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What if carbon was much more than just a funding mechanism?

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Summary. What we agree by common consent to call ‘carbon funding’ is seen primarily by many agencies and NGOs as providing the opportunity to leverage new financial resources at a time when development aid is increasingly scarce or difficult to secure. But over and above the financial dimension, the methods applied in the context of ‘carbon’ projects lead project developers to work in new ways, take a long-term view of the work they do, and put in place systems to ensure detailed measurement of project impacts. To what degree can the carbon approach contribute to changing the beliefs and practices of development organisations? In respect of which outcomes, and with which limitations? Bernard Giraud, co-founder of the Livelihoods Carbon Investment Fund, and Rémi Hemerick, Chief Executive of the NGO SOS Sahel, expand on their viewpoints as investor and project developer.

Keywords. Carbon finance, development, climate change, rural communities, food security, innovative financial model, sustainable agriculture, NGOs, corporate responsibility, agroforestry.

From the 1990s onwards, scientists were alerting the international community to the risks posed by climate change, and highlighting the role played by greenhouse gases (GHGs). Although there are many GHGs, carbon has become the ‘unit of account’ used to measure emissions resulting from human activity, as well as the storage capacity of natural and man-made ecosystems. The carbon footprint has therefore become an indicator of the pressure imposed by man on our environment.

But looking beyond this recent and rather negative connotation, we should remember that carbon plays an essential role that is central to the cycle of life: in plants that fix carbon using the miracle of photosynthesis, in the organic material that conditions soil fertility, and in the many interactions between carbon and the water cycle.

And then there are all the interactions that inevitably occur in the context of soil fertility, food security, forest cover, water resources, and many other environmental aspects. Consequently, even though carbon cannot by itself encompass the full complexity of the living world, it could be an interesting

and relevant indicator of ecosystem vitality and evolution. For example, evaluating alternative agricultural models from the viewpoint of carbon flows may be a relevant way of assessing their ‘sustainability’. Furthermore, research and practical experience show that ‘reloading’ natural and semi-natural ecosystems with carbon leads to substantial spin-off benefits for other aspects of natural capital, which in turn generate positive consequential effects that improve the lives of local people.

Why give carbon an economic value?

Until recently, the act of emitting carbon had no particular economic effect on a company, public institution or individual: the collective cost of emissions and their impact on climate change did not form part of the cost of production for business. Conversely, the social cost of emissions (rising sea levels, changes in rainfall, etc.) was met by society as a whole. The European Union’s creation of a market mechanism marked a significant step forward in attributing value to carbon. The

principle is simple and is based on a rarity effect created by a predominantly political decision: to reduce greenhouse gas emissions, the European Union decided to cap the emissions of those industries emitting the highest levels of carbon by allocating quotas, which are effectively 'emission permits'. Companies can achieve their individual emissions reduction targets by introducing reduction policies, implementing innovative technologies or buying 'carbon credits' by way of compensation or 'offset'. These credits are generated by projects which enable emissions to be avoided elsewhere, especially in developing countries, through renewable energy projects or polluting industry emission reduction projects, for example. The price of carbon is dictated by demand (and is therefore linked to state-allocated quotas) and the availability of carbon credits. The resulting carbon value has the effect of making business more responsible, and encouraging companies to reduce their emissions by adopting 'clean' technologies and production methods. It also enables significant levels of private-sector funding to be injected into development projects to supplement multilateral and/or bilateral publicly-funded aid. But until now, carbon investment in the countries of the south (via the Clean Development Mechanism or CDM) has focused essentially on industrial emission reduction projects or energy generation projects. Investment in projects relating to natural ecosystems, deforestation or agriculture has been very marginal, since these projects are more complicated to develop and are slow to generate carbon credits, and therefore slower to deliver a return on investment. But recently, we have seen a significant increase in such initiatives, as a result of the acceleration effect created by carbon funding.

Since the Copenhagen Climate Change Conference, a series of major international conferences have demonstrated the difficulty involved in getting nation states to agree on the progressive widespread introduction of this carbon market, which is currently focused essentially on Europe. But despite the problem posed by the absence of any global governance of environmental issues, new carbon markets have been launched - or are due to be launched soon - in America and Asia. A so-called 'voluntary' market has also developed internationally amongst companies that decide to offset part of their emissions, even though they are no longer affected by the quota obligation. Whether European, North American or based elsewhere, these companies are generally more demanding in terms of the social value of carbon credits, and seek to prioritise those credits that have the highest social and environmental impact. Consequently, they are more highly motivated to invest in development projects. In this regard, it is helpful to remember that publicly-funded development aid has, until now, focused essentially on infrastructure, education and famine relief projects (with the emphasis on remedial rather than preventive aid, especially in the latter case), and too little on renewable natural capital.

