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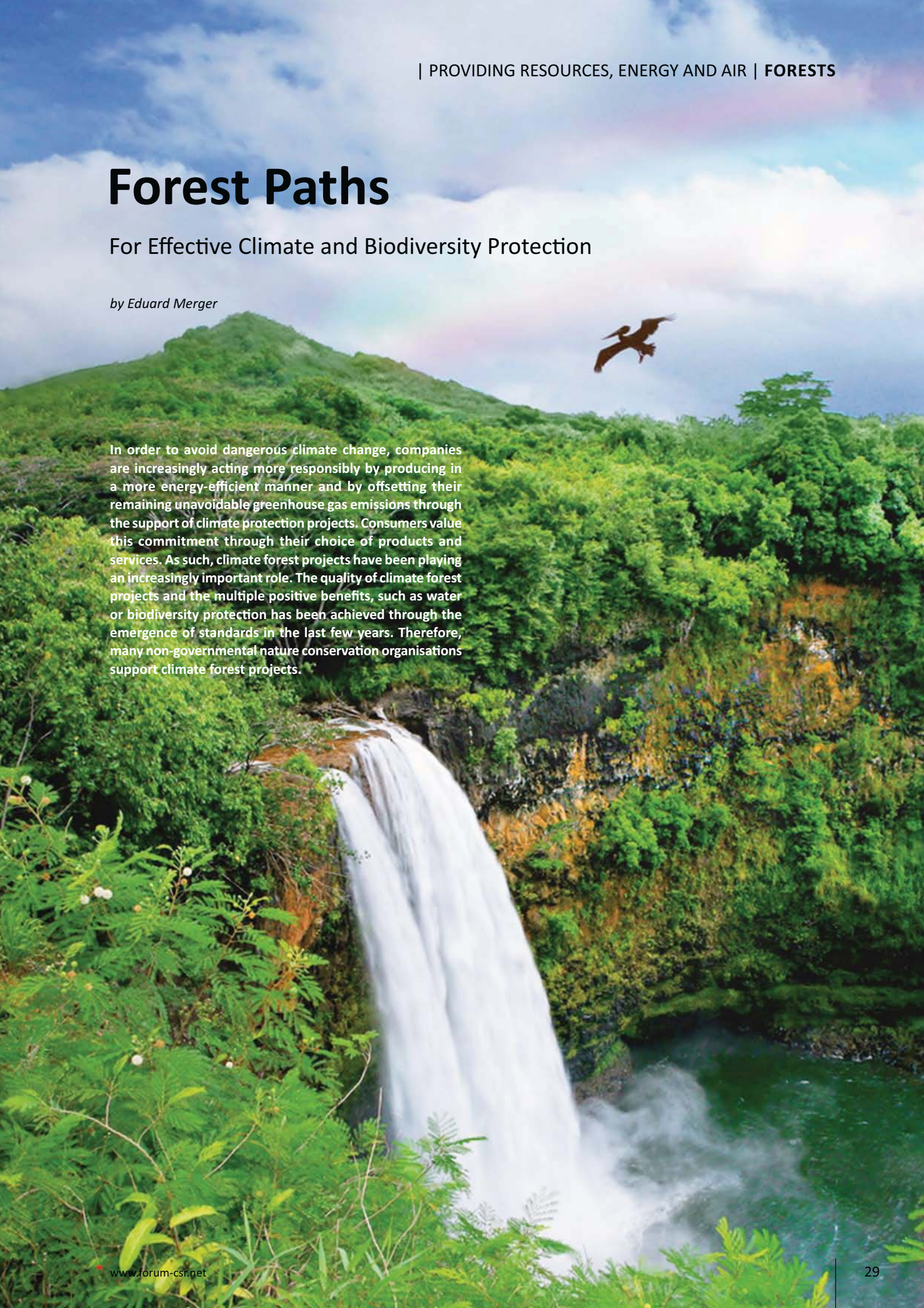
Forest Paths

For Effective Climate and Biodiversity Protection

by Eduard Merger



In order to avoid dangerous climate change, companies are increasingly acting more responsibly by producing in a more energy-efficient manner and by offsetting their remaining unavoidable greenhouse gas emissions through the support of climate protection projects. Consumers value this commitment through their choice of products and services. As such, climate forest projects have been playing an increasingly important role. The quality of climate forest projects and the multiple positive benefits, such as water or biodiversity protection has been achieved through the emergence of standards in the last few years. Therefore, many non-governmental nature conservation organisations support climate forest projects.

