



Report 2009-029

**Capacity Building for  
CDM in the United  
Republic of Tanzania**

# **Capacity Building for CDM in the United Republic of Tanzania**

Commissioned by  
NORAD

## Table of Contents:

ABBREVIATIONS .....	I
EXECUTIVE SUMMARY .....	1
1 BACKGROUND.....	5
1.1 Objective and outputs .....	5
1.2 Methodology and team .....	5
1.3 Document review .....	5
1.4 Pre-visit contact and interviews .....	6
1.5 Interviews during mission.....	6
2 CDM/CC CAPACITY BUILDING INITIATIVES.....	7
2.1 The CD4CDM programme .....	7
2.2 UNDP-UNEP CDM Capacity Building Programme.....	7
2.3 Other CDM related capacity building efforts .....	8
3 STATUS OF THE DNA AND SUPPORTING INSTITUTIONS.....	12
3.1 Institutional location, staff and management.....	12
3.1.1 Division of Environment - DNA .....	12
3.2 Regulation.....	13
3.2.1 Procedures for project approval.....	13
3.2.2 National sustainable development criteria.....	13
4 ORGANISATIONS WITH CDM CAPABILITIES .....	15
4.1 Commercial project developers .....	15
4.2 The national NGO's.....	15
5 SUMMARY OF CDM PROJECT CONCEPTS.....	19
6 CONCLUSIONS AND RECOMMENDATIONS.....	23
6.1 Conclusions.....	23
6.2 Institutional support .....	23
6.2.1 Institutional support to energy .....	23
6.2.2 Institutional support related to forestry.....	24
6.3 Other fast track interventions.....	24
6.3.1 Donor coordination .....	24
6.3.2 Support for PINs and PDDs.....	25
6.3.3 DNA training and support.....	25
6.3.4 Local consulting/advisory capacity .....	26
6.4 Programmatic interventions.....	26
6.4.1 CDM Programme of Activities, PoA.....	26
6.4.2 Biofuels.....	27
6.5 Recommendations.....	27
APPENDIX A: MISSION PROGRAMME .....	29
APPENDIX B: CDM STAKEHOLDERS CONTACTED.....	30
APPENDIX C: LIST OF LITERATURE .....	32
APPENDIX D: TERMS OF REFERENCE .....	34
APPENDIX E: CRITERIA FOR CDM PROJECT EVALUATION .....	38

## Abbreviations

A/R	Afforestation/Reforestation
AM	Approved Methodology
CC	Climate Change
CD4CDM	Capacity Development for CDM
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CER	Certified Emission Reduction (for CDM)
CEEST	Centre for Energy, Environment, Science and Technology
CO <sub>2</sub>	Carbon Dioxide
DNA	Designated National Authority
DoE	Division of Environment
DOE	Designated Operating Entity
EE	Energy Efficiency
EB	(CDM) Executive Board
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EPMS	Environmental Protection Management Services
FAO	Food and Agricultural Organisation
FCPF	Forestry Carbon Partnership Fund
GEF	Global Environmental Facility
GHG	Greenhouse Gas
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
LFG	Land fillgas
MDG	Millennium Development Goals
MEM	Ministry of Energy and Minerals
MOU	Memorandum of Understanding
NAPA	National Adaptation Programme of Activities
NEMC	National Environment Management Council
Norad	Norwegian Agency for Development Cooperation
PDD	Project Design Document
PIN	Project Information Note
PoA	Programme of Activities
PV	Photovoltaic
REA	Rural Energy Agency
REDD	Reduced Emissions from Deforestation and Degradation

REF	Rural Energy Fund
TMA	Tanzania Meteorological Agency
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URC	UNEP Risø Centre
UTIP	Technical Unit for Hydropower Implementation
VPO	Vice Presidents Office
WB	World Bank

## Executive Summary

### Abstract

*This report presents an overview of existing Clean Development Mechanism (CDM) capabilities in Tanzania, identifies areas of knowledge-gaps and lists potential capacity building initiatives that could assist in closing the gaps. Recommendations for targeted assistance are made with the aim that this should contribute to a functioning CDM infrastructure and the development of projects that are eligible under the CDM.*

### Priority areas for CDM capacity building in Tanzania

*Overview: Barriers, CDM capability status and possible capacity development interventions*

Tanzania has benefitted from a large number of CDM and climate change capacity building programmes and some 16 development agencies or United Nation organisations have ongoing support initiatives related to the CDM. During our mission to Tanzania several representatives from development agencies had the view that the level of institutional support for CDM in Tanzania is too high. Any new initiative, therefore, must be carefully considered in order to ensure that it does not duplicate ongoing programmes and that it meets priority needs of the authorities and their capacity to absorb additional support.

Development agencies are now taking steps to coordinate support programmes. To the extent that Norway will engage in CDM capacity building in Tanzania, interaction with and active support to donor cooperation activities is essential.

There are sections in the national development criteria that appear not to be conducive to CDM project development. Stringent criteria for national approval and a high (and not size specific) administrative fees (2.5 per cent of total CERs upfront of final project approval with the DNA) has already discouraged developers with apparently viable CDM projects. Support from Norway to CDM project development (PDD and methodology support) should therefore be considered carefully.

### *The DNA*

The Designated National Authority (DNA) for the CDM was established already in 2005. The DNA secretariat is located within the Division of Environment at the Vice Presidents Office (VPO). The Climate Change Secretariat is staffed by five officers. Support to this institution seems to be adequately covered through a Danish Capacity Development program, as well as programmes from UN organisations.

Our assessment is therefore that there is no need for Norwegian intervention in support of the DNA. However it is recommended that Norway points out to the VPO as well as the line ministries how fee levels at the DNA, as well as the stringent criterion for national project approval discourage CDM project development in Tanzania, and as such make the country lose out on opportunities that will not be financed otherwise.

### *Other institutional support*

Support to government agencies is relevant in order for these to fully understand and help promote CDM project developments, and on a broader basis for them to take an active part in the work of the National Climate Change Steering Committee. In Tanzania, however, the number of initiatives is high and coordination should and could be improved. Currently there is an ongoing process where the development agencies under a Danish initiative are mapping the different programmes, and within this year a programme for coordination of the development partners will be initiated. Until this programme is ready, we recommend that Norway focuses on addressing CDM and climate change issues within the ongoing programmes with forestry and energy institutions such as the support to the Division of Environment, the Division of Forestry and Beekeeping, and through cooperation with institutions like the Ministry Energy and Minerals.

### *Institutional support to energy*

Tanzania has potential for both large and small scale energy projects within hydro, wind and natural gas. There are currently ongoing programmes from the World Bank, EU and Sweden supporting the Rural Energy Agency (REA) in developing small scale energy projects. Larger energy projects in hydro, wind and natural gas are under development with international companies, and projects developed with assistance from international consulting companies (i.e. EPS-Camco) have developed PDDs and are requesting approval from the DNA. In terms of institutional support it appears that the potential for developing projects in the energy sector under CDM are being adequately considered and developed. The main issue for larger energy projects is now to solve the outstanding issues with the DNA.

### *Institutional support related to forestry*

The potential for projects within the forestry sector is substantial, and project developers like Green Resources are in the process of preparing PDDs. However, for a project developer to submit an afforestation or reforestation project proposal under the CDM, the host country is obliged to have agreed upon a common definition of “forest”. Currently Tanzania has not registered a definition of forests with the UNFCCC, and any forest project under CDM is at the moment excluded.

Based on its close ties with the Tanzanian forestry sector, Norway should determine whether Tanzania has a forest definition, and ensure that this definition is formally communicated from the Division of Forestry and Beekeeping to the DNA, and thence to the UNFCCC. If there is no definition, Norway should point out the consequences of this and encourage the Division of Forestry and Beekeeping to determine one

### *Support to project developers and projects*

The report has identified some 16 projects that are at some stage of developing PINs or PDDs. The projects range from forestry and energy to programmatic project approaches. Further, there is a large potential for projects within all sectors, examples including cogeneration at the sugar cane factories and sisal plantations, projects within the Rural Electrification Agency portfolio, fuel switch projects in industry and of course projects related to land use and forestry. Existing and planned programmes to support project development are many and seem adequate in order bring CDM-projects up to PDD-level. This is also valid for capacity building within consultancy companies like

EPMS and CEEST which currently are supported from two different capacity building programmes.

The only intervention recommended is to make the consulting agencies and project developers aware of the support mechanisms for CDM-project development NORAD already has available. Several of the projects identified in this mission might qualify for support, and have also requested assistance for developing PDDs. Norway should use its influence to assist the two project developers Green Resources and EPS-Camco in clarifying the outstanding issues there might be with the Designated National Authority.

### *PoA*

The newly approved “CDM Programme of Activities” (PoA) process is a methodology where a project document is prepared for a large programme with many small sites, even if not all of those sites are known in advance. This allows the coordinating entity of the programme, whether a public or private entity, to apply for carbon credits for the entire programme, and pass those benefits along to the individual site owners.

The access to electricity in Tanzania is low. As just 10 per cent of the total population have access to the electricity grid, and only 2 per cent in rural areas, the most common source of fuel is woody biomass, and the pressure on existing forest resources is increasing. Energy efficiency projects with more efficient cooking stoves is one example of an exercise that could qualify under the Programmatic CDM (PoA) approach. TaTEDO has prepared a PIN for such a programme, and is one of the projects that could be considered for PDD support under the NORAD facility for such projects.

