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## Encouraging CDM energy projects to aid poverty alleviation

### Attachment 5

# *Institutional Structures and Capacity Building for the CDM*

June 2003



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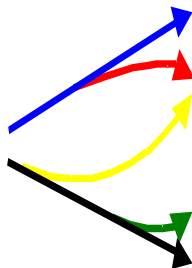
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## **Acknowledgements**

We would like to thank all our country partners, KITE in Ghana, CEEST in Tanzania and ITDGEA in Kenya and Dr Wilkinson at ITC for all their commitment and hard work on this project and in holding the workshops for country stakeholders. These workshops could not have been successful without the contributions from the many organisations and companies in the partner countries. We are indebted to all the participants and thank them all for all their efforts. This work would not have been possible without the flexible approach and support from DFID. We would also like to thank Gill Wilkins and Dick Jones at DFID for their support throughout the project and to DFID-KAR in making the resources available to us.

## Acronyms

AIJ	Activities Implemented Jointly
BAU	Business As Usual
CAPA	Clean Development Mechanism for Poverty Alleviation Project
CCCCF	Climate Change Challenge Fund of the FCO
CDCF	Community Development Carbon Fund of the World Bank
CF-Assist	Carbon Fund Assist for capacity building for the CDM from the World Bank
CDM	Clean Development Mechanism (defined in Article 12 of the Kyoto Protocol)
CER	Certified Emission Reductions (generated from CDM projects)
CO <sub>2</sub>	Carbon dioxide
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)
COP-MOP	Meeting of Conference of the Parties to the United Nations Framework Convention on Climate Change serving as the Meeting of the Parties to the Kyoto Protocol
CP	Commitment Period
DFID	Department for International Development
EB	Executive Board for the CDM
ERU	Emission reductions units
FCO	Foreign and Commonwealth Office
FDI	Foreign Direct Investment
GHG	Greenhouse gas
GWh	GigaWatt hour
ICS	Improved Cook Stoves
IET	International Emissions Trading
IPCC	Intergovernmental Panel on Climate Change
JI Protocol)	Joint Implementation (outlined in Article 6 of the Kyoto Protocol)
KP	Kyoto Protocol
MCA	Multi-Criteria Analysis
MHP	Micro hydro power plants
MVP	Monitoring And Verification Protocol
M&V	Monitoring And Verification
NBSSI	National Bureau for Small Scale Industries
NGO	Non Governmental Organisation
NEMA	National Environment Management Authority
NCCC	National Climate change Committee in Tanzania
ODA	Official Development Assistance
PCF	World Bank Prototype Carbon Fund
PDD	Project Design Document
SHS	Solar Home Systems
TATEDO	Tanzania Traditional Energy Development Organization
TANESCO	Tanzania Electricity Supply Company
S-L	Sustainable Livelihoods
UNFCCC	United Nations' Framework Convention on Climate Change
UNEP	United Nations Environment Programme
VPO	Vice Presidents Office in Tanzania

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# 1 Introduction

The following report deals with two main issues. The first relates to the capacity building requirements for the CDM small-scale project implementation and for CDM in general and the second is the institutional structures for small-scale CDM projects in developing countries. The results reported here are based on discussions held with participants of the final workshops for the CAPA project held in 2003. It also draws on the experiences from the first workshops.

Small-scale projects have been targeted under the Marrakech Accords for special treatment because it has been recognised that they can deliver direct sustainability benefits for the poor. These benefits are only realised if the project is implemented with care, and attention is paid to the capacity building and networks needed for success. It is also recognised that small projects, as investments, face a series of barriers that do not apply to large projects and makes them less likely to be undertaken. In addition the CDM process itself presents additional barriers to these small projects. The details of the project cycle have been discussed in Attachment 4 in detail and are not repeated here. The steps at which they demand extra resources are summarised in the following list.

- Preparation of the simplified Project design document (PDD) including the simplified baseline from the available methodologies.
- Validation by independent entity and registration with the EB
- Monitoring
- Verification by independent entity
- Certification and issuance.

In the following sections we will discuss the barriers the small-scale projects face if they are to deliver all the benefits expected. The capacity building actions to overcome these barriers formulated at the workshops are then listed and discussed. We then focus on one of the barriers, the institutional structures in the host country and again discuss the country workshop inputs on this aspect. Finally we turn to the list of actions detailed by each country workshop as a guide to future work in this area for DFID.

## 2 Barriers for Small-scale projects

Small-scale CDM projects face substantial barriers from the project idea stage to implementation and operation. In the following discussion we summarise briefly some of the considerations to be addressed in order to facilitate these projects.

Small-scale projects are recognised as having several problems associated with their implementation as CDM projects. The first is the problem of financial viability. Green et al (2003) analysed the financial viability of a range of small projects that already exist in Ghana. They found that many were not financially viable, with negative NPVs and low IRRs, even without the CDM. Not only do they struggle to be viable but there can be problems in sourcing funding for these projects which do not conform to the normal low risk criteria for large projects. New approaches are

required and there was some evidence in the workshops that local banks were addressing this issue. This was certainly true for Kenya.

Transaction costs associated with the CDM project cycle are also a major barrier. These costs can represent a high percentage of the project costs. Green et al (2003) also found that the income stream from the CERs did not necessarily offset the CDM transaction costs associated with the project cycle. To cope with the problems, small projects need to be aggregated or bundled for submission with one Project Design Document (PDD) etc. They recommended that the bundled projects have to generate large amounts of CERs or the revenue from the CERs should be a significant proportion of the net revenue from the projects to make the projects viable.

These transaction costs are affected by the institutional structures in place for the CDM under the UNFCCC and under the developing country. If these are complicated and require too much time and effort or are unreliable and arbitrary then the perceived risks and costs will discourage investors. These have been discussed in detail in EcoSecurities (2002)<sup>1</sup> and will be further examined later in this report. The procedures under the EB for the CDM for the small-scale projects though simplified still need further work especially on bundling projects and we have suggested some changes in Attachment 4. Another barrier exists in the costs associated with host country approval procedures. These must take account of the sustainability aspects of projects and be able to balance the country needs with the project viability. Some assistance with this aspect has been considered in Attachment 3.

The implementation phase is not simple either but requires additional actions that are crucial for the ultimate success of the project. Local capacity building through engagement of communities and training for skills are examples that need to be designed into the projects and do not represent additional costs to the project but are or should be an integral part of the project from the start.

In the discussions within the workshops, the participants identified a series of barriers which are summarised firstly for each country and then the common elements across countries are discussed.

## ***2.1 Actions to overcome barriers from country workshops***

In the workshops, one of the discussion sessions addressed the question *‘What can be done and by whom so that small-scale energy projects can be implemented under the CDM to achieve GHG reductions and sustainability benefits in terms of short term and long term measures?’*

The groups in each country workshop first of all discussed the barriers to CDM projects and then ways in which they could be overcome. The barriers discussed in the different groups are amalgamated here for each country for ease of comparison along with the actions to overcome the barriers that were suggested. In each country the findings of the groups had several elements in common and in this amalgamation

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<sup>1</sup> EcoSecurities (2003), Final report for DFID on CDM: Simplified Modalities and Procedures for Small-Scale Projects.



we have tried to ensure that no perspectives have been lost. The results are illustrated in Table 2-1.

### **2.1.1 Conclusions**

It can be seen that the perceptions of barriers across the countries have many elements in common. Common barriers were grouped under the following headings.

- Lack of awareness and CDM knowledge
- Financial barriers
- Technology barriers
- Institutional Barriers
- Poverty social and cultural barriers
- Lack of existing baseline data
- Infrastructure limitations for communications

Other barriers included Network of competence barrier and Specific CDM competence barrier. These are important subsets of the technical barriers and are dealt with separately in the table.

The actions to overcome these barriers listed for each country are a mixture of actions common across the countries and new initiatives developed as people have discussed and considered what could be done. This list has been generated by people who are in the country and involved in the process. It forms a comprehensive guide to governments, donors and NGOs of what needs to be done and the immensity of the task. Actions can be targeted using this list as a starting point.

It is clear that financing the capacity building actions is a priority if the CDM is to be implemented successfully on a reasonable scale. Host governments do not have the capacity or funding to do this entirely on their own. It will be imperative as well that host countries do ratify the Kyoto Protocol.

