

Climate Protection Programme for Developing Countries (CaPP)

Morocco: Clean Development Mechanism

Partner Organisation: Moroccan State Secretariat of Environment

Project Period: June 1998 - May 2001

Financial Contribution: DM 450,000

Project Brief

Morocco should play a more active role than it has done to date in negotiations determining the regulations of the clean development mechanism (CDM), so that it can take early advantage of the opportunities arising from the CDM and act as a role model for the rest of Africa. As an instrument of the Kyoto Protocol, the CDM yet lacks properly worked out implementation regulations and the Moroccan decision-makers in government and industry are not sufficiently aware of the consequences of those which have been agreed so far.



A precondition for the success of the CDM will be ensuring that there are reliable framework conditions for private and public players and appropriate supervision. The advanced reform of the Moroccan energy sector has created favourable conditions for the country's future involvement in the CDM.

To enable Morocco to benefit from the CDM the Moroccan Government and industry tested the Clean Development Mechanism in their country and took a proactive role to be involved internationally in determining its exact form.

The result of the study demonstrates that the CDM basically contributes to the financing of renewable energy projects. However, the real effectiveness of the process is only assured under certain conditions. Strict application of additionality criteria will result in a rather low number of potential projects. At least for renewable energy projects, which still entail a high risk, the additionality criteria should be applied in a less strict way. To avoid either high costs or a certain degree of arbitrariness in the project, standardised baselines should be developed and approved.

Climate Protection Programme for Developing Countries (CaPP)

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) mbH
Dag-Hammarskjöld Weg 1-5
Postfach 5180
65726 Eschborn
Germany

Tel.: +49 – (0) 6196-79-4103
Fax: +49 – (0) 6196-79-6320
E-Mail: climate@gtz.de
Internet: www.gtz.de/climate



CDM Capacity Development in Tunisia

Country/region:	Tunisia
Project name:	„Clean Development Mechanism (CDM) Capacity Development in Tunisia“: undertaken as part of the „Implementation of the United Nations Framework Convention on Climate Change in Tunisia“ programme
Partner:	Ministry of the Environment and Sustainable Development, Ministries of Agriculture and Water Resources, Public Health, Tourism, and Industry and Energy; the private sector
Project duration:	January 2006 to December 2008

Context

Like various other Mediterranean countries, Tunisia is strongly impacted by the adverse effects of climate change. In order to make a contribution to international climate change mitigation, Tunisia has ratified the United Nations Framework Convention on Climate Change (UNFCCC). Via Tunisian-German development cooperation to implement the UNFCCC, Tunisia is receiving support so that it can achieve its greenhouse gas emissions reduction targets and adapt to climate change.

As a Kyoto instrument, the Clean Development Mechanism (CDM) enables developed countries to meet their greenhouse gas reduction commitments cost-effectively by investing in mitigation projects in developing countries. It also offers developing countries an additional opportunity to access climate-compatible technologies and foreign investment. First of all, however, a country's CDM potential must be harnessed through the development of appropriate know-how and capacities. Project proposals can then be submitted to the Designated National Authority (DNA).

Until recently, Tunisia had very little know-how or experience with the CDM. In order to raise international awareness of Tunisia's CDM potential, it was essential to build its capacities to identify and develop CDM projects, establish the requisite organisational structures and ensure that they are functioning effectively.



commissioned by:





Project

The „Implementation of the UNFCCC in Tunisia“ programme focusses on two aspects: *greenhouse gas emissions reduction* and *adaptation to climate change*. In both components, an integrated multilevel approach is pursued. Policy advice, institution-building and technical expert advice are linked at all levels. GTZ provides advice to Tunisia's Ministry of the Environment and Sustainable Development and other partners on reducing greenhouse gas emissions.

In order to ensure that potential CDM project developers benefit from secure financing and advice, the training needs of staff in the authority responsible for approving CDM projects were identified in cooperation with the Ministry of the Environment. Building on this assessment, basic CDM training was provided. More advanced training was subsequently offered to coordinate the CDM project assessment process, especially as regards the projects' contribution to sustainable development in Tunisia, with case studies to trial various approaches. The project also supported an exchange of experience with neighbour countries on issues relating to CDM project approval.

