

Chapter 4

Egypt Prerequisites for CDM Participation

Introduction

The Clean Development Mechanism (CDM) must necessarily be designed and implemented within a national framework. Thus, project sectors and subsequently, individual projects must be generally consistent with the national economic and energy strategy and fit more especially within the investment program of the energy system, transportation sector etc.

In this chapter, the following points are presented in some detail:

Existing governmental institutions and their potential for participation in the CDM: This section, will be primarily concerned with the most relevant governmental institutions in Egypt regarding potential involvement and participation in the CDM. A study on the current status and future prospects of these institutions will be provided.

Existing private sector institutions and NGOs and their possible potential participation in the CDM: In Egypt, the economic restructuring and reform program was initiated over a decade ago. Under this program, many of the public sector activities were privatized and since then, the private sector has assumed a significant role in the economy and development path of the country. It is even expected to assume a much bigger role in the foreseeable future. As regards NGOs, there was a significant growth and wider scope for their activities in the last decade or so. Within this context, this section will investigate the current situation of both the private sector and NGOs in Egypt, their potential participation in the CDM as well as future prospects as regards the CDM.

Present mechanisms for foreign investments in Egypt (including the legal framework): This part will discuss the current procedures, legislation and process of investment in Egypt. In addition, the advantages and barriers for foreign investment in Egypt will be presented in the same section. In fact, this discussion is deemed necessary to identify various gaps and obstacles that will need to be taken into consideration in implementing the CDM in Egypt.

Actors, authorities, and institutions (roles, competencies, responsibilities and procedures): A detailed analysis of the various players in the CDM is presented in this section. The focus is laid on the anticipated roles and responsibilities of these entities. This discussion will assist in identifying areas requiring strengthening and capacity building in those entities as a means of ensuring the efficient implementation of the CDM.

The CDM cycle: A generic account of the various stages and procedures of the CDM cycle is presented in this section.

Institutional options to support the project cycle: In this part of the strategy, the CDM project cycle is presented within the context of the existing institutions in Egypt with a potential involvement in the CDM.

4.1 Existing National Governmental Institutions

It is of vital importance to identify all relevant CDM key players and stakeholders in Egypt as a means of investigating the present domestic capacity and constraints for Egypt to participate in CDM activities. In the following, we give an overview on some of the most important potential partners in CDM-Figure 4.1. The overview is however not concluding.