### **2.1.2 Common developments and needs in the case study countries**

A number of similar developments in Kenya, Tanzania and Ghana, can be identified as well as similar gaps in development so far. Progress and gaps are summarised below for a number of topics.

#### ***2.1.2.1 National structures and policies***

***Progress:*** The Kyoto Protocol has been ratified by Tanzania and Ghana but not by Kenya. Some national structures for the CDM are in place. Future strategies on energy, development and sustainable development have been formulated or are in the making.  
***Lacking:*** Institutional Structures are not in place (e.g. only a handful of experts who are overburdened) and policies are incomplete (e.g. priority sectors/projects), in particular with regards to the technicalities of the CDM. A legal framework is often lacking.

### **2.1.2.2 Capacity building**

**Progress:** Significant capacity building efforts have taken place at the central government level and in the (formal) industry and energy sectors.

**Lacking:** Awareness had been raised mainly at high levels with no linkages to the grass roots. Other stakeholders have not been sufficiently reached, including local government, the legal sector, NGOs, receptor groups (local community), but also investor groups, project developers, the financial sector. Different stakeholder groups have different information requirements and need to be targeted differently.

There is insufficient capacity and resources to implement the CDM especially for auditing and trading know-how, baselines know-how for projects, monitoring and the other issues required in the Project design document. Sustainability assessment tools are lacking for assessment of sustainable development contribution of projects (see Attachment 3).

### **2.1.2.3 Financing**

**Progress:** A number of organisations for financing activities are commonly active across the countries. For the CDM, these include UNIDO, UNDP, PCF, DFID, NORAD, the Dutch government. Complementary to the CDM, there is financing for renewables through the Worldbank, GEF, Spain, IFC, DANIDA, DFID, GTZ, CIDA, SIDA, USAID, EU.

**Lacking:** There is an urgent need to increase the sources of financing. The private sector (especially domestic) is not sufficiently involved. Investor groups, potential project developers and the financial sector are insufficiently aware of the opportunities that the CDM can bring to them. The World Bank CDCF will help in this but here are signs that local institutions are beginning to take notice e.g. South African Development Bank.

### **2.1.2.4 Sectors**

Common needs were identified in all sectors but SMEs, transport and the agricultural sector should be targeted more for the CDM

**Progress:** A number of large-scale initiatives have been put forward, including market reform/liberalisation.

**Lacking:** More small-scale projects needed, as these are expected to provide more direct SD benefits.

### **2.1.2.5 Data**

**Progress:** All countries have done or are doing their GHG inventories.

**Lacking:** Obtaining sufficient data, and good quality data, is still a problem.

Table 2-1 Barriers to the CDM and Small-scale Projects with Actions to Overcome the Barriers for each study country

Barrier	Tanzania	Kenya	Ghana
<ul style="list-style-type: none"> <li>➤ <u><i>Awareness and knowledge barriers</i></u></li> <li>➤ <b>Lack of Knowledge of CDM for Small-scale for Decision makers, Financial sector and general public</b></li> <li>➤ <b>Complexity of CDM</b></li> <li>➤ <b>Lack of political will and Attitude of government officials because not knowledgeable on the subject.</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ Awareness to government officials and policy makers eg Introduce policy maker to different ways of obtaining information on CDM e.g. Website</li> <li>➤ Set pilot Projects as models, demonstrations by government</li> <li>➤ Training &amp; workshop (formal) eg by UN organisations and donors, short courses eg by NGOs</li> <li>➤ Newsletters,</li> <li>➤ Use media newspapers/pamphlets etc</li> <li>➤ TV, Pamphlets</li> <li>➤ Undertake training and conduct awareness raising, This can be done by Expert on CDM, Universities, Media, Politicians, NGO's –CEEEST, CBOS, Teachers</li> </ul>	<ul style="list-style-type: none"> <li>➤ Use ICT to create information exchange nationally and internationally</li> <li>➤ Develop appropriate media content and deliver to the public through national and local media in various languages. By focal point offices and NGOs.</li> <li>➤ Awareness creation for politicians, financiers and communities.</li> <li>➤ Advocacy for CDM stakeholders.</li> <li>➤ Popularise CDM</li> <li>➤ Develop criteria for mass education</li> <li>➤ Communication at all levels i.e. technical policy makers, implementers and beneficiaries i.e. trickle down information system</li> <li>➤ Decentralise information</li> </ul>	<ul style="list-style-type: none"> <li>➤ Vigorous Advocacy: since the CDM is linked to all the sectors including health, energy and the Poverty Reduction Strategy, efforts must be made to explain these issues to the people at all levels of the decision – making process.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Awareness raising campaigns for local investors/financial institutions</li> <li>➤ Knowledge of criteria for eligibility of funding</li> <li>➤ Education – Curriculum changes (Ministry of education &amp; universities)- long term</li> <li>➤ E-training sponsored by government , universities, donors</li> </ul>	<p>access points like media print and electronic</p> <ul style="list-style-type: none"> <li>➤ Keep abreast on information on CDM and Climate change</li> </ul>	
<p><b><u>Financial Barriers</u></b></p> <ul style="list-style-type: none"> <li>➤ <b>Financial capacity to implement projects</b></li> <li>➤ <b>Higher cost of small-scale project for poor</b></li> <li>➤ <b>Higher imports duties and tax rates</b></li> <li>➤ <b>Difficult to borrow</b></li> <li>➤ <b>High cost of finance</b></li> <li>➤ <b>High risk factor</b></li> <li>➤ <b>Concentrate only on commercial aspects</b></li> <li>➤ <b>Resources to carry out capacity building</b></li> <li>➤ <b>Lack of resources (especially NGOs)</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ National budget should be allocated to this project</li> <li>➤ Use of private sector to invest in this sector</li> <li>➤ Assistance as provided for in the Kyoto protocol To be done by Government, Private sector, Financial institutions, Kyoto Protocol</li> <li>➤ Creation of financing schemes revolving funds</li> <li>➤ loans and guarantee subsidies</li> <li>➤ tax holidays</li> <li>➤ Trust funds for CDM (Long term)</li> <li>➤ Set up financing facility for loans or grants</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provision of credit-banks, government and development partners</li> <li>➤ Private sector to finance as tax incentives</li> <li>➤ Provide innovative financial products</li> <li>➤ Develop favourable legal and fiscal environment</li> <li>➤ Create awareness with bank for viability of small-scale energy projects</li> <li>➤ Long term profitability/return/benefits</li> <li>➤ Off shore Guarantors to reduce risks</li> <li>➤ Create community awareness with banks</li> </ul>	<ul style="list-style-type: none"> <li>➤ Funding: internally generated funds (e.g. energy fund generated from fees on petroleum products and electricity); grants (e.g. from CDM support and Global Environment Facility); loans and community levies for the CDM (i.e. paying for the benefits they will receive).</li> <li>➤ Reduce costs through early project identification and also bundling of projects together</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Incentives in fiscal policies e.g. tax reduction , Reduce / remove import duties</li> <li>➤ Regulatory frameworks clear for investors</li> <li>➤ Higher funding priority to CDM projects</li> <li>➤ Locally designed, cost effective equipment etc</li> </ul>	<ul style="list-style-type: none"> <li>➤ Tax benefits</li> <li>➤ Establish energy service companies (ESCO)</li> <li>➤ IFC should fund these projects</li> <li>➤ Operate CDM projects as a business venture</li> <li>➤ Provide resources to both private sector and government, not just an NGO affair</li> <li>➤ Private organisations to finance as part of social responsibility</li> <li>➤ Establishment of trust fund managed by government and private sector and stakeholders</li> <li>➤ All stakeholders to provide finances i.e., government private sector and development partners</li> </ul>	
<p><b><u>Technical Barriers</u></b></p> <ul style="list-style-type: none"> <li>➤ <b>Lack of capacity for local technology</b></li> <li>➤ <b>Information on reductions (technical capacity and information)</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ Integrate CDM Projects in our company strategic plans as priority Projects</li> <li>➤ Assessment technology training needs and provide the same</li> <li>➤ Encourage local innovation</li> <li>➤ Encourage local initiatives &amp; improve their skills</li> <li>➤ Training in special skills</li> </ul>	<ul style="list-style-type: none"> <li>➤ Make facilities more available</li> <li>➤ Transfer of technology to local enterprises to ensure sufficiency</li> <li>➤ Training, encourage suppliers, users training by institutions</li> <li>➤ Develop manuals for different technologies</li> <li>➤ Warranties for maintenance</li> <li>➤ Standards need to be</li> </ul>	<ul style="list-style-type: none"> <li>➤ Identify small-scale CDM projects that can give sustainable benefits</li> <li>➤ Identify what direct and relevant benefits Ghana is seeking to achieve from the projects.</li> <li>➤ Ensuring that validation is done by local (African) organisations and not foreign</li> </ul>