Healthy forests are an important reservoir of greenhouse gases. Through deforestation these are released into the atmosphere again.

Forests play a vital role in avoiding dangerous human-induced climate change and protecting biodiversity. Tropical forests alone provide habitat for more than 50 % of the world's plant and animal species. However, annually about 18 % of the global greenhouse gas emissions are caused by the destruction of forests covering an area equivalent to the size of Switzerland. This leads to the impoverishment of rural populations, whose livelihoods are intimately correlated with the existence and quality of forests.

Voluntary Carbon Market

After the adoption of the Kyoto Protocol, the United Nations member states (except the USA) committed themselves to preventing a dangerous concentration of greenhouse gases in the atmosphere. One instrument to achieve this was the legislative obligation of large energy-intensive industries to iteratively reduce their annual emissions. Other, smaller and innovative companies that are not subject to this emission protection act often also take on responsibilities. They engage in climate protection activities by voluntarily reducing their emissions and offsetting their climate impact by purchasing carbon offsets from the voluntary carbon market compensating for their unavoidable emissions. Thereby, forest and soil protection projects provide the only possibility to remove greenhouse gases from the atmosphere and permanently sequester these in forests and soils. Between 2005 and 2010 alone, the trade volume in the voluntary carbon market has grown thirteen-fold – from 10 to 128 million tons CO_2. Climate forest projects are highly valued in this market due to their multiple additional social and ecological benefits.

Quality Assurance Standards

Because of the rapid growth of the voluntary carbon market in recent years, new quality assurance standards and registry systems were initiated. Thereby, an independent third-party certification credibly ensures the integrity of projects. Recently, UNIQUE forestry and land use[1] conducted a study, commissioned by the German Environmental Protection Agency (German Emission Trading Authority (DEHSt), assessing the efficacy of standards and derived recommendations on their application. In addition, further guidelines were developed by the Global Nature Fund and the tropical forest foundation OroVerde (Merger et a., 2011)[2] that provide advice to companies on the evaluation of the quality of climate forest projects and standards.

Independent standards ensure that emission reductions are real, additional, measurable, permanent, and that projects achieve further positive social and ecological benefits. In 2010, more than 90% of all transacted emission reductions

1) www.umweltbundesamt.de/klimaschutz-e/publikationen/climate_change_11_2010_kurzfassung_e.pdf
2) www.mdpi.com/1999-4907/2/2/550/

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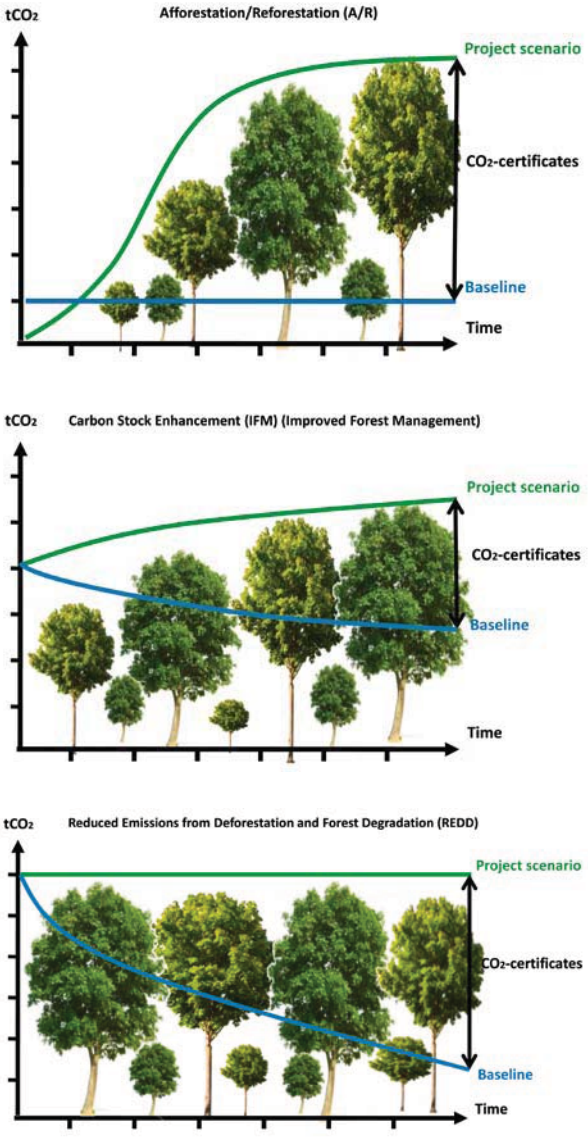
The Project "Forest and Climate Conservation for the Private Sector" is funded by the German Environmental Agency and the German Ministry for the Environment, Nature Conservation and Nuclear Safety.

