Ethical land-based community carbon

Case study Module 2

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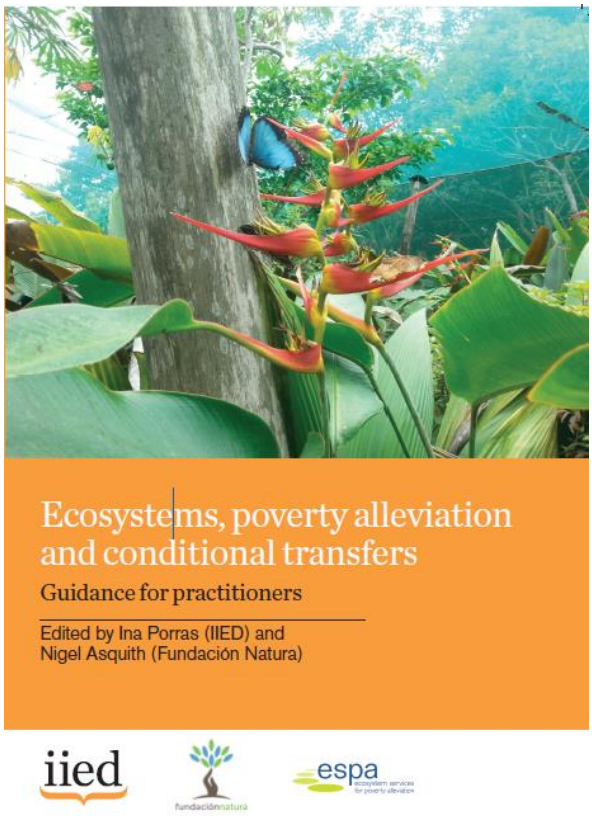


Evidence from the international research community shows that careful management of nature results in benefits to people's wellbeing. Poor people especially depend more heavily on the quality of the ecosystems and have less access to substitutes when they are degraded. Making meaningful impacts in the way ecosystems are managed requires governments to step in and scale up, but the evidence also shows that empowered communities can make strong calls to enact and implement change at the local level. Positive incentives like payments for ecosystem services (PES) and other forms of conditional transfers can provide important signals to enact this behavioural change into positive actions. Carefully designed, these incentives can also contribute to the wellbeing of people, especially poor and vulnerable groups. New tools emerge that can help with scaling up and dealing with inevitable trade-offs, but more efforts are needed to bring this information closer to those making decisions. This case study accompanies a Guidance for Practitioners that helps to bridge this space by: 1) making evidence accessible, bringing the latest evidence from research on PES in theory and practice with documented case studies written for practitioners; and 2) supporting capacity building to 'train the trainers', through teaching modules which can be used to promote capacity building of practitioners.

Smallholder and community carbon projects have shown that they can deliver local benefits and promote climate resilience (Grieg-Gran *et al.*, 2005; Milder *et al.*, 2010). Their emphasis on co-benefits — such as food, energy, carbon sequestration and the protection of water quality and habits for biodiversity — provides an advantage when it comes to selling carbon certificates in voluntary carbon markets, as they appeal to companies' corporate social responsibility (CSR) agendas.

There is real demand for carbon offsets from reforestation, forest conservation and `climate-smart' agriculture (Hamrick and Gallant, 2017a). But to ensure the success of community carbon projects, project developers are needed to ensure delivery of carbon sequestration to offset buyers' carbon footprints and generate benefits for the farmers. Providing credibility along the value chain through clear project design and monitoring and evaluation processes is also key.

Political support

The seriousness of climate change has led to increasing support for the voluntary carbon market, which emerged as a response from citizens and businesses who wanted to act faster than the slow-moving `compliance' market (for example, compulsory carbon trading overseen by governments).

The products, instruments and approaches from these voluntary experiences provide important incubating ideas and systems to ensure effectiveness, consistency and legitimacy of carbon markets generally. It represents an option where organisations or people can reduce their unavoidable carbon emissions by purchasing certified carbon offsets from smallholder and community projects and promoting their CSR agenda.