Another likely area for applying the PoA approach is for small scale renewable energy technologies such a solar PV systems, solar water heaters, micro hydro projects, or micro-scale wind turbines. The Rural Energy Fund, REF, being fronted by the Rural Energy Agency is the logical place to apply this approach, because they are charged with implementing donor-funded programmes for micro-hydro schemes, solar PV systems in institutions (e.g. schools, clinics), and residential solar PV systems, among other things.

Currently Sweden, the World Bank and EU are supporting REA, and the support from the three donors should cover the need for external assistance in terms of PDD development under this programme whether it is PoA or “standard” CDM projects.

### **Recommendations**

The following concrete recommendations are made for interventions from Norway to facilitate more CDM-projects in Tanzania, in order of priority:

1. Development agencies are now taking steps to coordinate support programmes. To the extent that Norway will engage in CDM capacity building in Tanzania, interaction with and active support to donor cooperation activities is essential.

Until the outfall of the ongoing stocktaking assessment of donor programmes and coordination is known, we recommend that Norway address CDM and climate change issues in the ongoing programmes with forestry and energy institutions such as the support to the Division of Environment, the Division of Forestry and Beekeeping, and through cooperation with institutions like Ministry of Energy and Minerals.



2. Norway should initiate a dialogue on a higher political level, bringing current obstacles to CDM project development in the national CDM framework to the VPO and Presidents Office attention. Tanzania is losing investments due to stringent criteria in the existing framework. The potential for CDM project development in Tanzania is considerable, ranging from fuel switch projects and landfill to hydro and A/R-projects, but they do not appear attractive in the current investment climate.
3. Tanzania has not yet communicated the national forest definition under CDM to the UNFCCC. As it is a requirement to determine baseline scenarios' in A/R projects, any A/R project in Tanzania is currently blocked from being registered.

Based on Norway's close ties with the Tanzanian forestry sector, Norway should establish whether Tanzania has a forest definition, and ensure that this definition, when ready, is formally communicated from the Division of Forestry and Beekeeping to the DNA, and thence to the UNFCCC.

4. It is recommended that Norway assists Green Resources and ESD-Camco to clarify any outstanding issues there might be with the Designated National Authority. Pending on a positive validation from a Designated Operational Entity, these two project developers have projects that, if registered by the UNFCCC, could open the forestry and energy sector for more CDM-part-financed projects.
5. Norway should make the local consulting agencies like CEEEST, EPMS and TaTEDO aware of the support mechanisms for CDM-project development Norway already has available. For PINs and PDDs the need for support is on a technical level, providing knowledge on the technical calculations of baselines and CERs. Norway could integrate the support mechanism into a formal project development programme, which would involve a first step project review, followed by provision of support for PDD preparation to local consultants and project developers where relevant.

# 1 Background

## 1.1 Objective and outputs

The primary objective of this project was to map existing CDM capabilities within Tanzania, identify areas where gaps in knowledge exist and provide a list of potential capacity building initiatives that could assist in closing the gaps. This was done through background research, a series of interviews with potential project developers and stakeholders, and a review of documents collected prior and during the mission.

The outputs from this project are an assessment of the current status of the Tanzanian CDM capabilities and gaps and a recommendation for a path forward for targeted assistance.

## 1.2 Methodology and team

This assignment commenced in early January and a field visit in Tanzania 14<sup>th</sup>-21<sup>st</sup> January was carried out by Knut Ødegaard with support from Econ Pöyry's office in Oslo by Francois Sammut and Maja Tofteng. Inputs and support from the Norwegian Embassy were made by Marianne Damhaug, Ivar Jørgensen and the ambassador Jon Lomøy.

The methodology used in this and other country studies (Uganda, Angola and Mozambique) is described in the table below:

Ref.	Task	Output
1	Desk study and field work preparation	List of project developers, officials, and other experts to be consulted, scheduling visits when possible. Outline of areas to be addressed in field visit. Preliminary assessment of CDM capacity in each country based on review of publicly available and assessable information.
2	Field visit/interviews	Descriptive presentation of the DNA function and available information on potential CDM projects, identification of potential areas.
3	Report	Presentation of main findings, conclusions and recommendations, including specific proposals to assist countries in strengthening institutional framework for CDM facilitation.

## 1.3 Document review

The team first collected reports and other information on ongoing and previous capacity building programmes in Tanzania (see Section 2), including PINs and draft PDDs and assessments from other development agencies and NGO's were also collected, as well as available and relevant Tanzanian policy documents and information relevant to the Climate Change Unit /DNA function in Tanzania (section 3).

These documents were reviewed in order to prepare for the field visit, identify contacts and potential project developers, and also to identify potential CDM projects that could be supported.

## **1.4 Pre-visit contact and interviews**

Almost all of the CDM stakeholders listed in Appendix B were contacted prior to the mission to check the status of their project ideas, assess whether or not they were likely to have projects or valuable inputs to the report, and set up appointments for the mission.

## **1.5 Interviews during mission**

During the mission to Dar es Salaam an introductory meeting with the Norwegian Embassy was held, followed by meetings with other relevant embassies, Tanzanian officials, public- and private sector stakeholders. A summary of these discussions is presented in Section 5.

## **2 CDM/CC capacity building initiatives**

Capacity building has been accommodated both in the public and the private sector through a number of CDM awareness workshops, training seminars, computerised learning courses on CDM and specific interventions. In the following we describe two of the ongoing programmes that have targeted the CDM in particular. The remaining 20-ish initiatives are summarised in tables 1 and 2 below.

### **2.1 The CD4CDM programme**

In 2007 the UNEP launched the CD4CDM in Tanzania. UNEP Risø Centre is the supporting organization contracted by UNEP to implement the project. The project receives financial support from the Dutch Government and is still ongoing.

The programme is intended to support developing countries in building their domestic capacity to identify, design, approve, transact and implement CDM project activities. Six Sub-Saharan African countries are covered by this programme: Mozambique, Tanzania, Mauritius, Ghana, Uganda and Cotê d'Ivoire. In each country, local experts are leading the programme. In Tanzania the local partners are The Centre for Energy, Environment, Science and Technology (CEEST Foundation) and The Environment Protection and Management Services (EPMS).

The key objectives of this programme are the following:

- Involvement of Government officials and policy makers
- Capacity development among policy makers and government representatives
- Support to the establishment of organisational and institutional framework
- Enhance the capabilities of public and private players to implement CDM projects
- Support to the creation of project pipelines and investment promotion offices.

According to the CEEST and EPMS the CD4CDM has been a successful programme in terms of identifying projects, but the programme has limited focus on establishing local capacity on technical assistance for application of approved methodologies, and development of new methodologies where appropriate. To date all the projects in the CD4CDM remains at PIN or at early PDD stage.

### **2.2 UNDP-UNEP CDM Capacity Building Programme**

The regional UNDP-UNEP CDM Capacity Building Programme (UCCBP) started in Dar es Salaam in April 2008. The programme is intended to support developing countries in building their domestic capacity to identify, design, approve, transact and implement CDM project activities. Six Sub-Saharan African countries are covered by this programme: Mozambique, Tanzania, Mauritius, Kenya, Ethiopia and Zambia. In each country residing experts will lead the programme supported by a regional coordinator based in Addis-Ababa (Ethiopia). The implementation is coordinated with the UNEP Risø Centre (URC) in Denmark, through the CD4CDM. The programme budget is USD 1.5 million for all the participating countries.

The programme builds on experiences from the CD4CDM, continuing with the PIN's developed in the first programme. The main focus is on enhancement of public and private sector capacity to identify, design, approve and implement CDM projects. This will strengthen local capacity to develop CDM project proposals. The programme will also seek to:

- Build links between project developers, external investors and CER purchasers;
- Identify opportunities for carbon businesses;
- Provide technical assistance for application of approved methodologies, development of new methodologies where appropriate (such as A/R CDM projects), and supporting the development of CDM project proposals in strategic sectors through the MDG facility.

In each country a national coordinator is employed with the responsibility of implementing the UNDP-UNEP National work plan involving:

- National scoping studies – involving desk research, compilation of existing materials and original studies – to identify CDM potential and barriers to investment in strategic economic sectors;
- Identification of key CDM stakeholders within Tanzania, and design of capacity-building measures tailored to different stakeholder needs;
- Assist in Project Idea Note (PIN) screening and provide technical support to CDM project developers.
- A series of national training workshops and 'mini-workshops' for stakeholder groups, execute activities conducted jointly with UNEP, including a High-Level Ministerial briefing and combined workshops.

In Tanzania, UNDP employed a fulltime national project coordinator (18 months), but unfortunately the person who was employed passed away. A replacement has not been recruited yet.

### **2.3 Other CDM related capacity building efforts**

Including the programmes described above, there are approximately 16 different organisations active in developing capacity on the CDM, CDM project development or programmes targeting institutional capacity building on climate change that involve the Designated National Authority (DNA).

Most of the projects are funded by the international donor community, the Development Partners (DP). The projects are implemented as part of a donor contribution with international experts involved, and often in collaboration with Tanzanian Authorities and NGO's. Table 1 and 2 below gives a summary of previous, ongoing and planned projects related directly or indirectly to CDM and climate change.