<ul style="list-style-type: none"> <li>➤ <b>Lack of appropriate technology</b></li> <li>➤ <b>Lack of capacity for project development</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ Encourage technology transfer</li> <li>➤ Training to build capacity on developing local technology by Tatedo and ministry of energy and mineral.</li> <li>➤ Conduct a targeted training programmes on CDM relevant technologies</li> <li>➤ Establishment of information and data centre for small-scale CDM projects. TATEDO, CEEST, COSTECH</li> <li>➤ Sharing of available local technology to be emphasised and encourage local manufacture</li> <li>➤ Train more trainers</li> <li>➤ Full utilisation of the available technology</li> <li>➤ Curriculum development to include CDM in schools, technical institution and institutions of higher learning</li> <li>Vocational courses from technical colleges</li> <li>➤ Solicit funding for capacity building on local technologies</li> <li>➤ Co-operation between donor and scientific community to be encouraged</li> </ul>	<p>developed so that good technology is adopted</p> <ul style="list-style-type: none"> <li>➤ Accessibility to data, sharing and acknowledge best practice, transparency, give credit where due, acknowledge</li> <li>➤ Need to explain what the small-scale energy projects entail (from biomass, wind, solar, hydro etc.)</li> <li>➤ Advocacy at rural level</li> </ul>	<p>organisations</p> <ul style="list-style-type: none"> <li>➤ Build capacities for the establishment of operational entities in Africa</li> <li>➤</li> </ul>
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	<ul style="list-style-type: none"> <li>➤ Participatory training</li> <li>➤ Pilot/Demonstration projects</li> <li>➤ Encourage information flow from grassroots</li> <li>➤ Train extension personnel e.g., technician, vocational assistant,</li> <li>➤ create volunteer schemes/national service</li> <li>➤ NGOs in communities to address technical energy/fuel issues</li> </ul>		
<p><b><u>Institutional Barriers</u></b></p> <ul style="list-style-type: none"> <li>➤ <b>Lack of institutional capacity</b></li> <li>➤ <b>Lack of simple procedures and policies to implement projects</b></li> <li>➤ <b>Lack of clear policy for CDM in the country (Kenya) to determine and regulate modalities</b></li> <li>➤ <b>No legal framework</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ Policy and laws (Regulatory frameworks) – Enforcement and compliance - Ministries short and long term</li> <li>➤ Policy focus on relevant interventions ( lead agency, line ministries) - long term</li> <li>➤ Create an enabling environment (laws/regulations Institution set up) for the CDM Projects to be successfully implemented</li> </ul>	<ul style="list-style-type: none"> <li>➤ Sensitise governments and stakeholders in needs and benefits of CDM</li> <li>➤ Sensitisation of the political and legal institutions (Cabinet, Parliament and AG) with regard to the CDM</li> <li>➤ Development of climate friendly policies specifying clear roles of stakeholders including NGOs/Government/target groups</li> <li>➤ Accreditation body is required in the country</li> <li>➤ Lobby Government to ratify</li> </ul>	<p>The establishment of a CDM Commission</p> <ul style="list-style-type: none"> <li>➤ Education: policies on energy, environment, trade and investment can be studied and used to promote CDM projects;</li> <li>➤ Relevant institutions should facilitate the understanding and implementation of CDM;</li> <li>➤ Policy intervention/ incorporation into policies</li> <li>➤ Streamline the work of relevant institutions to avoid duplication of efforts</li> </ul>

<p><b>for CDM projects in the country. No body established by parliament but the National Environmental Management Authority (NEMA) is the Focal point (Kenya).</b></p> <p>➤ <b>Energy policy is limiting (Kenya)</b></p>		<p>the Kyoto protocol</p> <p>➤ Establish accreditation bodies e.g. Kenya Bureau of Standards (KEBS), NEMA, KIRDI, National Council of Science and Technology</p> <p>➤ Establish an effective legal institution dealing with CDM through an act of parliament</p> <p>➤ Mainstreaming CDM into the NARC agenda. Make it a cross cutting issue like AIDS</p>	
<p><u><b>Poverty and Cultural Barriers</b></u></p> <p>➤ <b>High resistance to change, people may resist CDM</b></p> <p>➤ <b>People in rural areas need to be convinced of the project so that they are committed to the projects</b></p> <p>➤ <b>Lack of socio-economic set up and poverty</b></p> <p>➤ <b>Limited community</b></p>	<p>➤ Involvement of local people – participatory at grassroots level (NGO, CBOs, Local government)-</p> <p>➤ Local involvement from project inception to implementation</p> <p>➤ Networking through government and NGOs -Long Term</p>	<p>➤ Community participation throughout project cycle</p> <p>➤ Need to advocate for support and prepare people prior to project implementation</p> <p>➤ Affirmative actions and empowerment of marginalized groups e.g. women, Pastoralist etc by NGOs and Government</p> <p>➤ Involve target groups in CDM projects to overcome social and cultural barriers)</p>	<p>➤ Participatory projects: to involve all the relevant stakeholders especially at the community level.</p> <p>➤ Projects are usually implemented at the community level and therefore creating awareness at the community level will help foster understanding;</p>



<p><b>involvement</b></p> <ul style="list-style-type: none"> <li>➤ <b>Low awareness of the benefits to the community</b></li> </ul>			
<p><u><b>Infrastructure capacity</b></u></p> <ul style="list-style-type: none"> <li>➤ <b>Infrastructure limitations for communications</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Improve local infrastructure which includes all the stakeholders including government</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Government to invest in infrastructure</b></li> </ul>	
<p><u><b>Network of competence barrier</b></u></p> <ul style="list-style-type: none"> <li>➤ <b>Need to bring skilled people together</b></li> <li>➤ <b>Lack of a critical mass of people/organisations for project design and implementation</b></li> <li>➤ <b>Limited people to do PDD</b></li> <li>➤ <b>Limited institutions so cannot follow on – provide continuity</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Strengthen institutional partnerships for training, capacity building, information exchange (NGOs, Universities etc.)</b></li> <li>➤ <b>Exchange programmes with international institutions</b></li> <li>➤ <b>Network all stakeholders of CDM projects</b></li> <li>➤ <b>Organizing collaborations with successful CDM practitioners in and outside Kenya</b></li> <li>➤ <b>Need for skills in project management</b></li> </ul>		
<p><u><b>Specific CDM project skills</b></u></p>	<ul style="list-style-type: none"> <li>➤ <b>University of Surrey to link with local institutions (CDM</b></li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Training on how to implement small-scale energy projects</b></li> </ul>	

<p><u><b>competence barrier</b></u></p> <p>➤ <b>Lack of high level Expertise</b></p>	<p>under CDM</p> <p>➤ Project management courses in university and institutions to be introduced so that we can have enough experts in this area (Government to act)</p> <p>➤ Create clean technology courses at degree level</p>	<p>institution e.g. the universities) for capacity building</p> <p>➤ Train in CDM project development</p> <p>➤ Providing skills definition for CDM practitioners</p> <p>➤ Establish a centre for CDM training</p> <p>➤ This project should come up with a follow-up capacity development project to assist the locals participate in CDM projects as equal partners</p> <p>➤ Training in development of baselines</p>	
<p><u><b>Data availability barrier</b></u></p> <p>➤ <b>Lack of existing baseline data</b></p> <p>➤ <b>Lack of database on baselines</b></p> <p>➤ <b>Non availability of funding especially for data collection/compilation of database</b></p>	<p>➤ Initiate centres at village level to collect data</p> <p>➤ More researches are needed to provide enough data so that we can know where to locate which project</p> <p>➤ Develop methodologies and methods of collecting data and involve schools, colleges and universities</p> <p>➤ Use of students to collect emission data as part of their thesis (whatever practical)</p>	<p>Information may not be easily available.</p> <p>➤ Energy data does not need to be seen as confidential.</p> <p>➤ Enthusiasm is low among SMEs in Kenya</p> <p>➤ Level of enthusiasm is same in Annex 1 and non-Annex one countries</p> <p>➤ Energy conservation is to be used as a benchmark as uncertainty is low,</p> <p>➤ Majority of SMEs in Annex 1 have expressed interest.</p>	<p>➤ Develop database of available resources (e.g. an energy/climate change database). In the absence of baseline data assumptions would have to be relied on.</p>