The policy arena surrounding international carbon deals is uncertain. For some, this represents an opportunity for the voluntary carbon market to gather strength (Hamrick and Gallant, 2017b). The greatest risk, however, arises from plummeting carbon prices, as the existing pool of voluntary offset buyers may not be able to absorb the increased supply of offsets. This would drive prices ever further down, resulting in a devastating impact on socially-oriented carbon projects (Porras *et al*., 2016c). Project developers thus need to consider the opportunities and challenges of the political environment in their project designs.

Sustainable financing

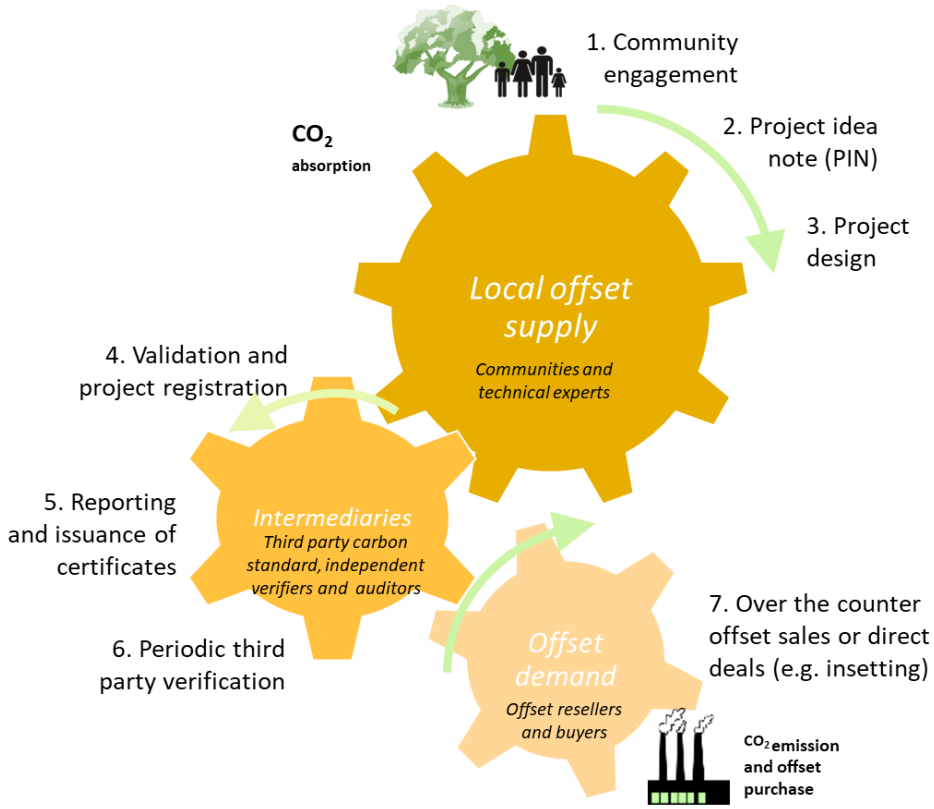
About US$191.3 million was transacted on the voluntary carbon market in 2016. Community-focused projects were able to achieve better prices than other types of projects. However, demand remains variable (Hamrick and Gallant, 2017). A study by IIED-HIVOS found that payments for ecosystem services (PES) can provide a viable financing strategy for smallholder agriculture, but it depends on how well this integrates with smallholder enterprises, as well as the level of payoffs from the carbon markets (Porras *et al.*, 2015)

Institutional set-up

Any growing tree can reduce carbon emissions. But it takes a series of extra steps to make this action into a commodity that can be traded in carbon markets. These steps usually follow pre-established criteria for designing, monitoring and reporting on carbon sequestration. The criteria are laid out by various `carbon standards', of which there are many (Kollmuss *et al.*, 2008). Projects will usually choose and subscribe to a particular carbon standard, depending on the nature of the project. Here, we look at the case of the Plan Vivo standard, which specialises in smallholder and community projects.

Figure 1 shows how a typical Plan Vivo carbon offset project operates. Through the submission of annual reports, projects can demonstrate compliance with their project design and monitoring targets, which will lead to the issuing of valid carbon certificates. The project is then able to sell these certificates in voluntary carbon markets. Regular third-party evaluation takes place to verify carbon sequestration and the proper dispersal of funds to communities.

Figure 1. The value chain for smallholder and community carbon offsets



Note: Smallholder and community carbon projects can be effective vehicles to deliver climate change solutions. The chain linking farmers to offset buyers, however, can become a barrier to entry if transaction costs are high.