Carbon Markets and the Livelihoods Fund

Without the carbon market, there would be no Livelihoods Fund, or at least not in its current form. What makes Livelihoods different is that invests only in projects that deliver high social and environmental impact for the benefit of poor rural communities. This fund brings together companies committed to

environmental protection. Their voluntary investment in Livelihoods enables these companies to fund major projects, such as the 3-year restoration of 10,000 hectares of mangrove habitats by 400 villages in Senegal, and the planting of 6 million fruit trees by 300 villages in India. Primarily, these investments generate value for the rural communities that are involved in, and benefit from, them: for example, restoring the mangrove habitat is about the large-scale re-creation of a food-producing ecosystem through the breeding of fish and crustaceans, protecting crops against seawater inundation and putting in place resources that can be exploited sustainably (including biomass, honey and food production). As they grow, these trees store large quantities of carbon, and therefore contribute to slowing the process of climate change. It is this stored carbon that the Livelihoods Fund converts into carbon credits. In return for their investment, the Fund's partner companies will receive these carbon credits over coming years, and can then use them to offset their own emissions or sell them in the carbon market. One of the special features of the Livelihoods Fund is that these companies (Danone, Schneider Electric, Crédit Agricole, Hermès International, La Poste and CDC Climat) have agreed to pre-fund these projects, which means providing rural communities and development organisations at local level with the financial resources needed at the outset of the project and throughout its life. They therefore accept the risk of investing at the outset, in the knowledge that the carbon credits will be generated over a long period. Selecting high-quality projects and assessing the abilities of project developers to deliver them successfully over the long term are therefore essential aspects of this approach. Unlike traditional subsidies, which are usually granted for a short period (3 years) and justified on the basis of a business report, carbon projects require a long-term partnership under which results are measured and verified: carbon credits are not released on the basis of a report, but require confirmation of trees 'in due form'; trees whose growth is verified by independent auditors! This therefore requires the necessary action to be taken in conjunction with local communities to ensure that their plantations are protected and maintained in the best interests of all stakeholders.

The situation that prevailed before the carbon markets were created was one in which all companies and individuals had an unlimited and free right to emit GHGs. Every human activity, whether conducted by companies, public authorities or each of us as individuals, contributes to greenhouse gas emissions. Following the Cancun and Durban Climate Change Conferences, it is now acknowledged and accepted that global warming cannot be contained within the 2°C limit, given all the consequences that doing so would have for the most vulnerable population groups. With the invention of new production and consumption methods, technological innovation is playing, and will continue to play, a determining role in our ability to reduce our collective environmental footprint. But at the same time, the growth of new industrial power sources and a demographic trend that will see the world's population exceed 9 billion by 2050 will accelerate the rate of emissions. The good news is that natural ecosystems, forests, mangroves, certain agricultural models and oceans do exactly the reverse by storing enormous quantities of carbon. These systems are crucial for the food-producing resources of hundreds of millions of people living in

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rural poverty, but in many areas of our planet they are coming under increasing threat. The challenge is precisely to create a 'bridge' between these two faces of the same reality. The choice is not between 'reduction' and 'offsetting', because we are duty bound to pursue both.

What is required is to focus much more closely on offsetting initiatives within projects that have a twofold impact: on the environment and on poverty.

A new approach for development project managers

The reckless exploitation of available natural resources tends to compromise the sustainability of development initiatives. The success of the poverty reduction and food security strategy relies on finding the right balance between people's short-term needs and the sustainable management of available resources. So the reason why SOS SAHEL is interested in 'carbon' projects is that they offer opportunities for very poor communities living in the areas where we work. Such projects must contribute to meeting their energy and food needs, at the same time as mitigating the negative effects of climate change, especially the reduction of greenhouse gas emissions. In addition to boosting income levels for farming families, our role is also to facilitate change in certain production practices through the widespread development of sustainable, eco-friendly agro-silvo-pastoral systems.

From this point of view, carbon projects oblige development organisations to adopt a systemic approach to modelling that encourages recipient communities and developers to accept responsibility. The result is a focus on initiative effectiveness. In seeking to increase soil and plot biomass, we are also targeting productivity improvements per unit area. The supply of ecosystem services contributes not only to carbon sequestration, but also improves water use efficiency, restores soil fertility and improves crop diversity, etc. In those regions of the Sahel where the desertification process sometimes appears irreversible, carbon projects can provide a real opportunity for change. They create a virtuous cycle in which communities and developers can engage in sustainable change. They aim to achieve a long-term impact and comply with environmental standards. However, they do require acceptance of the framework in which efficiency and results are precisely measured over time. This approach is restrictive, requires expertise and high quality standards, but the bottom line is that it produces impressive results and encourages us to think differently about development.