*Table 2.1 CDM-related projects funded through UN organisations*

Time	Project	Partners
Expected start Jan 2009-?	One UN pilot programme. Budget USD 7.5 million for 18 months. Undergoing planning. Expected to start in January 2009.  Building capacity for CDM and for accessing international funding for adaptation. Building capacity for adaptation and mitigation. Demonstration projects on mitigation.	Focus on climate change, land degradation/desertification Mainstreaming CC in all government sectors and Local Government Administrations, LGA's.  The donors are UNDP with FAO, IFAD, UNEP, UNESCO, and UNIDO
2004 - 2008	PV solar energy., USD 3.5 million, , about to be completed. CDM project related	UNDP- supported by GEF with Ministry of Energy and TaTEDO
Ongoing	Biogas energy in prisons, USD 150,000. CDM project related.	UNDP with the Ministry of Energy and NGO participation
Ongoing	Transformation of the rural market for PV energy in Tanzania, USD 250,000, ongoing. CDM project development related.	UNDP – supported by GEF, with Ministry of Energy.
Ongoing	Adaptation Strategies and Challenges Associated with Climate and Ecological Changes to the Lake Victoria Community., USD 69,000, ongoing. Institutional Capacity building on Climate change.	UNDP in cooperation with fishing communities, the Ministry of Natural Resources and Tourism, Sokoine University of Agriculture, and Kingolwira National Fish Farming Centre
Planning	Capacity building for CDM, USD 200,000, in the pipeline.	UNDP/UNEP
Planning	NAPA priority projects, , USD 1.5 – 3 million from GEF. In the pipeline. Will build capacity at DNA/CCU	UNEP with support from GEF, implementation in collaboration with the VPO
2007-2008	Expedited financing for interim measures for capacity building for CDM in priority areas (Phase II), USD 100,000.	UNEP in collaboration with VPO and NGO's CEETS and EPMS
2006-2009	Second National Communication. USD 405,000 for three years ending in 2009. Related to DNA's commitments under the UNFCCC	UNEP in cooperation with CEEST
2007-2010	Capacity Development for Clean Development Mechanism (CD4CDM) EUR 2 million, 2007-2010.	UNEP-Risø in collaboration with CEEST, EPMS and DOE
Unknown	Best practices in energy management in the industrial sector. CDM project development related	UNIDO with Tanzanian private sector
Ongoing	Rural Micro-Hydropower Development. Objective: to identify potential sites for the development of small and micro hydropower schemes. in CDM project development related	UNIDO in partnership with International Network on Small Hydro Power (INSHP), The Ministry of Energy and Minerals, TANESCO and TaTEDO.
Ongoing	Promoting Energy Efficiency in Buildings in East Africa, USD 231,000. CDM capacity building	UN-habitat

*Table 2.2 CDM-related projects funded by bi- and multi-lateral donors outside the UN*

Time	Project	Partners
2009	Support for the UN REDD programme, up to NOK 20 million.	Norway and UNDP
2009-2013	Support for climate-change research programme. Up to NOK 20 million annually, 2009- 2013.	Norway and three Tanzanian universities and the Tanzania Meteorological Agency.
Planning	REDD activities: 1) Support for the national REDD strategy process in Tanzania, 2) NGO-operated demonstration programmes within the framework of REDD, 3) public-private partnerships with private sector partners, 4) REDD capacity-building programmes, 5) development of REDD demonstration areas and implementation of baseline studies, and 6) support for a national REDD fund. Up to NOK 60 million	Norway and Tanzania – DoE
2007-2009	Capacity development on Climate Change, developing the Climate Change unit (DNA) within DoE. Follow-up to NAPA. USD 1 million  Renewable energy, EUR 8 million. CDM project development related  Global Climate Change Alliance, EUR 2.5 million.	Danida in partnership with DoE  EU programme on renewable energy.  EU
2008-2010	Recognizing the role of forest and water in climate change adaptation implemented with IUCN.  Climate Change and Development (Zambia, Tanzania, Mozambique), EUR 2.8 million.	Finland and IUCN
2008-2009	Southern/Eastern Africa CDM Capacity Development (Ethiopia, Tanzania, Kenya, Mauritius, Zambia, Mozambique), USD 1.5 million, 2008-2009,	Finland in cooperation with Spain/Sweden/ UNEP and national DNAs and relevant NGOs
2009-2011	National Forestry and Beekeeping Programme of Tanzania EUR 9.0 million.	Finland in partnership with the Ministry of Natural resources and Tourism and PMO-RALG,
2009-2011	National Forest Monitoring and Assessment of Tanzania (Forest Inventory) EUR 2.3 million.	Finland in partnership with the Ministry of Natural resources and Tourism, FAO and WB.
Ongoing	Regional Climate Change Programme for SADC (Malawi, Mozambique, Tanzania, Zambia, Zimbabwe, Angola), Climate Change Fellowship Programme for doctoral and post-doctoral studies in 12 African “Centres of Excellence”, USD 2 million.	DFID
Ongoing	Bioenergy/clean energy: a regional project, Tanzania funding is GBP 500,000 per year for 5 years.	DFID
2007-2010	Rungwe Environmental Science Observatory network (RESON), USD 120,000	France support to Institute for Resource Assessment, Faculty of Science, University of Dar es Salaam, Ministry of Science and Telecommunications
2007-2009	CDM in Africa (Uganda, TZ, Ghana, Ethiopia), EUR 2.5 million.	Austria in collaboration with national DNAs

Ongoing	Preservation of the mountain forests in the eastern Arc Region., EUR 2.1 million.	Germany in cooperation with UNDP and the Ministry of Natural Resources and Tourism
Ongoing	A programme in 20 countries, each of which is allocated USD 2-5 million,	JICA carried out by UNDP from Pretoria (information from UNDP).
Ongoing	The Environment for Development initiative (EfD). Objective: to support poverty alleviation and sustainable development through increased use of environmental economics in the policymaking process.	SIDA in collaboration with Environmental Economics Unit and Resources for the Future.
Ongoing	Institutional Capacity building in REA and build up REF. Within REA several micro and mini-hydro projects are located that might qualify as CDM projects.	SIDA and WB in collaboration with REA
Ongoing	Capacity Development for CDM	SIDA and the Swedish Energy Agency in collaboration with the Ministry of Energy and Minerals, the VPO, CEEEST and Cornland International

Source: Stocktaking report (unpublished, 2008)

Several of these donor funded projects overlap, e.g. in supporting CDM and capacity development. A joint stocktaking report (unpublished, 2008) of DP programs identifies major overlaps between several of the programmes. One example is the “One UN” Pilot programme and Danida’s support for the Vice Presidents Office (VPO) with regard to climate change and implementation of the Environmental Management Act, EMA. Both programmes are building institutional capacity with the Designated National Authority, yet none of them refer to each other.

The report states that there has been limited information exchange between the DP’s on planned and ongoing activities, and the exchange of information with Division of Environment (DoE) has been limited as well. There is a risk that DP funded projects will duplicate each other, leading to inefficient use of funds and resources and missing opportunities to create synergy.



### 3 Status of the DNA and supporting institutions

The Framework Convention (UNFCCC) was signed by Tanzania in 1992 and ratified in 1996. The Kyoto Protocol was signed in 1997 and accessed in 2002, whereas the DNA was officially established in 2005.

#### 3.1 Institutional location, staff and management

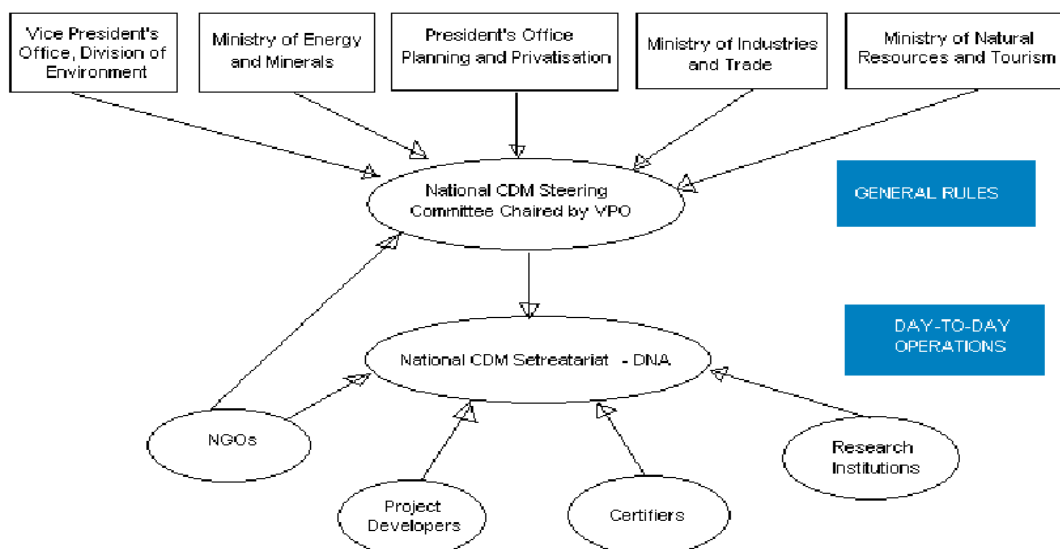
According to the Environmental Management Act, the overall responsibility for ensuring the implementation of all environmental policies, laws and rules belongs to the Vice President’s Office. The Minister of State for Environment works under the Vice President and has overall responsibility for matters relating to environmental management legislation and policy.

The two core institutions responsible for environmental management report to the minister: the Division of Environment (DoE) is responsible for policy matters, and the National Environmental Management Council (NEMC) is the technical entity responsible for enforcement and monitoring.

##### 3.1.1 Division of Environment - DNA

The DoE is the focal point and Designated National Authority (DNA). The DoE has established a Climate Change Secretariat currently comprising five part-time staff members under the Deputy Director in charge of the Environmental Impact Assessment (EIA) Section. The staff is the secretariat for the DNA, dealing with day to day operations. The secretariat is governed by a steering committee chaired by the VPO, and further receives input from various stakeholders such as NGOs, project developers, and research institutions. The generic structure is given in figure 1 below.