In a second stage, seminars and sector-specific training on CDM were held for the national energy supplier, chemical companies, the National Waste Management Agency (ANGED) and consultancies, especially in the energy sector. CDM project ideas were developed in groups, methods for the calculation of emissions reductions were discussed, and proposals for CDM project planning were developed. The presentation of practical experience from projects already registered in other countries rounded off the events.

Results

Tunisia's Designated National Authority is now up and running and is able to

- assess the contribution which CDM project proposals can make to sustainable development;
- establish criteria for project developers and standards to be complied within project documentation;
- apply internal procedures for coordination processes and responsibilities.

Guidance on Project Idea Notes and Project Design Documents for the Tunisian context has been drawn up, and a CDM project portfolio developed. These were published on a multilingual Internet site (www.cdmtunisia.com) together with information about the approval procedure and CDM project proposals that have already been submitted.

At a series of seminars which focused on CDM training and project development, practical project ideas and possible follow-up activities were discussed by the participants. For example, the Tunisian Energy Agency is planning a programme to promote solar thermal energy, utilising the CDM for co-financing. Advice is being provided in this context via German Technical Cooperation.

These practice-oriented training models have raised awareness of the CDM among stakeholders who play a key role in the development of CDM projects. To date, around 80 people have participated in training. Support has also been provided to enable a number of Tunisian government representatives to attend the Carbon Expo in Cologne and the United Nations Climate Change Conference in Nairobi in order to boost their knowledge of trends and actors in the carbon market.

Imprint:

Published by:
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T: +49 6196 79-0
F: +49 6196 79-11 15
E: info@gtz.de
I: www.gtz.de

Author:
Dr. Jörg Linke

For further information:
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH
Climate Protection Programme
Anja Wucke
E: anja.wucke@gtz.de

Printed on 100% recycled paper
Status: April 2007





Renforcement des capacités pour le MDP en Tunisie

Pays :	Tunisie
Intitulé du projet :	« Renforcement des capacités pour le Mécanisme de développement propre (MDP) en Tunisie » dans le projet : Mise en œuvre de la Convention-cadre sur les changements climatiques en Tunisie
Partenaires :	Ministère de l'Environnement et du Développement durable, ministères compétents dans les domaines suivants : agriculture et ressources hydrauliques, santé publique, tourisme, industrie et énergie, secteur privé
Durée du projet :	Janvier 2006 à décembre 2008

La situation de départ

Comme divers autres pays du bassin méditerranéen, la Tunisie est durement touchée par les répercussions négatives du changement climatique. Désireuse de s'associer aux efforts internationaux pour la protection du climat, la Tunisie a ratifié la Convention-cadre sur les changements climatiques. Dans le cadre de la coopération tuniso-allemande pour la « Mise en œuvre de la Convention-cadre sur les changements climatiques », un appui est fourni à la Tunisie afin de l'aider à atteindre ses objectifs pour la réduction des gaz à effet de serre et l'adaptation aux changements climatiques.

Le Mécanisme de développement propre (MDP) est un instrument du Protocole de Kyoto qui permet aux pays industrialisés de s'acquitter à moindre coût de leurs engagements pour la réduction des gaz à effet de serre, au travers d'investissements dans des projets pour la protection du climat. Il offre ainsi aux pays en développement une option supplémentaire afin d'introduire sur leur territoire des technologies et des investissements étrangers favorables à la protection du climat. Dans un premier temps, il faut que ces pays développent leur potentiel MDP par l'acquisition de connaissances correspondantes. Ensuite, les requêtes de projets peuvent être déposées auprès de l'organe national compétent pour l'approbation de projets MDP.