### **3 Institutional Structures for small-scale CDM projects**

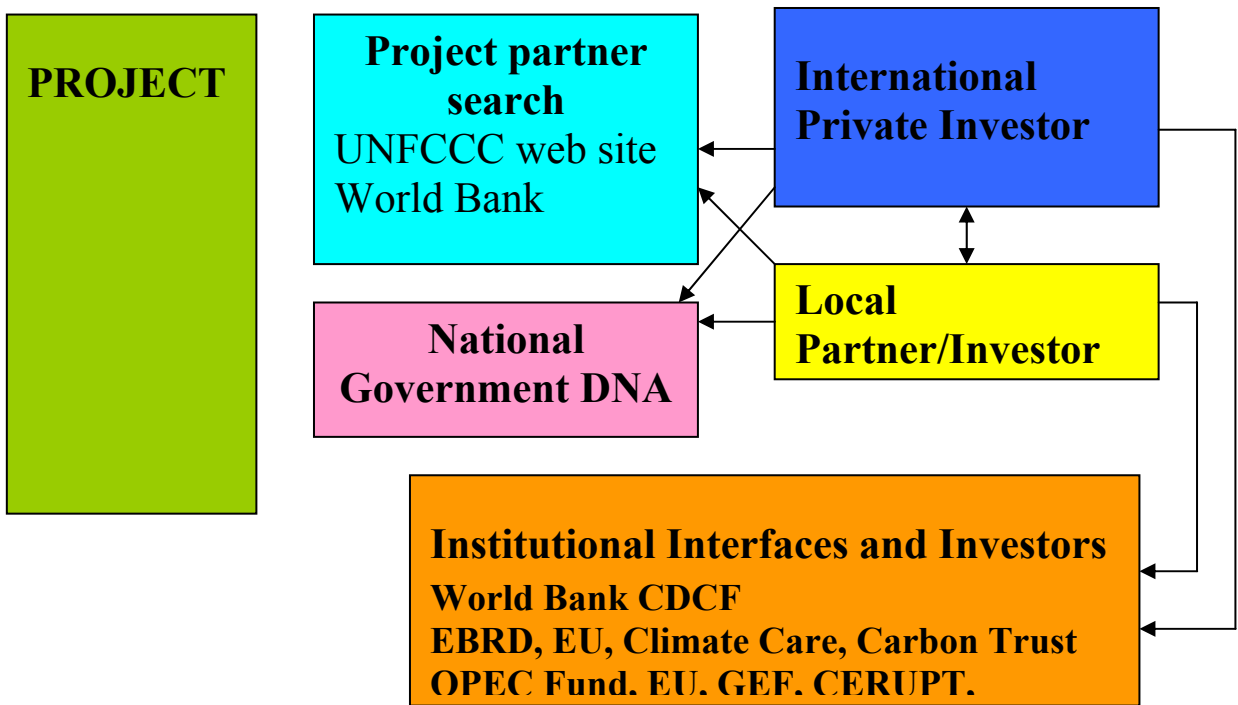
Institutional barriers were identified as one of the major barriers to the implementation of CDM projects. Particularly for small-scale projects there is a concern that existing approaches would not facilitate these projects. In this section we consider the different stages of the project cycle and where the institutional arrangements have to be considered more thoroughly.

For small-scale projects whose viability can be fragile there is a danger that host country procedures will be used which have been designed with traditional large Foreign Direct Investment (FDI) projects in mind. With small projects there is a risk that delays due to complex or long-winded procedures and lack of structures could mean that the project is lost. If investors perceive that not only are there risks associated with the viability of the project and the stability and legal structures in the country but also that the CDM streamlined systems are not available then this may be sufficient to discourage investors from this route.

In the workshops the current institutional arrangements in the project cycle were explored first to set the scene before considering what might be done for small-scale projects in the host country. In the early stages of a project there will be a need for a partner search to find a donor or recipient. In Figure 3-1 we illustrate that there are several existing organisations which can help in this task. Searches for partners are facilitated through the web by the UNFCCC eg <http://unfccc.int/cdm/bazaar.html> and national websites in addition to the initiatives such as the prototype carbon fund or the carbon community development fund from the World Bank.

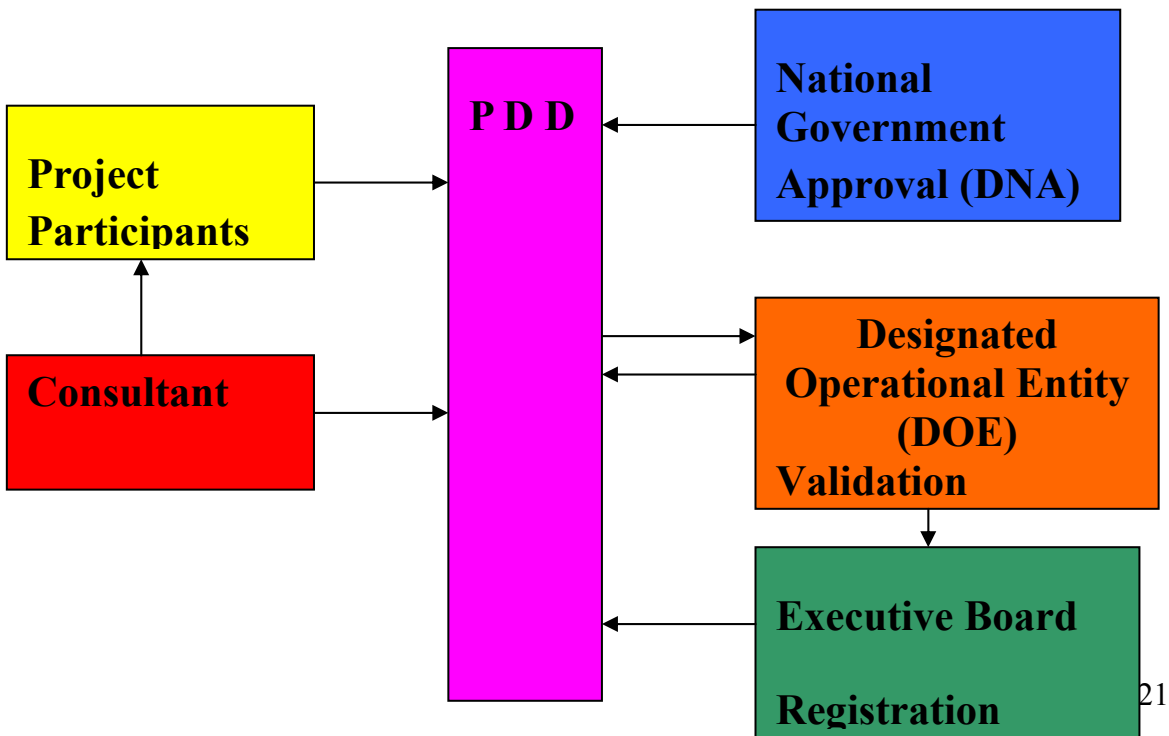
The costs for this stage would not be expected to be large.