Figure 3.1 Generic structure of the DNA



## 3.2 Regulation

A number of policies are governing the operations of the DNA and the CDM. Most important are the “Environmental Management Act (2004)”, the Tanzania Vision 2025, the Environmental Impact Assessment and Audit Regulations (2005), and the National Strategy for Growth and Reduction of Poverty (NSGRP). In addition several other policies, rules and procedures imply that a broad range of sector policies and regulations, e.g. environmental conservation, energy, manufacturing, natural resources or foreign direct investment, are of relevance to the CDM and need to be considered by project developers.

### 3.2.1 Procedures for project approval

The Tanzania DNA approval process follows a two step model in which the investor submits a Project Idea Note (PIN) requesting for *No Objection* to develop a CDM project. This is reviewed along the lines of the sustainable development criteria available and if it is found to suit the requirements of the criteria, a letter of *No Objection* is issued and the investor can continue preparing the PDD.

The final national approval involves the DNA consulting with the Technical/Approval Committee (TC) which assesses the PDD and the projects compliance with the sustainable development criteria. The TC comprises of members from all relevant sectors and NGOs (steering committee in Figure 3.1 above). Once the TC is satisfied, the DNA is given a go ahead to issue a Letter of Approval. The Letter of Approval is issued once the clearance has been given by the Permanent Secretary, Vice President’s Office.

Subject to receiving the final approval, the DNA charges an administrative fee of 2.5 per cent of the estimated CERs produced throughout the project crediting period<sup>1</sup>. This fee is imposed to cover the costs the DNA incurs in reviewing the PIN and PDD for a project, and is charged upfront of any project registration with UNFCCC. According to the DNA the process is standardised, but terms and conditions for price determination, payment and term sheets for the same are not stated in the CDM handbook for Tanzania, nor could it be supplemented from the DNA’s office.

### 3.2.2 National sustainable development criteria

The DNA builds upon existing experiences in the field of sustainable development. This is exemplified in the sustainable development criteria for reviewing CDM projects. The criteria were developed through taking into consideration the Tanzania Vision 2025 and the National Strategy for Growth and Reduction of Poverty (NSGRP) also known as *MKUKUTA*.

The expected development will according to the Vision 2025 provide high quality livelihood; peace, stability and unity; good governance; a well educated and learning society; and a competitive economy capable of producing sustainable growth and shared benefits. The Tanzania Development Vision 2025 therefore outlines the sustainable development needs of the country. CDM projects to be undertaken in Tanzania must support the Tanzania Vision 2025. These are criteria that the DNA

---

<sup>1</sup> CDM Project Handbook, VPO 2007.

enforces strictly; an example of this is one of Green Resources Tanzania's afforestation projects that was rejected on basis of local community ownership. Projects considering CDM in Tanzania should therefore ensure and take note of the following criteria:

- Compatibility with national sustainable development including, ecological and social dimensions;
- Consistency with the national agenda on poverty eradication;
- Congruence with the national environmental policy and related action plans and strategies;
- That all CDM activities require Special and Specific Environmental Impact Assessment (EIA), consistent with the national EIA guidelines and procedures and the national environmental legislation. The DNA determines the kind and level of the required EIA for each CDM project;
- Focus on rural development; improve the life and the livelihoods of the poor and those who are marginalized;
- Be environmentally and socio-economically friendly;
- Create employment opportunities to the community;
- Enhance poverty reduction;
- Improve infrastructure;
- LULUCF activities in CDM be primarily undertaken in the arid and semi arid areas of Tanzania where afforestation and reforestation is most needed;
- Be sustainable and cost effective;
- Really provide financial and environmental additionality;
- Be accepted by the local community; hence rely more on local manpower;
- Transfer the technology and enhance capacity of stakeholders;
- Ensure participation of the benefiting communities and stakeholders in development and implementation;
- Enable Tanzania to leapfrog to new sustainable and affordable technology. Energy projects particularly in rural areas are accorded the highest priority
- There must be a partnership between investor country company or institution and the host country local private company, NGO, Research /Academic Institutions or government department

## 4 Organisations with CDM capabilities

### 4.1 Commercial project developers

**ESD Camco** is an international consultancy company. ESD-Camco is the only resident organisation identified that has capabilities for developing full scale CDM projects within Tanzania. Currently they are involved in three CDM related projects:

1. Artmus: Natural Gas fired power plant in Mtwara.
2. Singida: Wind Farm (50 MW)
3. Mbeya: Fuel switch – cement factory (LaFarge)

Singida has been given a letter of no objection, while the two other projects have been at a standstill for the last year. According to ESD-Camco, there is no progression on the Artmus and Mbeya because the DNA requires payment of the 2.5 per cent fee (up-front) of CER project value, which the project developer cannot see the basis for claiming. The DNA on their side states that the project is at a standstill due to the fact that the government was not informed of the potential for CDM finance during the time of Power Purchase Agreement (PPA) negotiations, and thereby, according to the authorities, concluded the PPA on unfair terms.

**Green Resources Tanzania** (GRT) is a subsidiary of Green Resources ASA, a Norwegian based forestry company with forestry plantations for sequestration of carbon, production of forest products and development of renewable energy projects. They are the organisation furthest along in developing a reforestation CDM project in the region and have developed two project proposals in Tanzania. One has been rejected by the DNA while the second is still being prepared.

The reason for rejecting the first project seems somewhat diffuse. GRT claims not to have received a formal reason, and upon asking the DNA to provide feedback on the proposed PDD and potential improvement, nothing has been received. GRT has also asked the DNA to communicate the “National Forest Definition” to the CDM Executive Board, as this is a requirement for getting a CDM A/R project registered. The “National Forest Definition” is to be provided by the Division of Forest and Beekeeping (DFB). According to GRT the DFB claim to have done so, but the DNA has not received this definition. From the DNAs office the staff says that the reason for rejecting the project is that it does not address the sustainability criteria for CDM projects, specifically on local ownership in the communities in the project area.

### 4.2 The national NGO's

Few Tanzanian NGO's have been working actively with CDM. Amongst the initial screening and subsequent interviews only three Tanzanian institutions seems to put real efforts into understanding the CDM and develop projects. Tanzania Traditional Energy Development and Environment Organisation (TaTEDO), Centre for Energy, Environment, Science and Technology (CEEST), and the Environmental Protection Management Services (EPMS) are all NGOs with experience and capabilities on the CDM. They work in collaboration with International NGO's such as Care TZ, IUCN, WWF

and Oxfam, as well as DP's, International development funds and UN-organisations. An overview of relevant projects the three have been engaged in is given in table 3 below.

*Table 4.1 Overview of National NGO's activities within CC and or CDM*

<b>EPMS</b>		
Time	Type/budget	Details
Complete	Strengthening for Climate Change Cap build, CC in health sector. GBP 15,000	Project in Collaboration with International Institute for Environment and Development, IIED
Ongoing – 2009	South South North Collaboration Cap build on CC.. Eur 35,000	Development of project design: Capacity building in Coastal Communes
2007-2008	Capacity Development for CDM (CD4CDM)CDM capacity Building, USD 49,000 (tot)	Collaboration with CEEST, VPO and UNEP-Risø.
<b>CEEST</b>		
2005-2007	Netherlands Climate change Assistance Cap. Build policy Eur 180,000	Production of technical adaptation policy options based upon the vulnerabilities and adaptive capacities of local communities.
2006-2009	Second National Communication to the UNFCCC. USD 405,000	Prepare climate change scenarios for Tanzania. CEEST and VPO funded by Govt of Netherland and ETC.
2007-2008.	Capacity Development for CDM (CD4CDM)South South North Collaboration CDM capacity Building, USD 49,000 (tot)	CD4CDM in collaboration with EPMS, VPO and UNEP Risøe
2004-2005	Climate Change Technology Needs Assessment CC, USD 100,000	Identify adaptation and mitigation technologies in various sectors of the economy
2008-2009	CDM Capacity Building Programme for Tanzania, Kenya and Uganda Cap.build projects	Provide learning by doing to local CDM project developers.CEEST, Cornland Int and MEM funded by STEM.
2008-2009	Project Catalyst on Adaptation Working Group Cap build policy level.	Facilitate on good agreement in Copenhagen COP15 IN 2009. CEEST & McKenzie International funded by ClimateWorks.
<b>TaTEDO</b>		
Name	Type/duration/budget	Details
Ongoing	Up-scaling access to integrated modern energy services for poverty reduction Community level, Eur 2.5 million	Up-scaling of number of people using modern energy services and supporting development of small enterprises in rural areas. Supported by EU and HIVOS
Ongoing	Integrated modern energy services for sustainable development and poverty reduction (Phase II) Community level, USD 2.9 million	Contribute to sustainable development and poverty reduction by enhancing access to modern energy technologies and services for consumptive and productive needs in households, SMEs and social service centres. Supported by Norwegian Govt.

Ongoing	Integrated sustainable energy services for poverty reduction and environmental conservation programme (ISES-PRECP Phase II) Community Level	Increase income of the rural and urban population through reduced costs and increased efficiency for woodfuels utilization and production by adoption of efficient woodfuels stoves, ovens and charcoal production kilns. EU and HIVOS
Ongoing	Households efficient stone or brick made woodstoves in Rombo and Hi districts Community level, USD 200,000	Improvement of thermal performance of the wood fuels stoves in rural areas through replacing the tree stone fire places by efficient fuel wood stoves. HIVOS

---

## 5 Summary of CDM project concepts

During the mission CDM project developers were contacted to get status on project development. This section summarises the status of the different project ideas discussed with local project developers and the DNA.