For example, including carbon processes has resulted in the teams of SOS Sahel acquiring new skills and changing the way in which development initiatives are designed and conducted. In practical terms, you have to be certain that the model or approach developed will deliver the anticipated results before you can deploy the project on a large scale. In order to comply with the requirements surrounding long-term implementation, the teams involved have been trained in risk analysis and new monitoring techniques. For example, a more efficient stove design to save energy must be standardised before it can be introduced on a widespread basis. Its large-scale provision to communities must be done in accordance with this requirement for standardisation, at the same time as monitoring the situation to ensure

that it is actually being used on a continual basis at local level to guarantee delivery of the anticipated results. It is essential to gain a clearer understanding, not only of the industrial aspects of producing more efficient stoves, but also of the economic and social conditions of rural families in order to identify an appropriate technology and a product they can actually afford to buy. Experiments like these have demonstrated that the carbon economy can offer a new dimension for the implementation of large-scale projects.

The conditions required to ensure the success of this type of project

The success of this type of project relies on stakeholder commitment. The first stage is a sustained commitment shared by communities, developers (NGOs) like us and political and financial decision-makers, each of which must benefit from the value involved in creating the project or the value created by the project. Reliable databases are also essential, and in most cases simply do not exist. Investment relies primarily on the quality of the teams involved and their expertise. Human resources must be available, properly trained and well informed. The institutional framework must be constructed in such a way as to enable all those involved to have a clear understanding of the approach adopted and the desired results. Lastly, the monitoring system must be sufficiently efficient and effective to supply project progress data quickly and accurately. In this type of project, everyone must play their part fully and give their long-term commitment.

These new approaches to development show us that it is possible to combine the interests of communities (meeting their long-term basic need for food security, energy security, income, etc.) with good environmental practice and the interests of carbon funding providers to generate carbon credits. This approach brings with it a permanent system of observation and supervision of those parameters used to evaluate the impact of projects on climate change and social behaviour. NGOs are becoming increasingly expert in a broad range of different areas and complex issues. They must adapt, but at the same time they must also retain their expertise and the value they add as local stakeholders working in the field. In achieving this, financial and technological resources are as essential as increased human expertise.

Applied in this way for the benefit of development, carbon funding is certainly not a universal panacea. It does not provide a response to every situation, and it must be implemented on the basis of principles for action that guarantee a balanced distribution of the value created. But it does contribute to changing the vision and practices of development stakeholders by breaking down traditional barriers and creating new alliances between NGOs and companies, and between public-sector development aid, philanthropy and private investment. It demands long-term commitment and its results are subject to very precise measurement. In this sense, it is now a factor for progress. Lastly, unlike a carbon tax, which would simply boost national budgets, carbon investments are targeted directly at clearly-identified practical projects.



Rémi Hémercyck is an agroeconomist, and has been Chief Executive of SOS SAHEL since 2002.

Originally from Picardie Verte in northern France, he grew up on his family's dairy farm in the Pays de Bray area. He learned the practical aspects of farming from a very early age. At the age of 20, he set off to find out how agriculture worked in other parts of the world, from the American Midwest to Heilongjiang in China, and the Grassfields of Northwest Cameroon. For three years, he contributed to the Bafut village community development project in Cameroon as a *Volontaire du Progrès* (Volunteer for Progress). Working with Peul farming families, he surveyed the flora of the prairies and mapped the depletion of natural resources, as well as developing pastoral improvement plans.

At the start of the 1990s, he returned to his home region to train young farmers, but it wasn't long before he was off again, this time to Casamance in Senegal to set up local development projects. In 1995, he conducted a survey of the dairy reblochon economy as part of his studies in agricultural development. He joined SOS SAHEL in 1997, and was its technical director before becoming chief executive.



Bernard Giraud is the co-founder of the Livelihoods Fund, a new type of investment fund that seeks to create value both for investors and the rural communities it invests in. Livelihoods was operated experimentally from 2008 until 2011, when it was officially created by Danone in conjunction with other leading companies, including Schneider-Electric, Hermes International, Credit Agricole, CDC Climat, La Poste and Voyageurs du Monde. The Fund uses the carbon finance mechanism to support large-scale ecosystem restoration, agroforestry and energy access projects that provide long-term revenue and food security for local people and high-quality carbon credits for the partner companies, thereby contributing to reducing their carbon footprints.

Before the creation of Livelihoods, Bernard Giraud was Vice-President Sustainability and Shared Value Creation at Groupe Danone, a leading international food company. In this role, he played an important part in establishing Danone as a pioneer in social innovation and integrating social responsibility and sustainable development into the core strategy and business practices of the company. Bernard Giraud has also served as a board member and CEO of Corporate Social Responsibility Europe (CSR-E), a leading European social responsibility organisation.