**Figure 3-1 Project partner search**



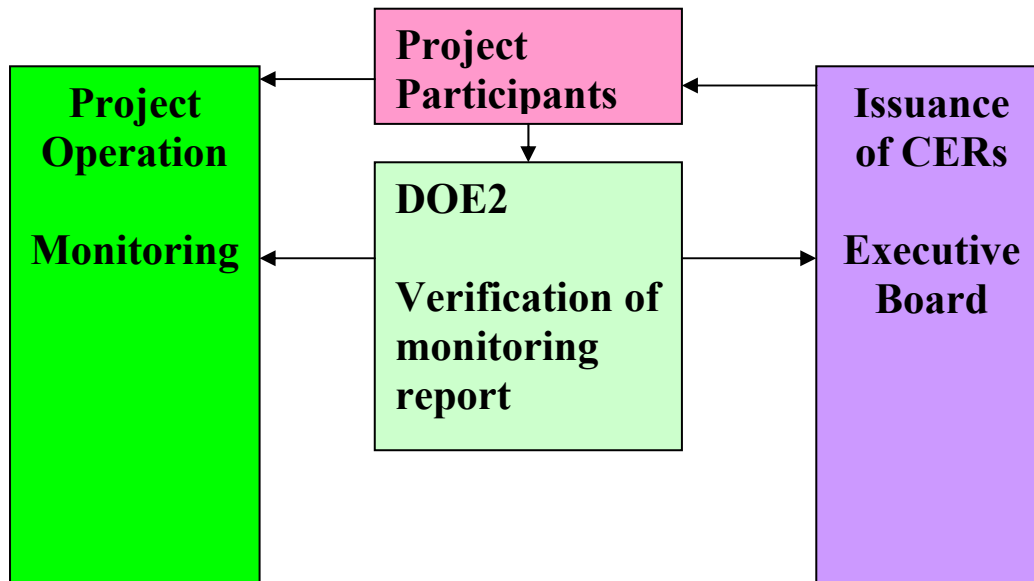
For the streamlined Project design document preparation, validation and registration stages the institutional arrangements are specified under the Marrakech Accords. These are illustrated in the next Figure 3-2. No requirement is placed on small projects for public consultation, as is the case for the large projects.

**Figure 3-2 Validation and Registration**



The next stage of monitoring and verification of reductions followed by issuance of CERs is represented by Figure 3-3.

**Figure 3-3 Verification and Issuance**



In Figure 3-2 we show that the host government approval is required for the PDD before it can be submitted. It is this process within the host country that is seen as a possible barrier and which we have explored in the country workshops. Green et al (2003) have also pointed out that the institutional capacity in the country for the CDM is key to the success of these small-scale projects.

The question addressed by the discussion groups was as follows.

- **How can the interfaces for small-scale projects be improved?**
  - **Financing**
  - **Capacity Building and participatory implementation**
  - **Bundling administration**
- **What are the Barriers?**
- **What actions could overcome them?**

### 3.1 Investor Needs

In the discussions in the country workshops we identified first of all what the investor wants when developing a small-scale CDM project and what the country host needs from the process. Table 3-1 summarises the outcomes from the discussions across all the countries for comparison.

**Table 3-1 Investor Needs**

<b>Investor needs</b>	<b>Tanzania</b>	<b>Kenya</b>	<b>Ghana</b>
Financial	Minimised risk in the investment (viability, feasible carbon stock) Viable project with low risk Collateral (loan) history	High quality offsets	Low risk
Country investment risks	Good investment climate (tax breaks) and Capacity / ability to implement in country	Low costs	Economic and political stability
Institutional process	Simple – transparent – efficient	Simple transparent process	Simple systems
Ease of implementation	Infrastructure communication		
Data availability and expertise	Facts / information (information point		Competence in ministries
Technological options	Low cost technology		
Corruption risk			Low corruption risk through transparency

Thus there is general agreement that a low risk investment environment and simple systems with competent institutions are required.

### 3.2 Host Country Aspirations

There was also general agreement on what the host country wants to achieve from small-scale CDM projects as shown in Table 3-2.

**Table 3-2 Host country aspirations**

<b>Host Needs</b>	<b>Tanzania</b>	<b>Kenya</b>	<b>Ghana</b>
Sustainability benefits	Sustainability benefits	Meeting S-D goals Poverty alleviation	Ensure sustainable benefit delivery
Economic progress	Employment – use locally available resources / raw materials and locally available labour skills Attract investors	Equity	
Contribution to host country goals	Funds	Development plan priorities	Align with host country goals
Community involvement	Impact to community and services to project developer	Local ownership	
Expertise development	Institutional support (NGO)	Local technology capacity building	Competence for negotiation
Technology transfer		Technology transfer	Technology transfer

In Tanzania the discussions focussed on the barriers specific to small-scale projects. Inevitably these overlap with the barriers identified in earlier discussions on capacity building. However they are more focussed and lead to some specific action recommendations. The following summarises the results from the discussion groups.

### **3.3 Tanzania Barriers**

- Inadequate capacity to implement and process small-scale CDM projects from design, implementation, monitoring and verification
- Policies not favourable for small-scale project due to threshold level
- Taxation
- Infrastructure (i.e., reaching projects in rural areas)
- Acceptance by community
- Access to funds



- Bureaucracy
- Low institutional capacity of DNA – no full time CDM official
- No effective technical CDM committee or expert committee
- Complex land laws
- Lack of technology / technical capacity
- Lack of funds for DNA office
- Lack of clear policies / regulations

### 3.3.1 Actions to overcome barriers in Tanzania

- *Minimising the risk of investors*
  - clear government policy on investment and stable government
  - Locals carryout basic studies to determine project viability
  - Investors need information / assurance of future market of her/his project
  - Legislation and good governance in place
  - Good information and future market for product
  - Local needs maximum involvement of the local community for the sustainability of the project
  - Designate full time CDM staff (Responsible VPO)
  - Government appoint a Technical CDM committee
  - Strengthen DNA capacity to enhance initiation of CDM
- *Put in place good investment climate*
  - Incentive package required
  - Needs appropriate policies that encourages investment such as tax relief
  - Develop CDM investment policy
  - Train local host on contracts / business partnership. This will help them understand terms and agreements during contract signing
  - Management codes of conduct
  - Institutionalise CDM concept in the existing legal instruments
  - DOE as a UNFCCC focal point should be prepared to handle CDM related issues
  - TIC and DOE should disseminate the knowledge on CDM. Other institutions also should assist (COSTECH, CEEST)
- *Information point*
  - Create information centre e.g., website, email etc
  - Create capacity within Tanzania Investment Centre (TIC)
  - Establish database and information centres
- *Low cost technology*
  - Use locally available raw materials
  - Provide tax exemption to imported small-scale CDM energy project equipment
  - Environmentally friendly project

- *Infrastructure and communication*
  - Investor needs to know the status of the infrastructure such as reliable roads, communications etc
  - Low cost and reliable communication system
  - Government to improve infrastructure using road fund
  
- *Simple , transparent and efficient system*
  - Avoid corruption
  - Minimise bureaucracy
  
- Sustainability benefits
  - The project should provide employment opportunities for the people / local community
  - Train NGOs to implement projects
  - Develop sustainability indicators

The discussions were focussed in Kenya and Ghana to examine the issues of the actual institutions and procedures that would be involved in the process. The starting point was the existing available structures for the CDM in the host countries.

### ***3.4 Existing Country Institutional Structures***

Table 3-3 gives a picture of what is happening in each country and a comparison across the countries

**Table 3-3 Existing country CDM Structures**

<b>Structure or Situation in country</b>	<b>Tanzania</b>	<b>Kenya</b>	<b>Ghana</b>
Ratification	Ratified	Not ratified	Ratified
Designated National Authority	Division of Environment	NEMA?	Ministry of Environment and Science See diagrams
National office for project developers	No national office for project developer focus	No national office for project developer focus	See diagrams
Committee for project appraisal	none	none	National Climate Change Committee
Any existing structure	FDI Tanzanian Investment Centre (TIC)	FDI	See diagrams

### ***3.4.1.1 Summary***

It was interesting to note that each country was at a different stage in its development of structures to deal with the CDM. Kenya has not ratified and seemed to be the furthest behind of the three countries in progressing the CDM. This was in direct contrast to the awareness of industry and NGOs who were keen to progress matters and who were knowledgeable and informed on the issues.

Tanzania has ratified and seems to have some structures in place but have not developed these sufficiently yet to handle the CDM. There was a lot of interest and knowledge on the CDM but little government support at this stage. Ghana on the other hand at the governmental level has ratified and progressed the furthest with existing and proposed structures as illustrated in Figures 3-4 and 3-5.