Tanzania has considerable resources for clean power generation which include hydro, gas and biofuels. Proven natural gas reserves are estimated at 45 billion m<sup>3</sup> with a potential capacity of 2,100 MW while hydroelectric energy has a potential capacity of 4,700 MW of which only 10 per cent has been developed. Other untapped indigenous energy resources include solar, wind and geothermal energy. A large proportion of the population also still lack access to modern and efficient energy services (90 per cent). The potential for CDM in Tanzania include;

- Landfill gas: So far Tanzania has one project registered (2007); the Mtoni Landfill project. The project is estimated to generate 202,271 CERs per annum and has a power capacity of 3.5MW. The project was implemented by the Dar es Salaam Municipality;
- Fuel switching in the power, industrial, and transport sector: This involves switching to either natural gas or biomass from heavy fuel oil or other non renewable sources of energy. According to the DNA, over 20 processing industries have switched away from HFO/diesel to natural gas since 2005 and 10 more are in process. Mbeya and Tanga Cement projects in the overview below are examples of this;
- Industrial energy efficiency: Mining, processing and production of metals such as aluminium, copper, manganese and gold;
- Coal mine methane: Potential areas include Mchuchuma, Liganga and Kiwira;
- Biomass-cogeneration: Biomass is the largest renewable resource available that can be converted into a variety of fuels. Examples of biomass residues/wastes are rice husks, sisal waste, sugar cane bagasse, coconut shells and corn cobs;
- Renewable Energy:
  - Wind in areas with strong wind like Singida, Makambako, Mufindi, and Kilimanjaro. Norway has been in contact with a Norwegian group, Norsk Vind Energi, who in cooperation with Sino-Tan (Tanzania) are developing a wind project at Makambako, including a complete CDM-study conducted by Norplan AS. Status of this project is un-known.
  - Solar energy: for generating electricity and heat/ drying for industries (e.g., fish processing), public buildings and hotels.
  - Geothermal energy: some potential in volcanic and rift valley areas in Tanzania;
- Afforestation and reforestation: Including community agro-forestry, plantation forestry, rangeland improvement, degraded lands restoration and dry land rice. Norway is currently supporting one Green Resources-project.



In addition to a variety of project possibilities, the tools necessary to develop PDDs are in place; the national grid emission factor has been established and is available from the DNA's office or downloadable from the UNEP-Risoe CD4CDM website<sup>2</sup>.

---

<sup>2</sup> <http://www.cd4cdm.org/tanzania.htm>

*Table 5.1 Overview of CDM-projects in the project pipeline*

Project Name	Status	Type/Size total CERs <sup>3 4</sup>	Status
Singida Wind Energy Project, 50-200 MW	Given letter of no objection by DNA, preparing PDD.	Renewable wind Exp. CER's : 100 kT/yr	Project under exclusivity with ESD-Camco
Artmus Ltd; Fuel Switch from Diesel Gensets to Gas at Mtwara and Lindi	Developed PDD, Issues with DNA on payment of fees.	Fossil fuel switch, Exp. CER's more than 60 kT/yr	Govt of Netherlands secured potential CER's. Exclusivity to ESD-Camco
Carmatech Ltd: Bio-latrine for Methane capture at five prisons in Arusha, Moshi and Tanga	PIN under completion, EPMS Consultants (CD4CDM).	Waste management, Exp. CER's: 7kT	Potential for expansion by bundling more prisons and schools.
Mwaguy an Kyoto Works Ltd: Vinguguti dumpsite gas capture and energy generation project	PIN under preparation (CD4CDM, 2008). EPMS consultants.	Waste management, Exp. CER's 60 kT	Needs additional studies to complement available information to prepare PDD. No good data for baseline determination
Tanzania Planting Company, Moshi: Bagasse Cogeneration at TPC Moshi	Tried to develop PDD but failed, are redoing PIN (CD4CDM, 2008). EPMS consultants.	Biomass Exp. CER's Medium	Need support for preparation of PDD and registration cost.
Katani, Tanga: Power Production from Sisal Waste	PIN completed EPMS consultants.	Biomass Energy,	Needs support for PDD development. Project can be bundled to produce up to 4 MW.
Community Development Cooperation Ltd: "Forest Plantation Project"	PIN under preparation (CD4CDM, 2008). CEEST Consultants.	Afforestation, Exp. CER's Small scale	Needs funding for PDD development and support for baseline establishment.
Safarijet Services Ltd Same and Mwanga Forest Project	PIN under preparation (CD4CDM, 2008). CEEST Consultants.	Afforestation, Exp. CER's: Scale not determined	Needs funding for PDD development and support for baseline establishment.
Tanga Cement Ltd Biomass Cogeneration Project	PIN under preparation (CD4CDM, 2008). EPMS Consultants	Fuel switch, biomass Exp. CER's: more than 60 kT/yr	Needs funding for PDD development and looks for a purchaser of CER's.
Mbeya Cement LaFarge: Mbeya cogeneration project	PDD finished, at a standstill with DNA.	Fuel switch, biomass, Exp. CER's more than 60 kT/yr	ESD-Camco consultants.
Green Resources Tanzania Ltd: Idete Reforestation Project	PDD under development	Afforestation, Exp. CER's more than 60 kT/yr	Has received support from Norway, needs support at DNA level

<sup>3</sup> Estimate of total CERs for varying crediting periods. Forestry projects have stated total sequestration potential up to 2025, others have in a 10 years period. Since none of the projects has been validated, we remind the reader that these figures are estimates only.

<sup>4</sup> Scale definition: Small scale less than 15kT CO<sub>2</sub> equivalents/year, medium scale is between 15 and 60 kT CO<sub>2</sub> equivalents/year /yr and large scale project is above 60 kT CO<sub>2</sub> equivalents/year.

Project Name	Status	Type/Size total CERs <sup>3 4</sup>	Status
TaTEDO: Zege 70kW Microhydro	PIN under development	Renewable, hydro Exp. CER's less than 15 kT/yr	Looking for JV-partner (finance and purchase). Voluntary market
TaTEDO: Energy efficiency in institutional cooking stoves	PIN Complete, given letter of no objection from DNA.	Energy Efficiency, Expected CER's 60kT	Needs funding for PDD development and transaction costs. Considers voluntary market.

Source: DNA, 2009

Table 4 highlights the fact that most of the projects currently in the pipeline claim that they need support and funding for further PDD development. In this respect, Norway's existing support mechanisms for CDM project development could be very relevant, and the relevant consultants and project developers (i.e. CEEST, EPMS and TaTEDO) should be made more aware of the existence of this mechanism. Norway could additionally take a more pro-active approach in using this support mechanism by making it part of a formal project development programme. This would involve a first step where the projects in the current pipeline undergo an independent review, undertaken by international experts, to determine their suitability for CDM and to highlight any associated risks. Those projects which are accepted following this first step would then be eligible for support for PDD preparation. This support should be provided directly to local consultants, although it is recommended that international experts are engaged in a supervisory role to oversee the performance of the local consultants and provide technical assistance in PDD preparation where required. This approach would prove both cost effective and ensure capacity building of local experts. Implementation of this programme should, however, be dependent on the resolution of the issues which are currently blocking approval of the currently proposed CDM projects.

## **6 Conclusions and recommendations**

### **6.1 Conclusions**

Tanzania has benefitted from a large number of CDM and climate change capacity building programmes and some 16 development agencies or United Nation organisations have ongoing support initiatives related to the CDM. During our mission to Tanzania several representatives from development agencies had the view that the level of institutional support for CDM in Tanzanian is too high. Any new initiative, therefore, must be carefully considered in order to ensure that it does not duplicate ongoing programmes and that it meets priority needs of the authorities and their capacity to absorb additional support.

Development agencies are now taking steps to coordinate support programmes. To the extent that Norway will engage in CDM capacity building in Tanzania, interaction with and active support to donor cooperation activities is essential.

Stringent criteria for national approval and a high (and not size specific) administrative fees (2.5 per cent of CERs upfront of final project approval with the DNA) has already discouraged developers with apparently viable CDM projects. Support from Norway to CDM project development (PDD and methodology support) should therefore be considered carefully.

### **6.2 Institutional support**

Support to government agencies is relevant in order for these to fully understand and help promote CDM project developments, and on a broader basis for them to take an active part in the work of the National Climate Change Steering Committee. In Tanzania, however, the numbers of initiatives are many and coordination could be improved. Currently there is an ongoing process where the development agencies under a Dansih initiative are mapping the different programmes, and within this year a programme for coordination of the development partners will be initiated. Until this programme is ready, we recommend that Norway address CDM and climate change issues in the ongoing programmes with forestry and energy institutions such as the support to the Division of Environment, the Division of Forestry and Beekeeping, and through cooperation with institutions like Ministry of Energy and Minerals

#### **6.2.1 Institutional support to energy**

Tanzania has potential for both large and small scale energy projects within hydro, wind and natural gas. Tools necessary to develop PDDs are in place; the national grid factor has been established and is available from the DNA's office or downloadable from the UNEP-Risoe CD4CDM website<sup>5</sup>

There are currently ongoing programmes from the World Bank, EU and Sweden supporting the Rural Energy Agency, REA, in developing small scale energy projects. There is potential for developing these projects as CDM, and the World Bank Carbon

---

<sup>5</sup> <http://www.cd4cdm.org/tanzania.htm>

Finance Unit is screening the projects looking to bundle the projects together in one PDD. Norway is considering financing some of these projects (2-8 MW hydropower). Larger energy projects in hydro, wind and natural gas are under development by the Tanzania Electric Supply Company Limited, Tanesco, in collaboration with international companies like Aldwych and Vattenfall. Potential CDM projects in the energy sector have been developed with assistance from international consulting companies (i.e. EPS-Camco), and PDDs have been completed for projects currently requesting approval from the DNA.