were certified according to at least one of the widely accepted third party standards. Partly independently from standards' development, registry systems were initiated, with an aim to make emission reductions transactions more transparent. Furthermore, these register systems provide buyers and suppliers of emission reductions an exchange platform.

How carbon offsets from climate forest projects are generated?

In all climate forest projects, it is not the currently existing carbon stocks that are traded, but only the carbon stock changes that result from the financial incentive from selling carbon offsets and the improved forest management or conservation activities. Therefore, prior to the project implementation, the current existing carbon stocks have to be estimated setting a baseline. Subsequently, in the project implementation phase, the additional emission reductions are measured, quantified, and certified, determining the amount of tradable carbon offsets (project scenario). These carbon stock changes can then be traded after a successful certification.



Climate Forest Project Types

Generally, carbon offsets can be generated from three different project types: afforestation / reforestation projects (A/R) that remove carbon dioxide from the atmosphere and permanently sequester it in the biomass and soil; projects that reduce emissions from preventing deforestation or forest degradation, mostly at locations that are heavily threatened deforestation or forest degradation (REDD); and improved forest management projects (IFM) whereby the introduction of improved forest management leads to carbon stock enhancement within the forest ecosystems, e.g. through lengthening of rotation periods (see InfoBox).

According to an annual study by Ecosystem Marketplace on the voluntary forest carbon markets, carbon offsets from REDD projects have transacted the largest volumes and comprised almost 70 % of all transacted forest-based carbon offsets, valued at about US$ 85 million. A/R projects comprised a market share of about 20 % (US$ 20.8 million) and IFM projects 10 % (US$ 12.2million). In 2010, average prices for carbon offsets from A/R projects were valued at about US$ 5.5/tCO_2, with a large price range that can increase up to US$ 27 tCO_2. Carbon offsets from REDD projects averaged at about US$ 4.9/tCO_2, and IFM projects at about US$ 6.9/tCO_2. Factors that determine the prices for carbon offsets can be summarised as follows: nature of project activities (technology applied), regional factor costs, applied standards, scale of carbon offset purchases, additional social and ecologic benefits of the project, marketing efforts and the quality/ reputation of the project developer.

When purchasing carbon offsets it is important to take into consideration that projects should be certified according to one of the widely accepted standards assuring the quality of offsets and that these are administered in an independent register. Moreover, it is important that project documentation be easily accessible so that the public is able to access information about the project when communicating the project benefits.

Author profile

Eduard Merger works for UNIQUE forestry and land use in Freiburg im Breisgau (Germany) as a land use project development expert and market analyst. He develops innovative business models for climate protection projects in the land use sector and assists in their implementation. Prior to his work for UNIQUE he assisted the certification and marketing of several climate forest projects.