**Figure 3-4 Current Ghanaian CDM Structures**

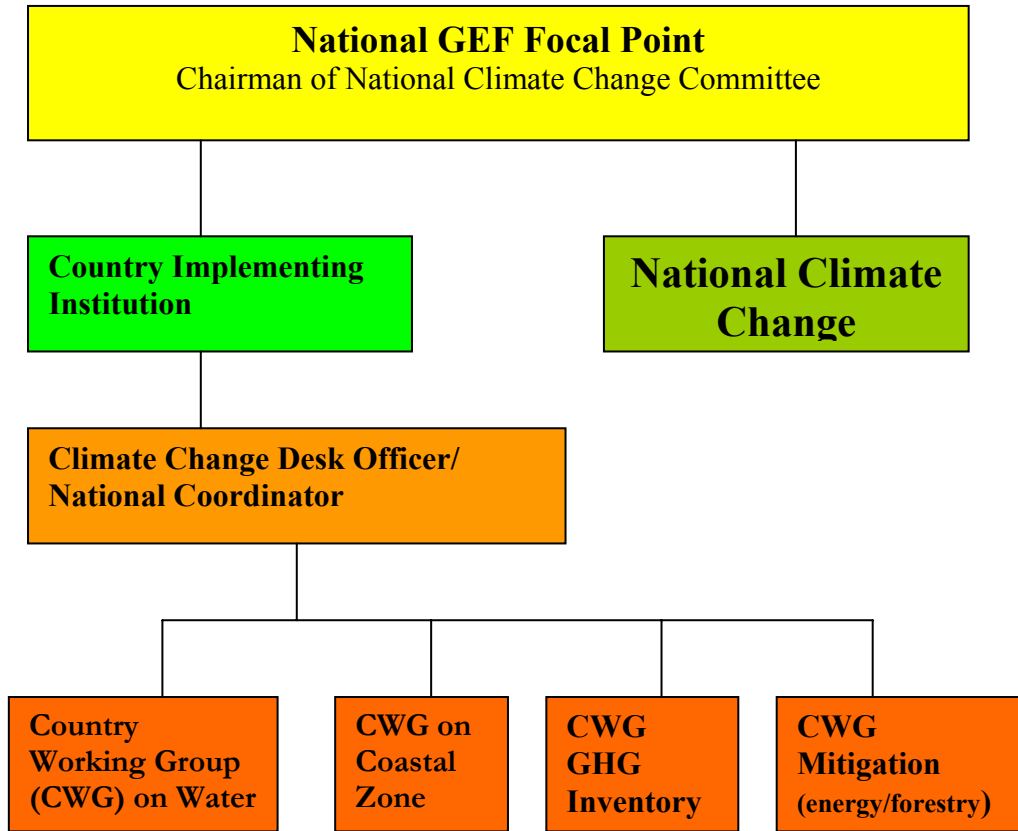


Figure 3-5 Proposed CDM Institutions in Ghana



### ***3.5 Proposals for Institutional Structures for small-scale projects from the discussion groups***

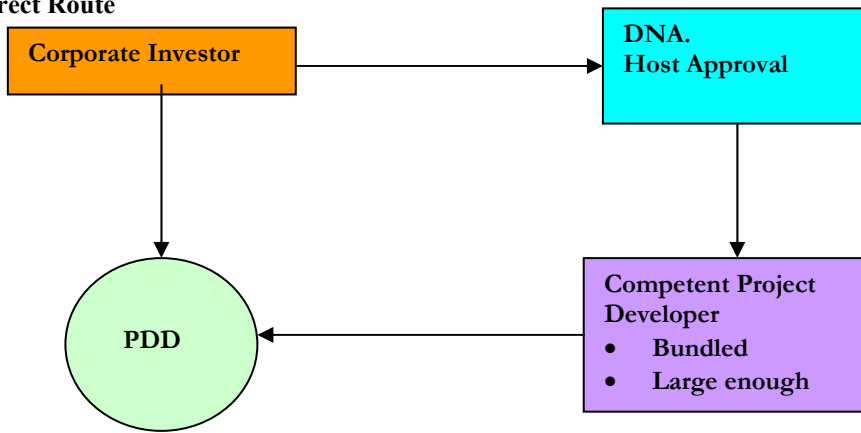
The workshops in Kenya and Ghana focussed on what the procedures and institutional structures would be for an investor with a project that needed to be bundled who wanted to minimise their risk and time and so was looking for a streamlined system to progress the approval of the project.

#### **3.5.1 Kenya**

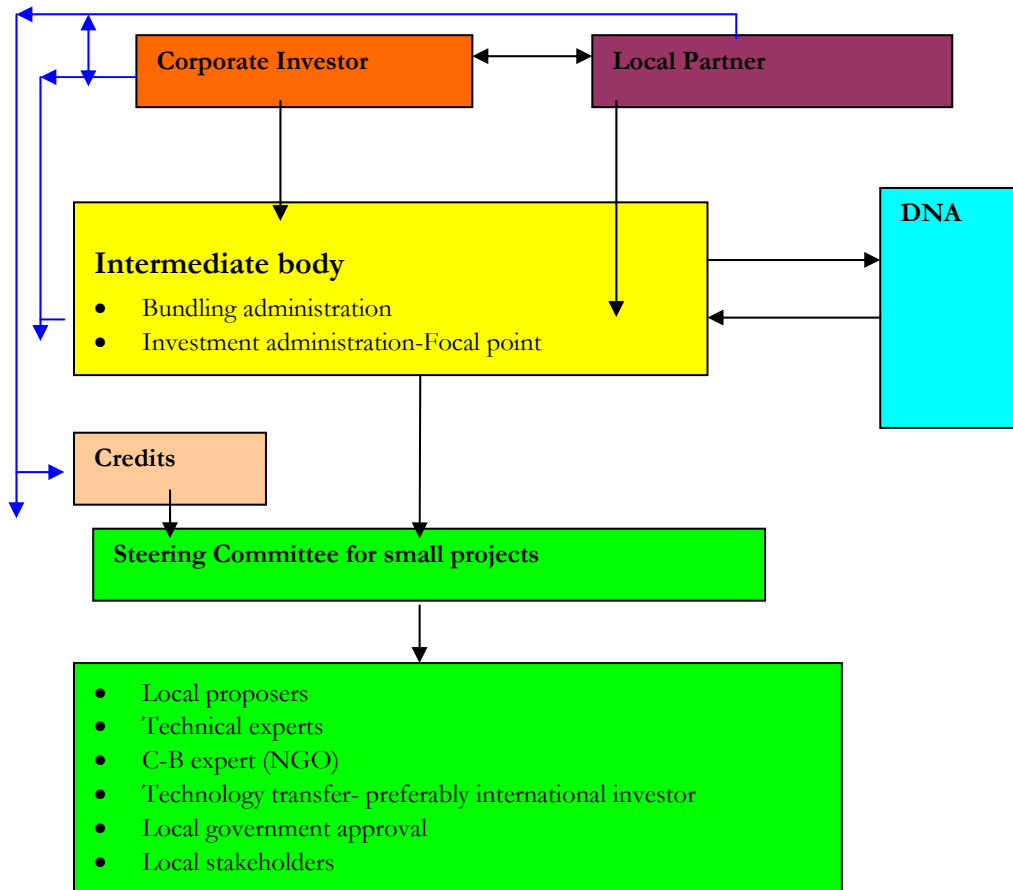
Two sets of proposals were generated with many common elements. In the first, three different routes were proposed depending on the circumstances of the project. These were the direct route, the indirect route for small individual projects and a one stop shop. The direct route would apply for a competent project developer with a large bundled project with a corporate investor coming into the DNA as a focal point. The investor is competent to bundle and implement the project with the necessary capacity building.

**Figure 3-6 Different routes for Investors in Kenya**

**Direct Route**



**Indirect Route for Small Individual Projects**

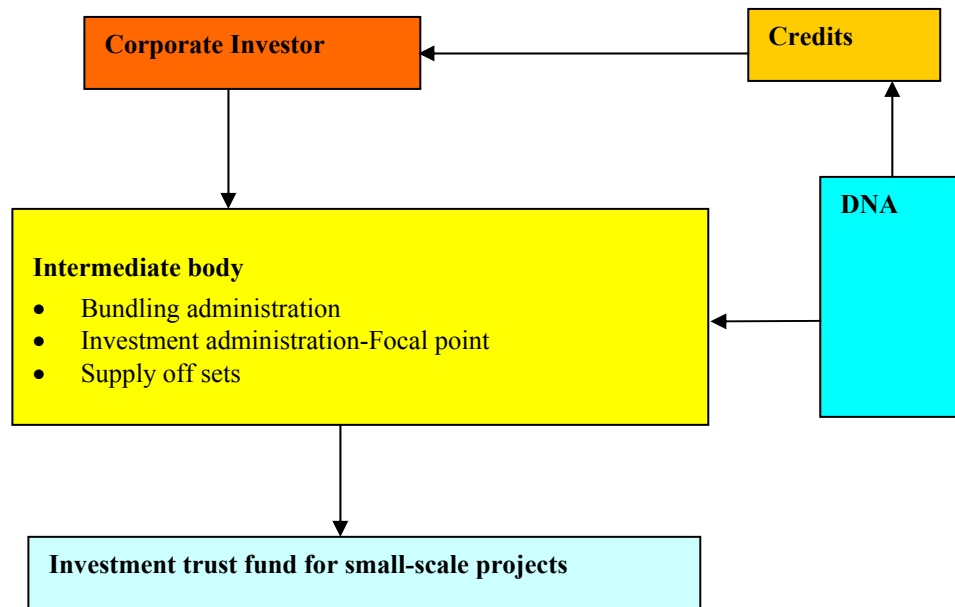


Credit possible cash flow in projects



In the indirect route, small individual projects are processed and bundled by an intermediate body who has the role of bundling administration and can act as a focal point for financing projects and finding local partners. The intermediate body (IB) also handles the project approval by the DNA. The credits can be used as a possible cash flow for the project. The investor can get involved with a local partner directly or through the IB but not with the project in detail. This is handled by a steering group of relevant stakeholders.

