How does carbon finance work and how does it reach rural communities?

Key points:

- Carbon offset projects require significant upfront finance in order to invest in project technology and cover transaction costs. Revenues from the sale of carbon generally accrue after projects have been established, meaning that carbon finance cannot be relied upon to initiate projects.
- Carbon finance can reach communities in different ways and benefits may vary depending on whether:
  - Monetary payments are delivered or indirect benefits are delivered, for example through supporting local infrastructure projects;
  - Payments are made to individuals or groups;
  - How payments are scheduled and the prices negotiated.
- The opportunities for poorer community members are likely to be affected by their ability to participate in community groups.

How does carbon offset project financing work?

Financing for carbon offset projects usually needs to cover three main categories of costs:

1. **Finance used to establish the project**, such as the development and installation of technologies. This may be provided through debt, equity or grants depending on the project.
2. **Finance used to cover transaction costs**, such as the development of the project design document, project registration fees etc. Such costs will normally be covered by the project developer.
3. **Carbon finance** which is used to purchase carbon credits.

This information sheet is part of a larger resource pack, Understanding the social opportunities and risks in forestry and bioenergy carbon offset projects. The resource pack has been developed by the Overseas Development Institute (ODI) on behalf of the Ford Foundation. For more information, please e-mail CCEF@odi.org.uk.

Table 6: Different approaches to delivering carbon finance to communities and the potential benefits and risks

Carbon payment scheme	Benefits	Risks
Revenue accrues to project developer or company, indirect benefits to community (e.g., biogas digester units installed but no direct carbon payment to individual households)	• Potential employment benefits. • In-kind benefits (e.g., gas to owners of household biogas digesters, establishment of schools, clinics, education).	• Does not fairly compensate community for activities foregone.
Direct payment to individuals (e.g., landowners who plant trees on their land)	• Increased income for individual project participants .	• Inequitable distribution among project participants and between participants and non-participants. • Disincentive to nearby non-participants to plant trees without additional carbon funding.
Direct payment to community groups (e.g., community forestry association)	• Increased income for community group, with potential disbursement to non-project participants who are involved in the community group. • Potential establishment of other community activities such as savings and credit schemes.	• Benefits may be spread too thinly to make an impact at the individual household level. • Equity within the group depends on revenue distribution arrangements. • Only community members who are part of group benefit.
Direct payments (to individual or community) delivered in initial years of project timeline	• Provides positive stimulus for project activities and may enable participation by poorer people.	• Lack of payments towards the end of project mean less incentives to keep the project in operation.
Direct payments (to individual or community) delivered at end of project timeline	• Creates strong incentive to complete the project timeline.	• Difficult upfront costs (e.g., purchasing seeds for planting) may create barrier to project uptake.

In practice, these categories can overlap. For example, forward contracts for the purchase of carbon credits that are predicted to arise from the project in the future can provide project developers with finance for project establishment costs. However, it is unlikely that agreements would be made before the project design has made some progress, meaning that other sources of finance for project development may be required. Small-scale and/or less well tested technologies, may be more difficult to finance because of high uncertainty in the returns and smaller economies of scale.

