Training session 2: Carbon Finance and Clean Development Mechanism (CDM) Projects in Africa

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The Clean Development Mechanism (CDM) is a global market mechanism in which a developing country can lower its CO_2 emissions on behalf of industrialized countries. The CDM institutional architecture is complex, involving various stakeholders: project developers, designated national authorities (DNAs), technology suppliers, designated operational entities (DOEs), financial institutions, etc. The Executive Board is the regulator of the CDM, usually with a commission of ten members who gives accreditations and mandates to the DOEs.

The CDM project developer is responsible for the administrative tasks regarding the transactions. The DOEs are third parties mandated by the Executive Board and designated by the Project Developers. There are 50 DOEs worldwide but unfortunately very few in Africa. The DNAs are the focal point at the country level as they promote the CDM on a local level. The problem with DNAs is that they are generally under funded and rely heavily on the tax issued from the CDM project. One of the roles of the UN is to provide them with the capacity to facilitate their activities.

During the project planning phase, a CDM feasibility assessment is carried out. Also, before selling the carbon credit unit, the DNA and the DOE have to give their agreement. Commercial credits are very difficult to obtain to finance this phase, equities of the project developer or grants are the usual financing solutions. The CDM project then goes through a construction phase, the installation of the equipments, and then an operation phase.

Regarding the cash flow, an annual transaction cost (feasibility project, project development documents, DOE validation, etc.) is added to the regular monitoring and regulation costs. However, other costs are to be taken into account: brokerage fees, compulsory fees to the DNA, 2% of the emission reductions addressed to the UNFCCC (United Nation Framework Convention on Climate Change). This last contribution finances the infrastructure and a fund which helps developing countries to adapt to climate change.

Although carbon revenue has been continuously steady over the years, its profitability highly depends on the size of the project. Furthermore, there is uncertainty regarding the next climate regime, after 2012. This is the reason why it is so hard to foresee the exact revenue of CDM projects. If carbon payments can help the loan disbursement, a finance engineer needs to appropriately structure the carbon finance since loan amortizations do not usually match the carbon payment.

The challenges to finance CDM projects are numerous. Firstly, regarding the project's size, as 48% of projects in CDM pipelines are on a small scale, the typical financing for a project is below 20 million USD. Therefore, it is difficult to attract banks for such small projects. Moreover, project developers will have to deal with uncertainty surrounding the CDM's future post 2012, which represents less than 6 years of reliable revenue.

CDM projects present high risks including: country risk, technology risk and specific CDM risks.
Also, the CDM market is a new market: awareness and new methods take time to develop. The real problem is therefore, not in creating a CDM project, but in financing the project.

In terms of capacity building, UNEP targets financial institutions as the finance sector is the group most likely to put pressure on the government. Being a key actor of the economy, the finance sector can build a momentum for institutional change. Banks can allocate ten times more capital than any government institution or any ministry has in its budget. Moreover, UNEP provides the platform for

project developers and the finance sector for dialogue and supporting project developers. As an example of an appropriate forum for dialogue, Mr. Jan Kappen referred the participants to the first major African Carbon Forum which will be held in Dakar at the beginning of September 2008.

A carbon finance project needs to be designed in a very large scale to be profitable. Several energy projects must be gathered to justify the transaction cost. Africa has several potential CDM projects including: energy sources, agriculture (the potential saving in carbon emission for Africa with this type of project is revolving around a billion tones per year until 2030 which is the potential of China and India combined) and minerals. However, Africa suffers from structural weaknesses as well including: low average of energy consumption which is bio-mass based and unequal energy consumption depending on the country. Moreover, there is a lack of methodology in the use of biomass.

The Voluntary Carbon Market is building up. For numerous projects, this alternative market has become more interesting than the CDM market. It consists of private buyers, mostly multinational firms or individuals, who are not obliged to purchase carbon. It is a self-regulated market and has gained a lot of credibility in the field due to its transparency. It is much more adaptable and innovative than the CDM market.

Carbon credits are AAA assets as they are issued by supranational entities or government. The currency risk is easy to figure out and this asset is easily transferable and exchangeable in a growing number of market places. The counterparts are all creditworthy except in the voluntary carbon market where a seller has to make preliminary enquiries. Financial institutions can benefit from several opportunities: a new revenue generating opportunities, a new service to be provided for clients (carbon consulting), enhancing viability of infrastructure projects and attractive opportunities to enhance corporate social responsibility.

From the very start until the validation of the project, developing a carbon project takes between 7 and 21 years for long terms projects. However, each project goes through different phases with different risk profiles. So it does not make sense to think of it as a single financing project.