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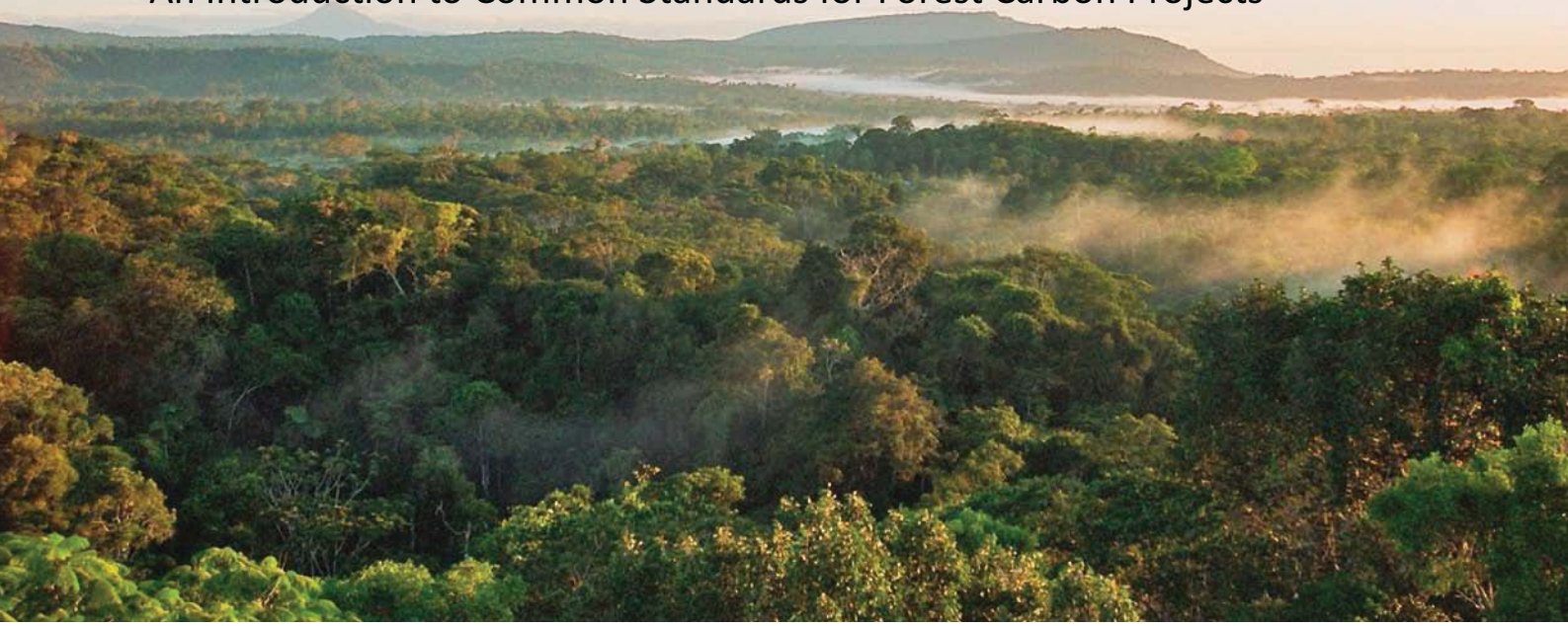
Guidance through the Jungle

An Introduction to Common Standards for Forest Carbon Projects



„Click here if you want to offset the CO_2 emissions of your flight". Lately, this kind of offer has become commonplace for travellers booking their flights. Promoting climate protection projects has become an important tool for businesses wanting to contribute to combat global warming. Often these projects are forest carbon projects. But how exactly do these projects work? And how can one distinguish between "good" and "bad" projects?

At first glance forest carbon projects are easy to understand: Carbon is captured in trees, so planting them or avoiding that they are cut down helps protect the climate. However, this touches only the surface. Forest carbon projects have diverse effects and their carbon storage potential is more difficult to calculate than that of – for example – a solar energy project, for which it is known how much fossil fuel and thus how many emissions are saved. The world's forests, moreover, form the basis of the livelihoods of many people and there is a risk that forest carbon projects may disregard the rights of local communities. Another fear is that under the pretence of climate protection, monoculture plantations are established which may store carbon but can have severe negative impacts on the biological diversity in the region.

In light of this, standards for forest carbon projects aim at minimizing the risks for investors, nature and local populations and ensuring that the potentials of the projects, such as the development new income opportunities, are fully tapped. Moreover, standards make the complexity of projects controllable and help the developer design the project according to proven methods. Project investors certifying projects with a standard are provided with an increased certainty as regards the high quality and integrity of the supported activities.