Il y a peu de temps encore, la Tunisie n'avait pratiquement ni connaissances ni expérience concernant le MDP. Afin d'attirer l'attention internationale sur le potentiel MDP de la Tunisie, il a fallu transmettre les savoirs permettant d'identifier et de développer des projets MDP, mais aussi mettre en place les structures d'organisation nécessaires à cet effet et faire en sorte qu'elles soient opérationnelles.





Le projet

Le projet « *Mise en œuvre de la Convention-cadre sur les changements climatiques en Tunisie* » se dédie aux deux domaines que sont la réduction des gaz à effet de serre et l'adaptation aux changements climatiques. Une approche intégrée pluri-niveaux est adoptée pour ces deux composantes. Des activités de conseil politique, de promotion institutionnelle et d'assistance technique sont combinées à tous les niveaux. En matière de réduction des gaz à effet de serre, la Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH prête conseil au ministère tunisien de l'Environnement et du Développement durable ainsi qu'à d'autres partenaires.

Afin de garantir un appui et un service-conseil cohérents aux postulants potentiels pour des projets MDP, il a été procédé, conjointement avec le ministère tunisien de l'Environnement, à l'identification des besoins de formation pour les collaborateurs de l'organe compétent en matière d'approbation de projets MDP. Une formation de base a ensuite été organisée sur la base de ces informations. Au cours d'une action de perfectionnement plus approfondie, la procédure à adopter pour l'évaluation de projets MDP a été analysée au regard de sa contribution au développement durable du pays, puis testée au travers d'études de cas. Le projet a également soutenu les échanges d'expériences avec les pays voisins en matière d'approbation de projets MDP.

Dans un deuxième temps, des séminaires et formations par branches sur le MDP ont été organisés pour la compagnie nationale de distribution d'énergie, des entreprises chimiques, l'Agence nationale de gestion des déchets ainsi que pour des sociétés d'études et de conseil spécialisées notamment dans le secteur de l'énergie. Au sein de groupes, des idées de projets MDP ont été élaborées, des méthodes pour le calcul de la réduction des émissions ont été discutées, et des propositions ont été développées pour la planification de projets MDP. Le programme était complété par la présentation d'expériences concrètes émanant de projets déjà agréés dans d'autres pays.

Les résultats

L'autorité tunisienne en charge de l'approbation de projets MDP est désormais fonctionnelle et à même de

- réaliser une évaluation sur la contribution de propositions de projets MDP au développement durable ;
- définir des directives pour les concepteurs de projets et de définir les exigences concernant les documents à joindre aux requêtes ;
- mettre en œuvre des procédures internes pour les processus de concertation et les attributions de compétences.

Un cadre d'action pour le développement de projets MDP (« Project Idea Notes » et « Project Design Documents ») dans le contexte tunisien et un portefeuille tunisien de projets MDP ont été élaborés. Ces documents ainsi que des informations sur la procédure d'approbation et des projets MDP déjà soumis sont accessibles au public via Internet (www.mdptunisie.com).

Dans des séminaires de perfectionnement sur le MDP et à titre de préparation pour le développement de projets MDP, des idées de projet concrètes et de possibles activités consécutives ont été discutées par les participants. Par exemple, l'Agence tunisienne de l'énergie envisage un programme pour la promotion de l'énergie solaire thermique faisant appel au MDP à titre de cofinancement. Elle est conseillée à ce niveau par la Coopération technique allemande.

Par le biais de modules de perfectionnement axés sur la pratique, les acteurs jouant un rôle important dans la préparation de projets MDP ont pu être sensibilisés. À ce jour, environ 80 personnes ont participé à des actions de formation. En outre, un appui a été fourni afin de faciliter la participation de plusieurs représentants du gouvernement tunisien au Salon « Carbon Expo » à Cologne ainsi qu'à la Conférence de Nairobi sur les changements climatiques, dans le but d'élargir leur champ de connaissances sur les évolutions et les acteurs du marché des émissions de carbone.