In terms of institutional support it appears that the potential for developing projects in the energy sector under CDM are being adequately considered and developed. The main issue for larger energy projects is now to solve the outstanding issues with the DNA.

## **6.2.2 Institutional support related to forestry**

The potential for projects within the forestry sector is substantial, and project developers like Green Resources are in the process of preparing PDDs.

For a project developer to submit an afforestation or reforestation project proposal under the CDM, the host country is obliged to have agreed upon a common definition of “forest”.

Tanzania has not yet communicated the national forest definition under CDM to the UNFCCC. As it is a requirement to determine baseline scenarios’ in A/R projects, any A/R project in Tanzania is currently blocked from being registered. This will remain the case until the DNA communicates the Tanzanian definition of forest to the UNFCCC EB. The responsibility for providing the definition lies with the Division of Forestry and Beekeeping (DFB), while the DNA is responsible for communicating the definition to the CDM EB.

Based on the Norway’s close ties with the Tanzanian forestry sector, Norway should establish whether Tanzania has a forest definition, and ensure that this definition, when ready, is formally communicated from the Division of Forestry and Beekeeping to the DNA, and thence to the UNFCCC. It is considered that the Division of Forestry and Beekeeping have the appropriate expertise needed to undertake this work, and no further capacity building in this respect is required.

## **6.3 Other fast track interventions**

### **6.3.1 Donor coordination**

Several of the DP’s met during the mission mentioned that there is just too much going on, and that another initiative “is highly likely to fail in the current situation”. “The current situation” is dominated by many DP’s active in a wide range of projects related to climate change. The level of activity and the overlapping programmes has led to a situation where neither the DP’s nor the Government of Tanzania has a full overview of ongoing projects. On this basis a joint stocktaking exercise has been undertaken, mapping the DP’s activities with regards to climate change, and a programme for coordination of donor support on the subject is currently being prepared by the Danish Embassy.

In view of the ongoing programmes as well as the Danish initiated process of coordinating the DP's, it is our recommendation not to start any large scale Norway funded projects on CDM related issues in Tanzania, but concentrate efforts on integrating the CDM in existing development projects, where relevant.

### **6.3.2 Support for PINs and PDDs**

Tanzania's potential for CDM projects are in hydro power, fuels switch projects, forestry, agriculture, and programmatic CDM projects (PoAs). Apart from the already identified projects, there are many new opportunities. Obstacles in the national approval process, however, are currently a disincentive to start developing new PIN's or PDD's. Tanzania has limited tangible CDM successes with only one registered project.

However, if one or more of the projects now at an advanced stage in the CDM project cycle is registered this could change the situation. Considering Norway's role within forestry, as well as the energy sector it is recommended that Norway assists Green Resources and ESD-Camco to clarify any outstanding issues there might be with the Designated National Authority. Pending on a positive validation from a Designated Operational Entity, these two project developers have projects that, if registered by the UNFCCC, could open the forestry and energy sector for more CDM-part-financed projects.

Given the fact that most of the projects currently in the pipeline claim that they need support and funding for further PDD development, Norway's existing support mechanisms for CDM project development could be very relevant, and should be actively promoted to the relevant local consultants and project developers. Norway could additionally take a more pro-active approach in using this support mechanism by making it part of a formal project development programme. This would involve a first step project review, followed by provision of support for PDD preparation to local consultants and project developers where relevant, and supervised by international experts.

### **6.3.3 DNA training and support**

The Tanzanian DNA has been operative since 2005 and has received substantial support to develop institutional and operational capacity. Currently there are at least two projects aimed at further strengthening the DNA (Danish and the One-UN).

However, the stringent criteria for national approval and a high (and not size specific) administrative fee (2.5 per cent of total CERs, upfront of final project approval with the DNA) has already discouraged developers with apparently viable CDM projects.

The cases of the fuel switch projects Artmus and Mbeya, as well as the issue of the rejected Green Resources afforestation project, are examples of potentially good CDM-projects that are currently not moving forward due to the above described reasons.

In addition to the project specific support with Green Resources and ESD-Camco, Norway should initiate a dialogue on a higher political level, bringing the stand still situation at the DNA to the VPO and Presidents Office attention. The fact is that Tanzania is losing investments where the prospects of achieving CDM financing would have been one of the main investment decisions. The potential for CDM project

development in Tanzania is considerable, ranging from fuel switch projects and landfill to hydro and A/R-projects.

### **6.3.4 Local consulting/advisory capacity**

Tanzania has very few local organisations with both theoretical knowledge and practical experience in the CDM that can support project developers. CEEST and EPMS have the most experience through their role in the previous and ongoing CDM capacity building programmes. Both organisations are currently supported by the CD4CDM programme, primarily through funding of PIN development for clients. Depending on UNDP-UNEP's ability to get a replacement for the National Coordination of their programme, technical assistance in PDD development will also be provided.

In addition to the CEEST, EPMS and TaTEDO there are international firms like EST-Camco that would be able to assist developing a project into a CDM project all the way to registration.

In view of the ongoing programmes, the support seems adequate and the only assistance from Norway could be to make the consulting agencies aware of the support mechanisms for CDM-project development Norway already has available. Several of the projects listed in section 5 might qualify for support, and have also requested assistance for developing PDD's.

## **6.4 Programmatic interventions**

### **6.4.1 CDM Programme of Activities, PoA**

The challenge of using CDM to promote investments in EE in Tanzania, as in many African countries, is that the individual installations and sites are too small to be viable as CDM. According to ECON<sup>6</sup> (2008) "the carbon revenue will often be too small to offset the transaction costs for preparing the CDM project documentation and getting the project registered. One solution is the newly approved "CDM Programme of Activities" (PoA) process, where a project document is prepared for a large programme with many small sites, even if not all of those sites are known in advance. This allows the coordinating entity of the programme, whether a public or private entity, to apply for carbon credits for the entire programme, and pass those benefits along to the individual site owners".

One of the most likely areas for applying the PoA approach is for small scale renewable energy technologies such a solar PV systems, solar water heaters, micro hydro projects, or micro-scale wind turbines. The Rural Energy Fund, REF, being fronted by the Rural Energy Agency is the logical place to apply this approach, because they are charged with implementing donor-funded programmes for micro-hydro schemes, solar PV systems in institutions (e.g. schools, clinics), and residential solar PV systems, among other things.

Currently Sweden, the World Bank and EU are supporting REA, having mapped a number of such projects all over the country. The Swedish contribution is approximately USD 20 Million, and the WB and EU support in the same range. PoA is one of

---

<sup>6</sup> Capacity Building for Mozambique, ECON 2008.

REA's responsibilities, and the support from the three donors should cover the need for external assistance in terms of PDD development and project support.

## **6.4.2 Biofuels**

CDM methodologies for bio-fuels have not yet been approved; except for the AM0047 - biodiesel from waste vegetable oil. Initiatives have been taken in getting new methodologies for bio-fuels approved, but to date the proposals are either rejected by the CDM EB or the methodology revision requested from project developers has not been opened by the EB. This means that, in the short term, bio-fuel projects will not qualify as CDM projects.

However there are several bio-fuel initiatives in Tanzania, both as large scale investments in bio-ethanol and bio-diesel production, as well as small scale community based bio diesel. The feedstock considered is both sugar cane and *Jatropha*. The companies in the business are SEKAB, planning ethanol production from sugarcane, while Diligent, Prokon and Felisa are developing bio-diesel projects from *Jatropha* and other oil producing plants. The NGO's TaTEDO and Kakute are developing smaller scale *Jatropha* for village level purposes.

Biofuel production presents both important possibilities and potential challenges to Tanzania. Currently there is no policy framework in place, and developing a clear national framework for this industry is therefore important. In December 2008 the Tanzanian and Swedish authorities agreed on establishing a three year project on policy framework development. According to the Swedish embassy, the specific development objective is to "contribute to a well regulated sustainable biofuel industry contributing to important development objectives of Tanzania such as energy security and reduced dependency on oil import, food security, protection of the environment, human health, macroeconomic growth and an expanded tax base". The project will also look into instruments to facilitate the domestic use of biofuel to complement the use of biomass and fossil fuels, and thus have a potential positive environmental impact. Sweden supports the implementation and monitoring of the project with an amount of SEK 12 million, while Norway will support the implementation of the project with NOK 11 million. Additional support on CDM at this stage is not recommended.

## **6.5 Recommendations**

The following concrete recommendations are made for interventions from Norway to facilitate more CDM-projects in Tanzania, in order of priority:

1. Development agencies are now taking steps to coordinate support programmes. To the extent that Norway will engage in CDM capacity building in Tanzania, interaction with and active support to donor cooperation activities is essential.

Until the outfall of the ongoing stocktaking assessment of donor programmes and coordination is known, we recommend that Norway address CDM and climate change issues in the ongoing programmes with forestry and energy institutions such as the support to the Division of Environment, the Division of Forestry and Beekeeping, and through cooperation with institutions like Ministry of Energy and Minerals.

2. Norway should initiate a dialogue on a higher political level, bringing current obstacles to CDM project development in the national CDM framework to the



VPO and Presidents Office attention. Tanzania is losing investments due to stringent criteria in the existing framework. The potential for CDM project development in Tanzania is considerable, ranging from fuel switch projects and landfill to hydro and A/R-projects, but they do not appear attractive in the current investment climate.