In the last years a variety of standards with different objectives and focuses has been set up. Besides the methodology of the CDM (Clean Development Mechanism) that was developed by the UNFCCC (United Nations Framework Convention on Climate Change), businesses, universities and non-governmental organizations have introduced standards of their own. Some standards, such as the CDM, the Verified Carbon Standard, VER+ or the CarbonFix Standard, issue tradeable emission certificates. Others such as Social Carbon, the Climate, Community and Biodiversity Standard (CCBS) or the Forest Stewardship Council (FSC) certify only the additional social and ecological value of the projects. The issuance of tradeable permits can be a source of project funding. In addition to this, the co-certification with a social or ecological standard increases the attractiveness of the permits (and thus the price) for the buyer.

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What is Certified by the Standards?

Despite the different approaches adopted by the standards, the challenges that afforestation and forest protection projects face are similar and have to be tackled by all the standards.

A first important aspect with regard to the mitigation potential of a forest carbon project is "additionality". It has to be proven that the undertaking leads to additional emission savings and that it would not have been implemented otherwise, that is without the revenue gained from selling the generated permits. Another means of proving additionality could be through documenting that the project is not a (non-additional) result of legislative measures or that the forest is not regrowing on its own. A second aspect is the permanence of the mitigation measures. This deals with the risk that carbon is not stored forever in the trees and the soil. Natural catastrophes such as fires or pests as well as political unrest or illegal logging can threaten the forests and protection efforts. In the worst case scenario, a carbon reservoir may become a source of emissions. Therefore, standards obligate the project developer to implement risk mitigation strategies. In addition to this, a certain amount of emission permits must be put aside as a risk buffer.

Closely related to the aspect of permanence is the question of displacement of emissions, the so-called leakage: There is a chance that trees that are protected in one area are simply cut down in another. The effect of climate protection would then be zero. The standards analyse different possible causes of leakage and the countermeasures taken by the project developer. Some standards also include these effects in the quantification of the carbon stored in the project to calculate only those emissions that are really saved.

The social and ecological impacts of forest carbon projects are manifold and the review of various criteria is therefore necessary: A fencing of the project area can, for example, take the access to firewood or food away from people living in and near the forests. Resulting conflicts increase the risk of non-permanence of the activities. On the other hand, forest carbon projects can have positive impacts for the local population, for example through the creation of new income opportunities. To evaluate these socio-economic effects and to adjust the design of projects accordingly, an intense co-operation with local actors is essential. Furthermore, forest carbon projects have complex ecological implications on the local and regional biodiversity. Negative impacts can be avoided if certain silvicultural parameters, e.g. on the use of endemic tree species, are determined. Positive ecological

results can be achieved if areas with high biodiversity value are given priority while selecting the project site.

How Do the Standards Differ and where Can I Get More Information?

All these impacts have to be considered in the context of forest carbon projects and the standards differ with regard to the type and extent of their obligatory analyses: Some, such as CCB, Plan Vivo or the CarbonFix Standard demand detailed evidence of the generation of additional socio-economic benefits in the project country as well as an analysis of the local biodiversity. Others only require that negative impacts be avoided and that national legislation not be breached (VER+), or explicitly recommend a co-certification with a second standard (VCS).

Many standards are still in the early stages of their development and the number of verified projects is small. Further improvements resulting from more experience can therefore be expected. The complexity of the projects, however, remains the same and makes it difficult for businesses to choose the forest carbon project that suits their wishes best. The Global Nature Fund (GNF) and OroVerde have, with the support of the German Federal Environment Agency (UBA) and the German Ministry for Environment (BMU), launched the project "Forest- and climate protection for the private sector" that addresses these difficulties. In April 2011 a set of guidelines was published that assist investors in choosing projects and standards. The guidelines are available for free download on the websites of both organizations and can be ordered in print as well.

Profile

Tobias Hartmann is a project manager for the environmental foundation Global Nature Fund (GNF) with offices in Radolfzell and Bonn. The GNF was founded in 1998 and cooperates worldwide with environmental organizations, state actors and businesses to promote a sustainable development.

Max Vöhringer is a project manager for OroVerde – The Tropical Forest Foundation. The foundation is based in Bonn and concentrates on substantial and sustainable activities for the protection of tropical forests. In Germany, OroVerde's work focuses on environmental education and the promotion of exchange of information between environmental organizations, businesses, science and politics.

The guidelines that are developed in the framework of the "Forest and Climate Protection for the Private Sector" project with the support of the German Federal Environment Agency (UBA) and the German Ministry for Environment (BMU) can be obtained here:

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