**Figure 3-7 One Stop Shop Version one.**

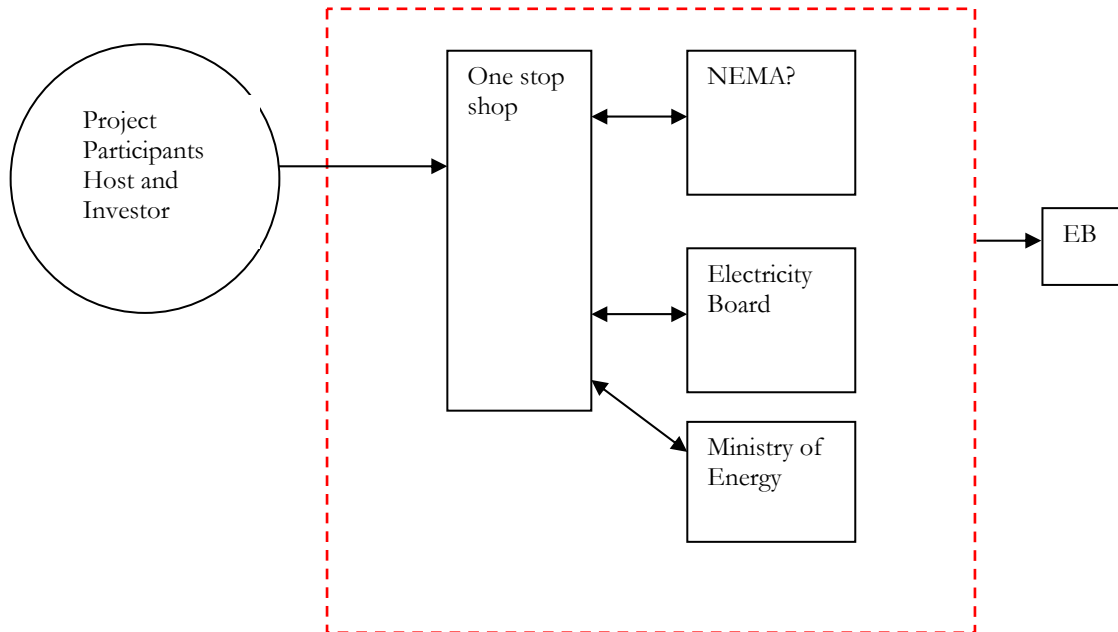


In this one stop shop, the investor is not interested in implementing the project themselves but can access the CERs through investment via the intermediate body. Small-scale projects are financed through a trust fund set up with investor money not linked to a specific project but with guaranteed credits.



Another group proposed an alternative version of a one-stop shop as described in the diagram below.

**Figure 3-8 One stop shop version 2**



### **One Stop Shop**

One suggestion was for NEMA to be the one stop shop, which would play a key role in the CDM process, and its composition should be flexible so that expertise matches the projects. The key roles of the one stop shop would be as follows.

- Coordinate and link up groups
- Perform the role of bundling
- Link up project proposers with government institutions depending on the proposal
- Act as a resource centre where information on CDM is stored. Proposers can get information there.

Some suggested institutions

- Climate Network Africa (CNA)
- African Centre for Technological Studies (ACTS)
- Intermediate Technology Development Group - Eastern Africa (ITDG-EA)

It was noted that if there were so many players in the approval institution, it was likely to discourage potential investors and thus the rationale for the one stop shop.

Since there are different types of investors there may be need to have different types of frameworks to deal with the investors. If NEMA is involved there are concerns about its

authority . NEMA would be a co-ordinating body and not an implementing organisation. These different roles must thus be kept separate.

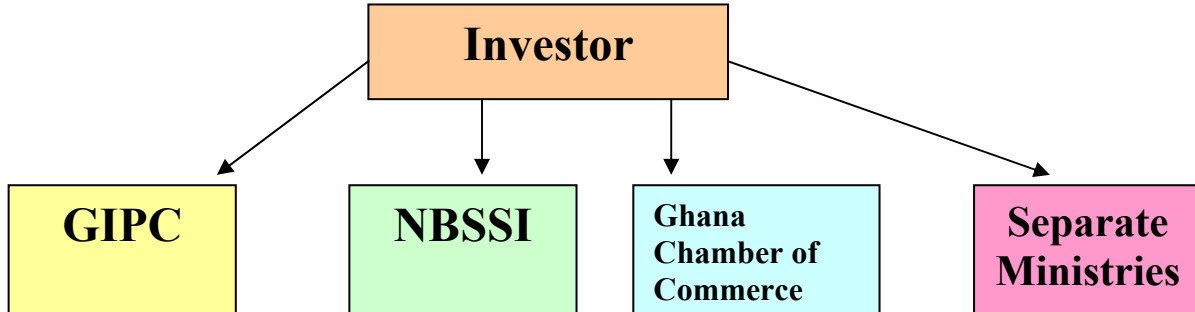
### 3.5.2 Ghana

In Ghana, the detailed interfaces were discussed and suggestions were made. However it was clear in discussions that the roles of existing ministries had all to be taken into account which may slow down the process. A more streamlined approach may be required. The proposed interfaces are illustrated below.

#### NEEDS OF GHANA

- Ensure sustainable development benefits
- Competence in negotiations
- Minimize costs and maximize benefits
- Technology transfer
- Align with other development goals

**Figure 3-9 Interfaces for partners**



## Administration of Projects

### Option 1

- Expand NBSSI
- Bundling administration
- Project Assessment

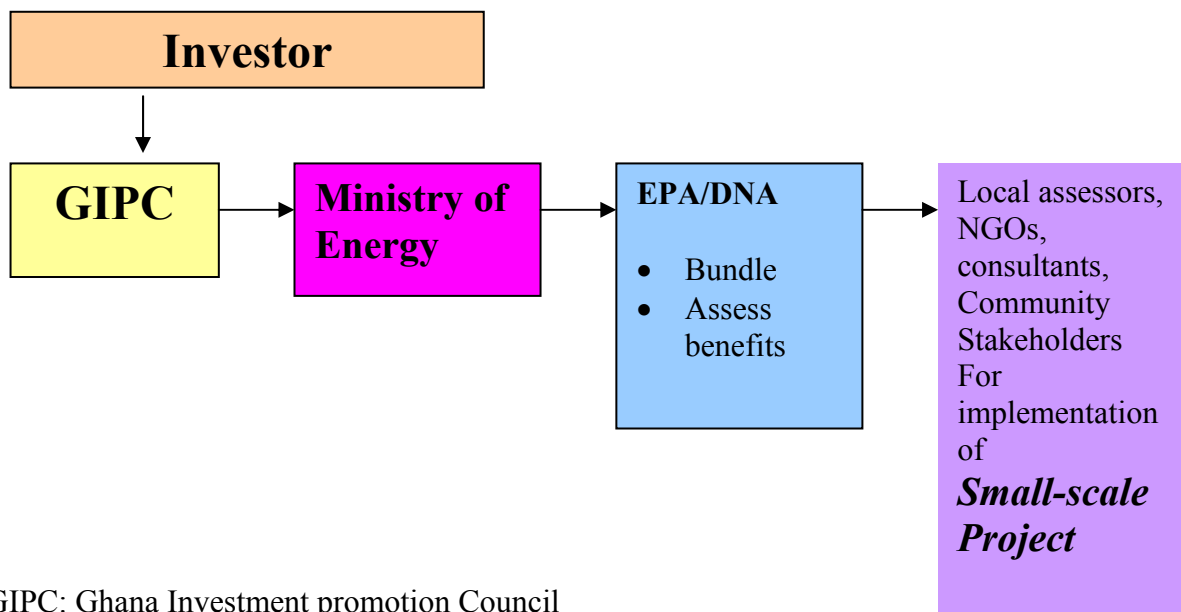
### Option 2

- Separate Sector Ministries for Bundling

### Option 3

- Ensure sustainable development benefits

Figure 3-10 *Administration of projects*



GIPC: Ghana Investment promotion Council

### 3.5.2.1 Implications

How a simple streamlined procedure for approval of small-scale projects would be carried out in practice in host countries is not clear. There is a temptation to use the same systems for Foreign Direct Investment as for these projects. This would effectively prevent any small-scale projects being undertaken. A new approach is needed and the discussion groups started to come to terms with some of the issues in the suggestions

being made above but of course these can only be preliminary given the limited time available. The main issues concern the following elements of the process.