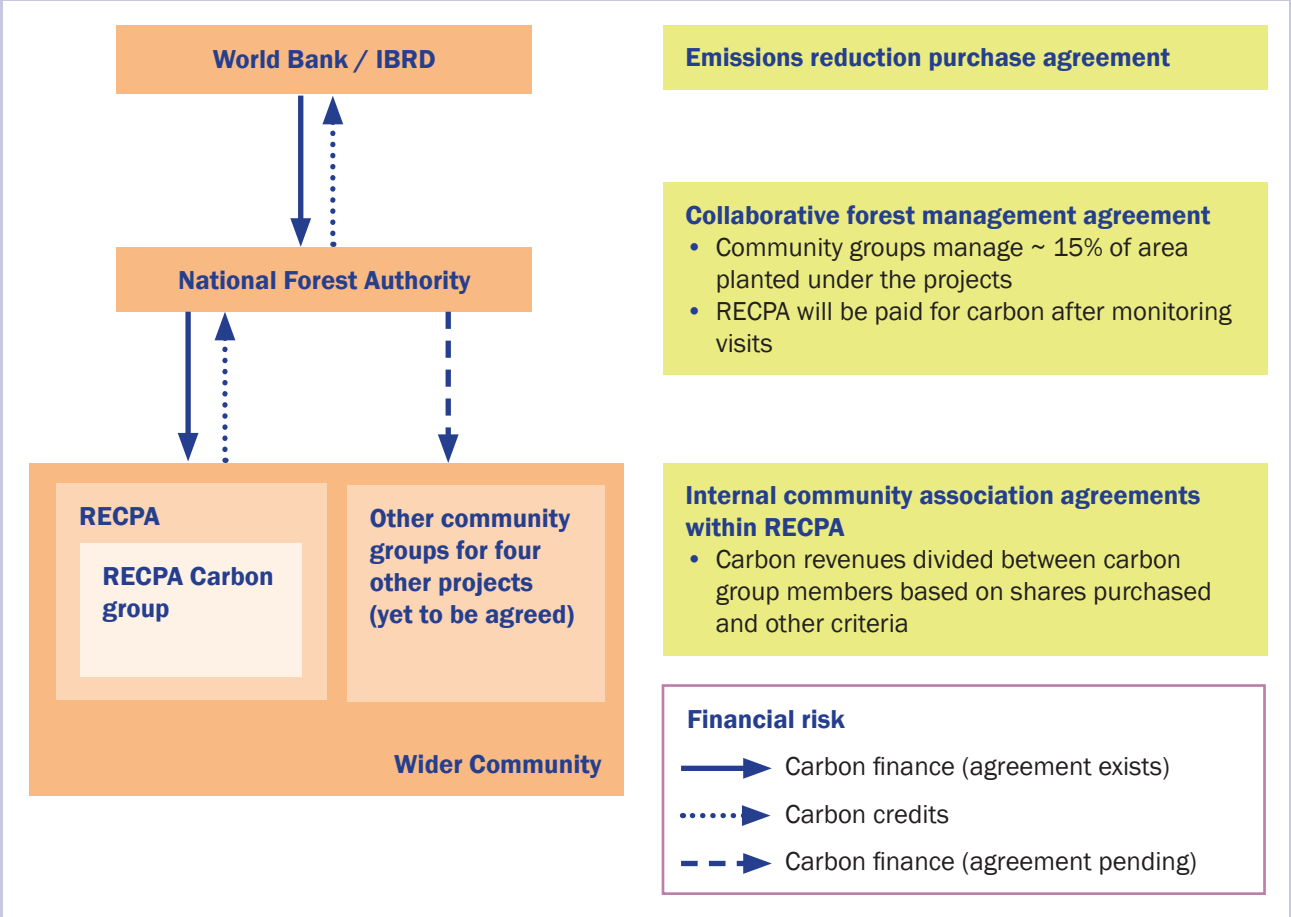
How does carbon finance reach poor rural communities?

Carbon offset projects which involve poor rural communities differ significantly in how carbon finance is delivered. For example, some projects deliver **direct payments** for carbon credits that arise from an individual or community's activities. This can provide a new and additional revenue stream. In other cases, there may be **indirect forms of benefits** where the carbon finance revenue (or a proportion of it) is used to deliver non-monetary benefits to the community, such as building a school or providing agricultural inputs like fertiliser.

Where direct payments are made, they can either be delivered to **individuals or groups**. This means that internal revenue sharing arrangements can be important in terms of how payments are delivered to individual project participants. Evidence indicates that well established groups which involve a wide cross-section of communities and have clear and accountable governance structures, can help to increase equity in the distribution of benefits.

The **payment schedule and length of payment period** of carbon finance can also have substantial impacts.

Figure 1: Flow of carbon finance and carbon credits between institutions in the Nile basin Reforestation Project, Uganda



For example, if finance is provided upfront, this can reduce the financial risk taken on by the community and/or project developer, and means the financial benefits may be more seamlessly delivered. The length of payment period determines over what time period the financial benefit can flow to the community; longer term finance can help improve the sustainability of projects. The payment schedule and contract length agreements are included in the **ERPA**.

The **price provided for carbon credits** can determine whether there is any financial benefit delivered to communities or individuals. If the price is set too low, it may only cover the costs of project development. Prices are often negotiated by intermediaries on behalf of communities or individuals. It is therefore important to ensure that intermediaries fully understand the net costs involved in implementing carbon offset activities over the lifetime of the project.

These different issues combine to form different approaches to financing offset projects, which have different benefits and risks, described in table 6. Figure 6 illustrates how carbon finance, carbon credits and agreements between stakeholders are managed in the Uganda Nile Basin Reforestation Project.

Further Resources:

Guidebook to the markets and commercialisation of forestry CDM projects. http://www.ecosecurities.com/GetAsset.ashx?AssetId=23757

Realizing the Development Dividend: Making the CDM Work for Developing Countries (Phase I Report). http://www.iisd.org/pdf/2005/climate_realizing_dividend.pdf