3. Tanzania has not yet communicated the national forest definition under CDM to the UNFCCC. As it is a requirement to determine baseline scenarios' in A/R projects, any A/R project in Tanzania is currently blocked from being registered.

Based on Norway's close ties with the Tanzanian forestry sector, Norway should establish whether Tanzania has a forest definition, and ensure that this definition, when ready, is formally communicated from the Division of Forestry and Beekeeping to the DNA, and thence to the UNFCCC.

4. It is recommended that Norway assists Green Resources and ESD-Camco to clarify any outstanding issues there might be with the Designated National Authority. Pending on a positive validation from a Designated Operational Entity, these two project developers have projects that, if registered by the UNFCCC, could open the forestry and energy sector for more CDM-part-financed projects.
5. Norway should make the local consulting agencies like CEEEST, EPMS and TaTEDO aware of the support mechanisms for CDM-project development Norway already has available. For PINs and PDDs the need for support is on a technical level, providing knowledge on the technical calculations of baselines and CERs. Norway could integrate the support mechanism into a formal project development programme, which would involve a first step project review, followed by provision of support for PDD preparation to local consultants and project developers where relevant.

## APPENDIX A: Mission Programme

<b>Time</b>	<b>Organisation &amp; Contact</b>	<b>Contact</b>
Thursday 09:00-10:30	Swedish Embassy	Gøran Haag
Thursday 11:00-13:00	Finnish Embassy	Timo Vihola Gabriel Batulaine
Thursday 13:00-14:00	Norwegian Embassy	Marianne Damhaug
Friday 09:00-13:00	World Bank	Ralph Karhammar
Friday 17:00-18:00	Green Resources	Moses Engaba
Friday 14:00-15:00	Africa Green Oils	Severin Kalonga
Monday 07:30-08:30	World Bank	Christian Peter
Monday 08:45-09:30	Norwegian Embassy	Ivar Jørgensen,
Monday 10:00-10:45	Danish Embassy	Lars Mikkel Johanessen
Monday 16:00-17:00	CEEST, Hubert Meena	Hubert Meena Stephen Mwakifwamba
Monday 16:00-17:00	EPS-Camco,	Jeff Felten
Tuesday 09:00-10:00	EPMS	Damian Casmiri
Tuesday 10:00-11:00	TaTEDO	Pamela Semiono Maria Swai
Tuesday 12:00-13:00	UNDP	Savinus Kessy
Tuesday 14:00-13:00	SEKAB	Per Renman Anders Bergfors Kirsten Röttcher
Tuesday 16:00-17:00	REA	Justine Uisso-Rusali George Nchwali Alphonse Kyariga
Wednesday 12:00-14:00	DNA	Freddy Manyaka

## APPENDIX B: CDM Stakeholders contacted

Institution	Name	Email
The Norwegian Embassy	Marianne Damhaug Ivar Jorgensen	<a href="mailto:mada@mfa.no">mada@mfa.no</a> <a href="mailto:ivjo@mfa.no">ivjo@mfa.no</a>
The Swedish Embassy	Göran Haag	<a href="mailto:goran.haag@foregin.ministry.se">goran.haag@foregin.ministry.se</a>
The Finnish Embassy	Timo Vihola, Gabriel Batulaine	<a href="mailto:sanomat.dar@formin.fi">sanomat.dar@formin.fi</a>
The Danish Embassy/DANIDA	Lars Mikkel Johannessen	<a href="mailto:daramb@um.dk">daramb@um.dk</a>
DIFID	Adrian Stone	<a href="mailto:a-stone@difid.gov.uk">a-stone@difid.gov.uk</a>
Designated National Authority	Richard S. Muyungi	<a href="mailto:tanzania37@hotmail.com">tanzania37@hotmail.com</a>
World Bank	Ralph Karhammar Christian Peter	<a href="mailto:rkarhammar@worldbank.org">rkarhammar@worldbank.org</a> , <a href="mailto:cpeter@worldbank.org">cpeter@worldbank.org</a>
Environmental Protection and Management Services	Damian Casmiri	<a href="mailto:epms@bol.co.tz">epms@bol.co.tz</a>
Centre for Environment, Energy, Science and Technology	Hubert Meena Stephen S. Mwakifwamba	<a href="mailto:ceest@ceest.co.tz">ceest@ceest.co.tz</a> <a href="mailto:Smwaki67@yahoo.com">Smwaki67@yahoo.com</a>
TanESCO	Kabiruddin R. Abdulla	<a href="mailto:kabiruddin.abdulla@tanESCO.co.tz">kabiruddin.abdulla@tanESCO.co.tz</a>
Green Resources ASA	Moses S. Ngegba	<a href="mailto:ms_ngegba@yahoo.co.uk">ms_ngegba@yahoo.co.uk</a>
TaTEDO	Pamela Semiono Maria Swai	<a href="mailto:energy@tatedo.org">energy@tatedo.org</a>
Africa Green Oils	Severin Kalonga	<a href="mailto:info@africagreenoils.com">info@africagreenoils.com</a>
Sekab	Anders Bergfors, Per Renman, Kirsten Roettcher	<a href="mailto:Anders.bergfors@sekab.com">Anders.bergfors@sekab.com</a> , <a href="mailto:Per.renman@sekab.com">Per.renman@sekab.com</a> <a href="mailto:Kirsten.roettcher@sekab.com">Kirsten.roettcher@sekab.com</a>
Rural Electrification Agency	Justina Uisso-Rusali Alphonse T. Kyariga	<a href="mailto:juisso@rea.go.tz">juisso@rea.go.tz</a> <a href="mailto:akyariga@rea.go.tz">akyariga@rea.go.tz</a>

**- Econ Pöyry -**  
Capacity Building for CDM in the United Republic of Tanzania

---

Institution	Name	Email
ESD-Camco	Jeff Felten	<a href="mailto:Jeff.felten@esd.co.uk">Jeff.felten@esd.co.uk</a>
UNDP	Savinus Kessy	<a href="mailto:Savinus.kessy@undp.org">Savinus.kessy@undp.org</a>

## APPENDIX C: List of literature

---

A Reformed CDM	UNEP-Risoe, 2008
Analysis of Possibility of CDM Through Biogas Production and Electricity Generation From Sisal Waste	Abbas Salum, 2008
Country report on implementation status	GoT, 2006
Electricity Act	GoT, 2008
Encouraging CDM energy projects to aid poverty alleviation	DFID, 2008
Framework E&E Portfolio 2007 - 2010	UNDP, 2007
Green Carbon Guidebook	WWF, 2007
IPPs in Tanzania	Unknown, 2007
Mtwara Energy Project	Artmus, 2008
National Adaptation Action Plan	DoE, 2006
National Framework for Reduced Emissions from Deforestation and Forest Degradation	GoT, 2009
Needs Assessment for Strengthening National Capacity to Adapt to the Adverse Impact of Climate Change	Inka consult 2008
Opportunities and challenges in Tanzania	REA, 2008
Power system master plan study	GoT, 2008
Proceedings for government briefing on CDM	CEEST, 2008
Proposed plan of action for DoE	Inka consult 2008
State of voluntary Carbon Market	Katoomba Group, 2008
Status of CDM Tanzania	DNA, 2008
Stocktaking report	Inka consult 2008
Tanzania – brief on climate policies and measures	SIDA, 2008

---

---

Tanzania CDM Investment Guide	DNA, 2007
The Clean Development Mechanism in Relation to Energy in East Africa	GTZ, 2008
The Netherlands Climate Assistance Programme	2004
Workshop report on REDD	GoT, 2008

---

## **Appendix D: Terms of Reference**

### **“Clean Development Mechanism in Tanzania, Uganda and Angola”**

#### **DI Background**

Norad provides assistance to developing countries in the CDM field as part of its bilateral development cooperation. Funds for private sector development earmarked for climate related cooperation can be used for support to development of specific projects, as well as capacity building and institutional cooperation.

The distribution of CDM projects among Kyoto Protocol non-Annex B countries is highly uneven. Some countries, especially the Least Developed Countries (LDCs) are all but non-existing in CDM pipeline statistics. There are several reasons for these countries' lacking ability to benefit from the possibilities to promote investments and sustainable development. It is assumed that lack of capacity in the institutional framework and the CDM enabling framework are important factors, along with the general investment climate and risks.

Norad thus wishes to target our assistance towards strengthening these countries' capacity within CDM to enable them participate in the carbon market and reap the benefits from the mechanism.

Based on a pre-mapping and contact with the embassies in a number of countries, Norad has selected Tanzania, Uganda and Angola as focus countries for this effort.

#### **DII Purpose**

The primary objective of this assignment is to map and analyze the capacity to identify and develop CDM projects, with the goal of identifying needs and propose areas of improvement for possible Norwegian support to capacity development.

The results will be used to advise Norad and the embassies on how to promote initiatives in cooperation with relevant stakeholders and how to strengthen the countries' capacities within CDM..

The team shall also present an overview of potential CDM projects with a brief analysis of major challenges related to the approval process

The assignment shall be carried out in close dialogue with key actors in the concerned countries

## **DIII     Scope of work/priority issues**

The team has two major tasks:

1. to carry out a mapping of the CDM status for each country
2. to propose capacity building initiatives for possible Norwegian support

Task 1 should cover the following aspects:

- A general overview of the countries' ongoing and planned CDM activities;
- An overview of the institutional framework, players and stakeholders (e.g. DNA, local scientists and consultants, Department of Energy, etc.) and their strengths and weaknesses;
- Bottlenecks that hinder CDM development;
- Other donors' efforts and initiatives on CDM;
- Identify needs for capacity building, (preferably) avoiding overlap with ongoing efforts by other donors, so as to avoid duplication of other donors' efforts/programs.
- Potential for CDM projects for various sectors, including if possible concrete projects in the relevant sectors.

