their emissions. But unfortunately, the market had a major quality problem. We were inspired by the idea of providing independent, science-based information and channelling the cash to wherever it would have the biggest impact: in other words, into high-quality climate projects.

How many projects have you evaluated so far?

We have evaluated 450+ carbon projects and given greenhouse gas ratings across more than 20 different project types. But we don't just look at climate impact. We have also evaluated more than 200 projects to determine their effects in terms of the Sustainable De-

velopment Goals and we are now also starting to identify projects' social and environmental risks – to health, biodiversity or workers' rights, for example.

What's the situation with regard to quality at present?

There's still a lot of work to do to improve the market overall. We have produced a graph that rates the projects that we have evaluated on a scale from A+ to E; in other words, from very good to very poor. Unfortunately, only 3% of the projects received our A+ rating, which means we did not find any material GHG risks. With most projects, we find risks such as a lack of additionality, non-permanence, over-crediting or double counting.

How do you select the projects that you evaluate?

We started out by considering whether rating the projects that represent the largest portion of the carbon credit market was a rational approach. That would have been quite straightforward because there are some very large projects out there. However, we found that these projects tend to receive lower ratings – in which case, all we can do is signal to customers what not to buy. So now we look for high-quality projects, although that's rather like searching for a needle in a haystack.

How can the quality be improved?

Quality cannot be improved by only one actor. In the voluntary market, it requires multiple actors working in tandem. For example, the Integrity Council for the Voluntary Carbon Market is helping to define clear “quality” criteria and setting a minimum bar. Standards are working to meet that bar. Regulations can also help; for instance, California requires companies to disclose which specific carbon credits they are using to

offset their emissions. In the short term, this may be painful, but transparency is usually good for a market. The investigative media also play an important role; they call companies to account if they make misleading emission reduction claims. And of course, there are initiatives or agencies like ours which provide information about the quality of projects and carbon credits.

Are you already seeing improvements in the market?

I see signs of improvement that fill me with optimism. The voluntary carbon market is a complex and sometimes very peculiar ecosystem. But I see the market maturing – partly because there are new players providing independent information, and also new technologies that make it easier to measure and monitor climate impacts or that can drive a higher level of transparency in the market. I also see businesses taking climate change seriously and therefore investing in climate projects early on to ensure greenhouse gas integrity and high-quality sustainable development impacts.

Thank you for talking to eco@work.
The interviewer was Christiane Weihe.



Talking to eco@work: Donna Lee,
co-founder of Calyx Global
donna.lee@calyxglobal.com