Source: Authors' own, based on Porras *et al.*, 2016c.

Central to this process are intermediaries who help to design (and often run) a project. These intermediaries are termed `project developers' and are often local non-governmental organisations (NGOs) close to the smallholders or community. Project developers provide technical expertise and link communities to carbon markets. Successful developers (for example, Ecotrust in Uganda and Taking Root in Nicaragua) operate within existing produce channels and forge alliances with governments and other groups.

Systems and tools for effective implementation

The reality of carbon-offset projects is that they occur within highly complex and dynamic social-ecological contexts, where environmental and social impacts are difficult to predict. This complexity creates a challenge for project developers in both designing a project that will work for all participants and stakeholders, and in predicting and verifying variable social and environmental impacts (which will probably change over time). Here, based on the experiences of existing projects, we suggest four key focal areas that can help project developers overcome these challenges: **accountability; efficiency; flexibility; and business planning**.

1. Accountability: A successful carbon project needs to be transparent and accountable in order to build its reputation with carbon offset buyers, and to maintain good relationships with local smallholders and communities.

- *Certification to promote transparency with buyers*: To build a reputation with buyers, a project must subscribe and adhere to the regulations of a carbon certification standard, such as the VCS Standard, Plan Vivo Standard and the Gold Standard (Plan Vivo, 2013; The Gold Standard, 2014; VCS, 2011).

- *Accountability to smallholders and communities*: To ensure that a project maintains support at the local level, projects must be designed to be accountable to local communities. In fact, maintaining community support is increasingly seen to be one of the most important factors for success in carbon offset-style projects (Huber-Stearns *et al*., 2017), yet it is often less well-defined in project documentation. This includes: agreeing, explaining and following project processes for land use design, monitoring and payment; ensuring effective and independent representation of local actors in project decision making; and a clear and trusted grievance process.
- *Science-based approach to estimating carbon*: The amount of carbon sequestered forms the central commodity by which projects attract income. Ensuring a robust scientific basis for carbon estimation is thus integral. Various greenhouse gas (GHG) accounting tools exist for doing this, some of which are free and simple enough for non-specialists, and some of which will require the help of an expert (see Table 1). Some certification standards may prefer a certain GHG accounting tool.
- *Demonstrating co-benefits*: While carbon is often the focus of accountability processes, projects may also generate other environmental and social benefits, often called `co-benefits'. These also need to be estimated and monitored (perhaps in a less intensive way than for GHG emissions, see **Efficiency** below). However, projects should be critical when judging which co-benefits they can claim and for whom; co-benefits are not always clear or equitable (Anderson and Zerriffi, 2012).
- *Conservative but fair estimates*: Given the difficulty of estimating social and environmental impacts, projects often rely on a `precise-or-conservative' approach (Berry and Ryan, 2013). This is where, when estimates have low precision, projects will intentionally underestimate the carbon or co-benefit to ensure that certified benefits are `real'. This is a key tool for ensuring accountability. However, research suggests that project developers should ensure balance when employing conservatism (for example, reducing carbon estimates) because `over-conservatism' may lead to unfair and seemingly arbitrary reductions in carbon income to smallholders and communities (Wells *et al*., 2017). This in turn may reduce the legitimacy of the project in the eyes of local actors. Developers should carefully review estimates of benefits to ensure that they are appropriately conservative.
- *Monitoring and evaluation* (M&E): M&E is the tool by which projects prove the existence of the carbon offset and its co-benefits, and by which projects can identify and resolve problems. Carbon certification standard bodies specify required monitoring and act as independent agents that ensure transparency and credibility of these transactions. Depending on the requirements of the carbon standard, monitoring can be done by technical staff, consultants, or the community.

Table 1. Free GHG accounting tools

Tool	Where to find:
The Cool Farm Tool	https://coolfarmtool.org/coolfarmtool/
Smallholder Agriculture Mitigation Benefit Assessment Tool (SHAMBA)	https://shambatool.wordpress.com
CO2FIX	http://dataservices.efi.int/casfor/models.htm

2. Efficiency: Minimising transaction costs increases income to smallholders and communities, therefore increasing both incentives and benefits. Developers should thus pay careful attention to streamlining processes where possible.