Task 2: A proposal for areas of CDM capacity building cooperation with Norwegian assistance should be developed in line with the following:

- The proposed areas should be based on identified bottlenecks and needs for capacity building
- Initiatives should target sectors or fields of expertise in which Norway has expertise and can add value
- Harmonization with other donors' programs – avoiding overlapping efforts
- Initiatives should be developed in understanding with the related authorities who will be the owner of the project(s)/programme
- In order to ensure good effect of the capacity building initiatives, concrete projects should be implemented in parallel. Identifying potential projects during the mapping phase will therefore be an advantage.
- The proposal should also consider how cross cutting issues such as gender and anti-corruption may be an integral part of the recommended activities



## **DIV     Implementation of the work**

### *The plan for implementation*

The plan for implementation shall follow the description given in 'Proposal T-2008-314 Clean Development Mechanism in Angola, Tanzania and Uganda'.

### *Team composition*

The Team shall consist of:

Francois Sammut  
Knut Ødegaard  
Maja Tofteng

Norad will include own staff in the team for certain parts of the assignment.

### *A. Source of information and methodology to be applied*

The study shall (mainly) be done as field work in Tanzania, Uganda and Angola.

The team is expected to meet with:

- relevant project developers
- relevant government representatives (first and foremost representatives from the Designated National Authority)
- the Norwegian embassy
- other relevant donors
- other partners and stakeholders who might provide relevant inputs

It is also important that the team consults and coordinates its work with other relevant publications and work on CDM (e.g. other donors' efforts, scientific publications, relevant energy masterplans, etc.).

CDM-related information from the Embassies in each country will be made available to the team, giving an early indication of specific fields which may need special attention.

### *B. Timetable for preparation, field work and finalisation of report*

Schedule and tentative time frame:

- The assignment shall be carried out and finalized by March 1, 2009.
- The total number of work days for the whole assignment is expected not to extend a total of 36 days, including travel. The work shall be done within the following time frame:
  - a) 6 days of field work in each country, for a total of max 18 days,
  - b) 3 days per country, for a total of 9 days, for preparations in Norway before the travel (to get an overview and get relevant contacts in the concerned countries, etc.); and
  - c) 9 days for the finalization of the report and briefing(s) with Norad after the consultant has returned to Norway

## **DV Reporting**

- The report shall contain a summary of the main findings, main conclusions and recommendations. The specific proposals for initiatives to assist the countries in strengthening their institutional framework for CDM facilitation shall be a separate chapter in the report.
- The report shall be written in English and not exceed 20 pages for each country excluding annexes.
- A draft report shall be presented to Norad. The team shall deliver the final report based on comments given to the draft report.
- The final report shall be submitted in electronic form within two weeks after Norad and the embassy have given their comments to the draft report.

Mari Sofie Furu      18.12.2008

## **APPENDIX E: Criteria for CDM project evaluation**

### **Sustainable development criteria for Tanzania**

One purpose of the CDM is to assist developing countries to achieve sustainable development. The Tanzania Government is responsible for screening projects according to these criteria, excluding those not consistent with its sustainable development goals. Sustainable is a broad concept that includes environmental sustainability, economic development and social equity. The 1987 Brundtland Commission defined sustainable development as ‘development that meets the needs of the present without compromising the ability of the future generations to meet their own needs’ (WCED, 1987). While everyone agrees that sustainable development is desirable, there are differences in how it is understood. Much of this stems from different interpretations of what is to be sustainable. Some consider that sustainability applies to the resource base itself, while others focus on the well being of people and their livelihoods deriving from the resource base.

Tanzanian has a development ambition of transforming the country from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities, which are effectively integrated and buttressed by supportive industrial and service activities in the rural and urban areas by 2025. This is known as Tanzania Development Vision 2025.

According to the Vision 2025, Tanzania should have created a strong, diversified, resilient and competitive economy which can effectively cope with the challenges of development and which can also easily and confidently adapt to the changing market and technological conditions in the regional and global economy by 2025. The expected development will provide high quality livelihood; peace, stability and unity; good governance; a well educated and learning society; and a competitive economy capable of producing sustainable growth and shared benefits. The Tanzania Development Vision 2025 therefore outlines the sustainable development needs of the country. CDM projects to be undertaken in Tanzania must support the Tanzania Vision 2025. CDM Projects should therefore:

- Focus on rural development; improve the life and the livelihoods of the poor and those who are marginalized.
- Be environmentally and socio-economically friendly;
- Create employment opportunities to the community;
  - Enhance poverty reduction.
  - Improve infrastructure.
- LULUCF activities in CDM be primarily undertaken in the arid and semi arid areas of Tanzania where afforestation and reforestation is most needed.
- Be sustainable and cost effective;
- Really provide financial and environmental additionality;
- Be accepted by the local community; hence relay more on local manpower.
- Transfer the technology and enhance capacity of stakeholders.

- Ensure participation of the benefiting communities and stakeholders in development and implementation
- Enable Tanzania to leapfrog to new sustainable and affordable

## **The Role of the Government of Tanzania**

In order for Tanzania as a LDC to fully embrace CDM as a test for Sustainable Development, key stakeholders must be empowered to be equal partners in negotiating with the developed countries and private sector. A solution lies in capacity development and institutional strengthening to address limitations in the CDM implementation. This will lead to transparent, effectively administered policies laws and regulations, and to the accountability and participation of diverse stakeholders.

The Governments of Tanzania has a key role to play in enabling and promoting CDM projects in the country. This has been done and can still be done through:

- (i) Ratifying the Kyoto Protocol;
- (ii) Encouraging other countries to ratify the Kyoto Protocol through various international conferences, meetings and workshops;
- (iii) Establishing a strong Designated National Authority in Vice President's Office Division of Environment, to oversee CDM projects;
- (iv) Development of National Inventories of GHGs Emissions and removals;
- (v) Development of a CDM Investors guide, and
- (vi) Capacity building to encourage the participation of the private sectors.

The government also should be involved in:

- Identifying requirements for CDM projects such as sustainable development criteria;
- Identifying specific projects that meet these criteria;
- Developing enforceable environmental regulation;
- Building national capacity, awareness and infrastructure for CDM projects;
- Setting up integrated national procedures and infrastructure for CDM projects;
- Promoting CDM projects and participation;
- Facilitating investment procedures through Tanzania Investment Centre (TIC);
- Coordinate between industries to identify and take up CDM opportunities.
- Implementing National Adaptation Programme of Action (NAPA) as a way of building capacity for CDM projects.

The government has a big role to play in promoting and enabling CDM activities in the country is therefore responsible for facilitating and providing good political and economic environment through:

- Putting in place good CDM investment climate in the country e.g. policies, training, autonomy DNA office, and improve infrastructure;

- Ensuring simple, transparent and efficient systems of CDM project review and approval so as to avoid bureaucracy ;
- Financing and promoting researches for baseline data and other relevant information needed in the contract of CDM;
- Creating information point/centre for CDM activities e.g.: website;
- Liasing and strengthening financial institutions to support CDM activities in the country;
- Ensuring political will for CDM activities in the country;
- Promoting awareness and enabling activity for the communities and the private sector to participate in CDM activities;
- Through training, putting in place a critical mass of climate change and CDM experts to facilitate negotiations and technical analysis of CDM projects;
- Constant capacity building, including training of all key stakeholders particularly the private sector in order to facilitate their participation as partners in CDM projects.

The government already has a mechanism for liasing with potential investors through its institutions such as the Tanzania Investment Centre (TIC) and National Development Corporation (NDC). The Vice President's Office, Division of Environment, which hosts the DNA will put in place a mechanism through which the TIC, NDC and other institutions will collaborate together to successfully attract CDM projects.

### **Contribution of CDM activities to the socio-economic development of the country**

CDM activity has a potential role to play in the socio-economic development in the country. The CDM activities will attract capital investment to Tanzania. Crucial benefits that will accrue from CDM activities include:

- Sustainable industrial development;
- Poverty reductions through improved and increased rural income, hence improved livelihoods of the people;
- Employment opportunities to the community;
- Capacity building in various areas;
- Availability of affordable and reliable electricity to the rural communities;
- Improvement of social services such as education and health; and
- Enhancement of technological transfer and development.

### **Sovereignty Issues**

It is important to note that CDM should not diminish national sovereignty by allowing external forces to change the development paths of Tanzania. This issue is particularly acute with LULUCF component of CDM. This is drawn from earlier experiences while implementing the "Activities Implemented Jointly" (AIJ) in the early 1990s, which were based on forest conservation. With large expanses of undeveloped forests in the major tropical countries worth just dollars per hectare on the open market in many cases, Western multinationals would purchase land in vast

scale and set up private “reserves”. This action if taken on the basis of carbon sequestration would undermine the right of foreign countries and local inhabitants to manage their own resources base, while also allowing multinationals to continue along a path of excessive emissions at a small cost. Therefore, it is important to ensure that the requirement for host country endorsement, inclusion of sustainable development criteria based on the country prerogative and the requisite local and international stakeholders consultations are taken into account, apart from the other requirements under the CDM project cycle. This will help to ensure that the eventual investments focus not only on the cost effectiveness, but also to the contribution of CDM projects to Sustainable Development priorities.