#### Investor complexity:

- Some investors will be competent to carry out small-scale projects and will be able to bundle and administer the project as well as carry out the required capacity building.
- Some investors without development experience should not implement projects without an appropriate partnership with an NGO or other organisation. Assistance with bundling administration may be required. For small projects not already part of a programme this provides an opportunity for an intermediate body to bring projects together to be bundled to save transaction costs. We have discussed possible ways in which projects could be bundled in detail in Attachment 4 to the report.
- Some investors only want to be supplied with CERs in return for their investment. This is the model used in Costa Rica for the carbon sink projects involving thousands of small farmers. In that case the government takes the risk and guarantees the offsets to the investor. They then administer the bundled project through the small farmers. This is one one-stop shop model.

#### Simple systems

- Some sort of template would be useful for host countries to enable them to offer a simple procedure to investors. The system devised has to take account of the following.
  - Assessment of the sustainability benefits from the projects. Additional actions may need to be prescribed to make the project suitable as described in Attachment 3 to the report.
  - Check that there is equity in the project partnership and competent people are to implement
  - CERs applications to EB where bundled project is administered internally and donor investor is external to the project.
  - Interface for dealing with project implementation organisations for bundled projects without competent investors
  - Registry for reductions and CERs is available for tracking.
  - Possible partnerships are available for investors through a project office central contact point
  - Financial mechanisms through local banks are available for funding especially for unilateral projects.
  - Information on country resources, legal systems etc and advice is available.
  - Internal management system with timed procedures to enable approvals to be given within 4 weeks maximum.
  - Investors should not have to pass from Ministry to ministry and all should be in house if possible.
  - Transparent procedures open to inspection to avoid corruption.

#### Institutional structure

- Resources have to be allocated to do the job with trained personnel
- The final approval procedures should be simple and direct so that there is no conflict of interest and no delays
- The chain of responsibility should be clear.
- Subcontracting to local expertise where none is available in house should be possible especially at the start until experience is accumulated.

#### Bundling Administration

- This was not dealt with in detail but the main model discussed was bundling within the CDM government office. In fact this could be a flexible arrangement with some projects being bundled by the developers before the submission for approval while others may need to be collected together by the projects office and bundled at that stage. Green et al (2003) suggest a commercial entity for bundling.

## 4 Final action list for countries

At the Kenya and Ghana workshops participants were asked in the closing session to give one action they would take to move forward on the CDM. Though the following contains some of the elements that have been discussed earlier it also includes new constructive actions such as the suggestion for one body to coordinate CDM events in Kenya to keep track of all the different initiatives. It provides an indication of the priorities and way forward for further work and capacity building on the CDM.

### 4.1 Kenya Action Plan

- Sensitise government and financial institutions to CDM and to ratify the Kyoto Protocol and set up national office speaking with one voice
- University of Surrey and local university institutions to develop framework for capacity building on the CDM
- Resource mobilisation for projects
- Effective coordinating body. For example ITDG could coordinate with other institutions and organisations to keep track of what is happening in Kenya on the CDM
- Sustainability assessment should be extended to forests.
- Replicate successful projects
- Every one to visit the relevant websites including BEA website to find out more about the ongoing activities.

<http://www.surrey.ac.uk/CES>

<http://www.surrey.ac.uk/eng/ces/research/ji/index.htm>

<http://www.itdg.org>

[www.BEAINTERNATIONAL.ORG](http://www.BEAINTERNATIONAL.ORG)

<http://unfccc.int> and [www.unfccc.org](http://www.unfccc.org)

<http://prototypecarbonfund.org>

<http://www.undp.org/seed/eap/html/climate.htm>

<http://www.ifc.org>

- Build a programme to fit projects into CDM process
- Consider getting SME's involved in the process
- More training on assessment of sustainability using the Sustainable Livelihoods approach and the MCA
- Building on the projects studied, need to see how to get this initiative on board at government level.
- More inclusion of the community in the process so that they get some equity from this.
- Need to develop a complementary project approach and fit current development priorities instead of trying to discredit KENGEN and the micros.
- Emphasise positive aspects of the CDM
- CDM approval process must be better than existing system- develop the process and the criteria. Approval process is bureaucratic. Panpaper has been trying to get a Micro Hydro - a 20 MW plant on river Yala but approval never came through
- Data collection and archiving is important
- Develop a way forward for the cement and sugar industries in the CDM
- NEMA to look at how CDM fits into its activities
- Follow up exchanges for information
- Develop a process for project identification
- Capacity building for local people
- Directory of CDM who's who
- Programme on CDM for the transport sector eg standards, MOT, testing authorities
- Need policy shift to focus on energy supply, i.e. generate more with local resources than the use of independent power producers (IPPs) using thermal power.

## ***4.2 Ghana Action Plan***

- Creation of a Central National Authority should help crystallize all ideas into a cohesive whole.
- Training of trainers in CDM is very necessary.
- Capacity building should not be limited to the short term but should be extended to educational institutions in the long term
- Advocacy needs to be strengthened
- Setup a CDM specific foundation
- Get professionals on board to serve as motivational factor for the group
- We should know where we are coming from and where we want to go with CDM
- Annex 1 countries should do more than they are doing now
- Increase awareness among policy makers
- Increase general awareness and encourage more advocates of CDM
- Explore funding possibilities
- Continuous/vigorous sensitisation and education of policy makers
- More NGOs need to play advocacy/sensitising roles to add to what KITE is doing. (E.g. Energy Commission's role in getting taxes on CFLs removed)

- Strengthen institutional capacity building
- Need to build expertise to write CDM proposals
- Use existing projects to learn more about the CDM
- Technical advancement, national institutes for CDM
- Move out of theorising and develop real models and projects
- Develop Public/Private Partnerships
- Capacity building at all levels – policy makers, students, communities, and include the issues in the school curriculum
- The Public Utilities Regulatory Commission and the Energy Commission to develop proposals among others to provide green and efficient energy (e.g. as in the case of the cogeneration project that KITE is looking at)
- Motivate the public sector to work with CDM
- Create awareness about the CDM within the private sector
- Development and publicising of technical specifications to generate interest of private investors
- Comprehensive Database on CDM issues
- Educate financial institutions to know what is going on in CDM. There is currently no awareness within the Ministry of Finance
- Establishment of CDM Office
- Issues of projects development, and capacity building
- Make CDM an attractive project to sell

#### **4.2.1 Way Forward and future work**

These lists of actions represent an indication of way forward for the countries concerned and their need for targeted capacity building. It is interesting to note that the recurrent themes are

- Specific training on the CDM, sustainability assessment and preparing PDDs for projects as well as long term inclusion into educational courses
- Technology transfer for local manufacture and skills
- Government commitment and resources for a national office and other institutional structures for the CDM
- Awareness raising at all levels particularly in the financial sector for funding
- Compilation of a national database for baseline data with mobilisation of existing resources
- Alignment of national legal and policy environment with the CDM
- More projects as demonstrations and templates

There are also several different initiatives on the CDM being undertaken by different organisations in the host countries making it difficult to keep track and develop an overall picture. For that reason it was suggested in Kenya, but it applies to all the countries, that there should be a co-ordinating body assigned the task of keeping track of activities and disseminating the information to others. A government office or an independent NGO could carry out the co-ordination.