Mentions légales :

Publié par :
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Allemagne
T : +49 6196 79-0
F : +49 6196 79-11 15
E : info@gtz.de
I : www.gtz.de

Auteur :
Dr Jörg Linke

Pour toute information complémentaire :
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH
Programme de Protection du Climat
Anja Wucke
E : anja.wucke@gtz.de
I : www.gtz.de/climate

Imprimé sur papier 100 % recyclé
Version : April 2007



The Voluntary Emission Reduction Market: Characteristics, Risks and Opportunities

Greenhouse gas (GHG) mitigation has been the focus of the political and public debate on climate change. Under the Kyoto Protocol, the EU has established mandatory reduction targets for its electricity, steel and cement producing industry. These companies can reduce the amount of GHGs within their own production process or make use of the Clean Development Mechanism (CDM). As a flexible instrument of the Kyoto Protocol, the CDM allows emission reduction projects in developing countries to generate certified emissions reductions (CERs) as long as host countries feel they promote sustainable development. Companies which want to become carbon neutral or individuals who want to offset their emissions through a project in developing countries can define their own rules for voluntary emission reductions (VERs).

CDM – A Certificate Market under UN Supervision

The CDM process is relatively transparent and produces emission certificates with a fairly high quality. This is due to the oversight by the CDM Executive Board (CDM EB), which consists of ten elected members representing the different groups of Kyoto Protocol member countries. However, it has been criticized for the high level of transaction costs that occur before any certificate is issued. The costs can reach up to several hundred thousand US dollars per project. Estimates show that even a small-scale CDM project has to generate at least 8000 CERs per year to compensate for the transaction costs.

A CDM project requires a clearly determined baseline and a solid calculation as well as monitoring of GHG emission reductions, based on a methodology approved by the CDM EB. The development and approval of new methodologies can take up to two years, with project developers facing a substantial risk of rejection. One of the key criteria a project has to fulfil is additionality. This means that the project would not have happened without the additional revenues generated through the CERs. Moreover, a CDM project must secure the approval of the host country whose sustainable development it is supposed to assist.

A third party, accredited by the CDM EB, determines whether all these requirements are met for a project. It verifies the monitoring of CDM projects and confirms by how much GHG emissions have been reduced. For each verified tonne of reduced carbon dioxide equivalent, the CDM EB issues a CER certificate. So far, 40 million CERs have been issued and over 1.6 billion are in the pipeline.



commissioned by:

The Voluntary Market – More Flexibility and More Risks

Companies or individuals who are interested in VERs are not part of the Kyoto Protocol-driven, mandatory reduction efforts. They offset their emissions or decide to become carbon neutral because of corporate social responsibility, marketing interests or moral issues. This enables them to choose whether to engage in the CDM or in the voluntary market.

While CDM projects have to comply with a variety of different rules, VER projects have freedom and flexibility. Many steps in the approval, monitoring and verification process can be left out. This keeps the transaction costs low. But it also makes the quality of certificates question-



able. Key issues such as additionality, permanence, leakage or environmental and social impacts might be neglected. At present, the VER market is much smaller than the CER market, reaching only a few million VERs in 2006.

In contrast to the CDM market, which has one authority that sets standards and regulates the market, the voluntary market is highly diverse. A wide range of companies and non-profit organizations offer VER certificates and use a number of different standards. The *Gold Standard* and the *Voluntary Carbon Standard* are the most prominent examples of voluntary carbon offset standards. This variety and the fact that VERs are not registered with a central index make the VER market less transparent than its CDM counterpart. This poses two fundamental risks:



- **Certificate Quality:** As VERs are generated according to various more or less effective standards, it is difficult to determine their quality regarding the baseline or additionality of projects.
- **Delivery Quality:** Because there is no central registration, there is a high risk of double counting. It is not possible for a buyer to determine whether the certificates bought have not been sold to somebody else before.

However, because transaction costs are lower, the voluntary market offers the possibility to implement projects which are too small to be economically feasible under the CDM. These projects tend to have the highest co-benefits concerning poverty reduction and development. As investors in the voluntary market act with a moral or marketing motivation, they may be especially interested in poverty reduction issues. This could be a particular chance for development efforts.