- *Focus M&E on what matters*: There may be many potential impacts from carbon offsetting projects, but developers cannot monitor everything. Projects should talk to buyers and local actors to figure out which impacts are the most important, and which methods of analysis are appropriate (for example, quantitative or qualitative). Generally, projects should focus resources on monitoring `core' benefits (such as carbon) and agree less resource-intensive, but still sufficiently robust, methods for other co-benefits.
- *Simpler technologies can be effective*: New technologies (such as remote sensing and tablet computers) can create efficiencies and increase accuracy, but not in every case. They may involve hidden development and maintenance costs in practice, and may not deliver significantly better

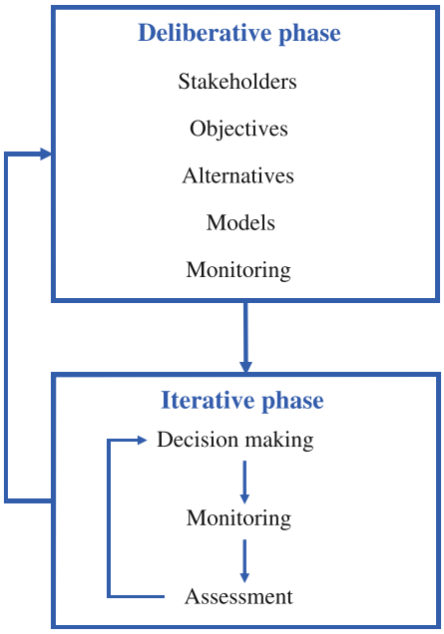
results (Danielsen *et al.*, 2013b; Wells *et al.*, 2017). Developers should consider whether older, cheaper technologies will suffice.

- *Seek a cost-effective level of accuracy*: There is a temptation to continue to invest resources in increasingly complex and more accurate estimates of benefits. However, this increases costs, and gains to accuracy have been shown to become increasingly marginal with further complexity (Wells *et al.*, 2017). Developers should ensure that analyses maximise marginal accuracy gains while resisting further complexity.
- *Rely on local labour where possible*: Many M&E tasks can be carried out by local people, thus reducing costs and increasing local support for the project (Wells *et al*., 2017). Monitoring by community members, if implemented with proper training, can be similarly accurate as monitoring by experts and can provide benefits to the local community (Larrazábal *et al*., 2012). This needs to be balanced with checks and balances (for example, independent verification; sanctions for misreporting; competitive and transparent recruitment of local staff) to avoid conflicts of interest and elite capture expertise (Doswald *et al*., 2010).

3. Flexibility: Smallholder and community carbon projects usually occur in social-ecological contexts that are complex and change over time. Thus, project designs at the beginning of project, no matter how well thought out, are likely to need to change as the project learns more about the local context, and as this local context itself changes. Building in the scope for flexibility is thus integral to a successful long-term project (Muradian *et al*., 2010).

- *Explicit processes for adaptive management*: Adaptive management can provide a cyclical and transparent process for responding to change in environmental management projects (see Figure 2). Many smallholder and community carbon projects implicitly have an adaptive cycle, though this is not always explicitly stated in the design documentation (it often appears under the `project governance' section). Project developers should make this process clear from the outset.
- *Explaining and documenting changes to stakeholders*: Introducing flexibility into a project may be seen as risky. Thus, it is important to:
  i) make clear to stakeholders that, given the complex and dynamic social-ecological context, expected impacts and ways of working **will** necessarily change
  ii) emphasise that this adaptation increases (rather than diminishes) programme success, and
  iii) that the project has a robust way of documenting and assessing the impacts of these changes.
- *The importance of `boundary actors'*: As shown in Figure 1, the carbon offset value chain links together many different communities (for example, buyers, auditors, technical experts and communities). Successful carbon programmes often rely on versatile individuals or small committees to act as translators, or `boundary actors', between these different actors (Dougill *et al*., 2012). They understand the problem in one community, translate it so that others can understand, then negotiate a solution. Such boundary actors often take the form of a community technician or local leader (see section on local labour, above). Identifying and empowering good boundary actors is very important.

Figure 2. A generalised adaptive management cycle



Note. In a carbon offset project, the `deliberative' phase encompasses determining the broad long-term objectives and ways of working, while the `iterative' phase resembles adjustments to overcome problems in the short term. The deliberative phase may apply every few years, while the iterative phase can be viewed as day-to-day management.

Source: Williams and Brown, 2014.

4. Business planning: Business planning is integral to the sustainability of a project. Projects must plan their cash flows and have a marketing strategy to distinguish their offsets from other projects through good marketing.

- *Business and marketing skills*: In addition to the technical skills needed to set up and run a carbon project, project developers need to ensure that their senior team includes people experienced in business development, and in communication and marketing.
- *Efficient financial management*: Ensuring that cash flows in a timely manner from buyers to suppliers is integral to a smoothly running project.
- *Clear and frequent messages for buyers*: A communications and marketing plan should include clear and frequent outputs, addressing subjects that are of interest to potential buyers, and doing so in an interesting and engaging way.
- *Partnerships*: Partnerships with companies interested in CSR and with carbon offset resellers (Figure 1) can be another effective way to boost sales.
- *Transparency and timely reporting*: Ensuring that annual reports and (reasonable) responses to requests for information are dealt with in a timely fashion, and are easily accessible, is imperative to maintaining a good reputation in the marketplace.

Ability to demonstrate impact

Impacts on the environment: Initial experiences of environmental impacts of carbon projects have demonstrated various environmental benefits (Chervier and Costedoat, 2017; Cole 2010; Hayes *et al*., 2017; Jayachandran *et al*., 2017; Mohebalian and Aguilar, 2018). However, these benefits are variable and sometimes uncertain, as there are limited baselines, counterfactuals and rigorous project evaluations (Caplow *et al.*, 2011).

Within the Plan Vivo system, about 55,600 smallholders and community members participate in sustainable land-use systems on 166,585 ha and help to conserve an additional 138,854.50 ha. Plan Vivo participants have planted over 6,226,979 trees which has channelled about US$17.33 million into

developing countries, with an estimated 52 per cent going straight to smallholders and participants. The price for Plan Vivo certificates is well above the average voluntary carbon market price at US$8/tCO2.

Impacts on people: Community carbon projects can have positive impacts on people (Caplow *et al*., 2011; Tacconi *et al*., 2013). Referring to the Sustainable Development Goals (SDG) framework, this may include:

- *Tackling poverty* (SDG1): through direct cash payments and working in remote areas or those divided by conflict.
- *Achieving food security* (SDG2): by understanding how to improve the management and investments in a community's natural resource base; for example, different types of tree species are appropriate for timber, fruit, fodder and shade for intercropping and engaging in beekeeping.
- *Affordable and sustainable energy* (SDG7): including firewood provision and adoption of efficient cookstoves.
- *Growth and employment* (SDG8): providing new jobs from community monitoring, technical staff and marketing activities.
- *Urgent action to combat climate change* (SDG13): reforestation, protection and management of forests help diminish the threat of climate change.
- *Protecting ecosystems and biodiversity* (SDG15): the sustainable principles underpinning each management plan seek to balance food and timber cultivation while broadening the area of impact to other ecosystem service.
- *Fostering partnerships* (SDG 17): building partnerships between farmers, technical actors and offset buyers.

Lessons

Sustainable smallholder agriculture can generate benefits for farmers and society, such as provision of food and energy, carbon sequestration, and the protection of water quality and habitats for biodiversity. Ongoing experience (summarised above) shows that successful implementation relies on accountability, efficiency, flexibility and business planning.

The experiences from these voluntary markets offer important new ideas and strategies to bring climate solutions that also support local livelihoods. These experiences could have strategic importance in the implementation of the Paris Climate Agreement (Abeysinghe and Prolo, 2016) and countries' National Determined Contributions (NDCs).

But to emerge as tangible solutions for combating climate change, these projects need to work at a much larger scale, which will mean trade-offs if local contact is reduced and the benefit sharing is compromised. The greatest risk, however, arises from plummeting carbon prices, as the existing pool of voluntary offset buyers may not be able to absorb the increased supply of offsets. This would drive prices ever further down, having a devastating impact on socially-oriented carbon projects. To inspire the creation of new carbon markets, new legislation needs to be introduced. It needs, for example, to encourage demand from the private sector in developing countries, and to bring carbon prices closer to the real social and economic cost of climate change.

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