As it has fewer binding requirements, the voluntary market is more flexible in terms of the methods being used. This is a way of gaining experience with project types whose methodologies have not yet been approved by the CDM EB – avoided deforestation being the most prominent example. But it also enables the generation of certificates that are not based on a solid scientific methodology and thus may lead to a backlash against the idea of offsetting emissions, as already expressed by some scientists and NGOs.

The VER market might open up new opportunities for development work. However, further analysis is necessary to determine whether these benefits outweigh the risks.

Imprint:

Published by:
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T: +49 6196 79-0
F: +49 6196 79-11 15
E: info@gtz.de
I: www.gtz.de

Author:
Benjamin Stephan

For further information:
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ) GmbH
Climate Protection Programme
Anja Wucke
E: anja.wucke@gtz.de

Printed on 100% recycled paper
Status: April 2007





Using CDM for Development in Sub-Saharan Africa

Sub-Saharan Africa has so far been sidelined by the CDM. Its share in number of projects and projected CERs is just 1.5% of the world's total. Moreover, this is dominated by large gas flaring reduction projects from Nigeria. How can African participation in the CDM be strengthened and yield development benefits? GTZ has been supporting CDM capacity building in Western Africa for several years and first lessons can be drawn.

Given the lack of modern energy services in most sub-Saharan countries, the development challenge is to expand modern energy services to the rural population. From a greenhouse gas perspective, renewable electricity generation for grids should also play a role. With the recent reform in the rules for CDM programmes, small decentralized activities start to become attractive in the CDM. In the West African context, the following project types could become relevant under the CDM:

- Introduction of energy efficient charcoal / wood stoves. They would replace extremely inefficient traditional stoves.

- Electricity generation from agricultural biomass residues. In West Africa, residues from cotton, groundnut, rice and cereal production are widely available.
- Wind power, to serve coastal grids in trade wind areas that allow to reach high plant load factors.





Three workshops in spring 2009 served to assess the potential and barriers of those project types. Regarding stoves, it so far has not been possible to mobilize large-scale industrial stove production that could guarantee stable quality. Except for one factory in Mali, which was visited by the workshop participants, stove production is done by small artisans using recycled material. Generally, lacking availability of local capital is a major obstacle. The few local CDM experts are frequently "poached" by international organizations or carbon market companies, as we could witness in the case of the local expert serving as resource person for our workshops.

Data for baseline setting are generally not available and need to be collected with a high effort. While local CDM approval authorities are generally supportive, they lack the resources to engage in targeted training of possible CDM entrepreneurs.

As regards electricity generation from agricultural residues, these projects are often not put into practice because there is no regulatory framework for power purchase from renewable energy sources. For this reason, the purchase price offered by power utilities is often too low for the realisation of power plants on the basis of agricultural residues. Furthermore, the utilisation of agricultural residues or wind power for electricity generation is a rather new technology in this area, with few experiences. Generally, electric utilities are not willing to invest in such projects since the overall budget for rural electrification is limited, which means that overall beneficial projects, but with high initial investment costs (such as for agricultural residues and wind power), are often discarded.

The way forward

The workshop participants from the five partner countries Benin, Burkina Faso, Mali, Senegal and Rwanda have been sensitized for the CDM potential of the three technologies. They also can assess the methodological challenges before a CDM project is registered by the CDM Executive Board. It is likely that a CDM stove project will be launched in Senegal which could be the starting point for a CDM programme. Given that an efficient stove can generate 0.5-1 emissions credits per year, a stove programme could reach an order of magnitude that becomes interesting for large buyers of CDM emissions credits. As next step, mobilization of finance for activities in the electricity sector needs to be addressed. Both biomass residue as well as wind CDM projects are developed in large numbers in Asia and Latin America.



Imprint

Published by:

Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T: +49 61 96 79-0
F: +49 61 96 79-11 15
E: info@gtz.de
I: www.gtz.de

For further information:

Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH
Anja Wucke
Climate Protection Programme
E: anja.wucke@gtz.de
Photos:
Perspectives GmbH
Status: October 2009