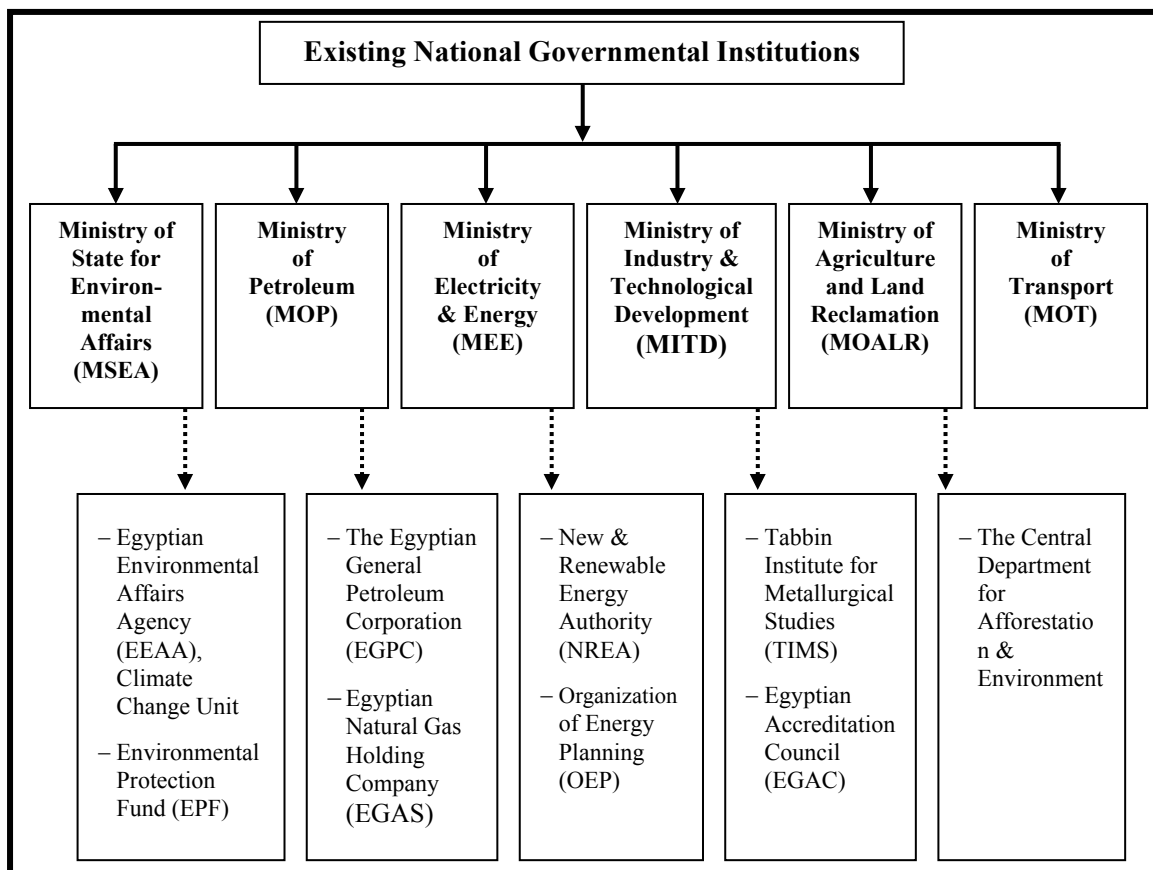


Figure 4.1: Existing Governmental Institutions Potentially Participating in the CDM (Ministries and Most Relevant Specialized Institutions with Ministerial Affiliation)

4.1.1 Ministry of State for Environmental Affairs (MSEA), the Egyptian Environmental Affairs Agency (EEAA)

EEAA has been established in 1982. This was followed by the creation of the MSEA in 1997. Both steps indicate Egypt's commitment towards environmental protection.

The principle functions of EEAA as pertains to the CDM comprise the following:

- Formulating environmental policies; and,
- Preparing the necessary plans for environmental protection and environmental development projects, following up their implementation and undertaking pilot projects.

Within the context of setting up a climate change national institutional structure, Egypt formed an intra-ministerial National Climate Change Committee in October 1997. This committee represents a wide range of governmental and non-governmental stakeholders under the directorship of the Chief Executive Officer of the EEAA. Also EEAA established Climate Change Unit on December 1999.

4.1.1.1 Climate Change Unit

The Climate Change Unit at EEAA is the national focal point for coordination of all climate change activities and CDM projects in Egypt. It is responsible for the development of the National Climate Change Action Plan. However, the Climate Change Unit is the Operational Unit for matters concerning climate change activities in Egypt.

4.1.1.2 Environmental Protection Fund (EPF)

EPF was established in accordance with Law No. 4 of 1994 pertaining to the environment. The main objective of the EPF is to promote investment in environmental fields. In doing so, the fund provides the necessary funding for projects having a positive environmental impact. In addition, the EPF facilitates cooperation between financial institutions and different entities in Egypt (e.g., NGOs, private, public, and governmental sectors) in order to promote investment in the field of environment.

The promotion and support of CDM projects can be integrated into the EPF mandate. In fact, the Fund can define CDM projects as one of its priority areas.

4.1.2 Ministry of Petroleum (MOP), the Egyptian General Petroleum Corporation (EGPC) and Egyptian Natural Gas Holding Company (EGAS)

EGPC is the main supplier of primary energy in Egypt (92%) comprising crude oil and natural gas. The Petroleum sector in Egypt at present has the capacity to provide natural gas in various sectors of the economy. However, there exists a problem, which is that the gas network comprises only the main pipelines of the network. Each entity has to pay for its sub-pipelines, which connect its plant with the main gas network pipeline. The obstacle is, therefore, for most of the investors reflected in the initial capital cost needed for the natural gas infrastructure (that is, pipeline etc.).

In view of utmost importance of the natural gas industry to the country's economy and according to the vision of the MOP, it was decided to establish EGAS as an entity focusing on the natural gas chain of activities. EGAS was established in August 2001, adopting an effective action plan to organize and diligently handle the activities of the natural gas resource of Egypt and adding value to the Egyptian economy.

4.1.3 Ministry of Electricity & Energy (MEE)

MEE is the authority responsible for providing secondary energy in Egypt. In doing so, it depends upon different primary sources of energy both conventional and non-conventional. The objectives of the Ministry of Electricity and Energy and its Egyptian Electricity Holding Company are as follows:

- Securing generation & supply of electricity for development needs.
- Securing high-level services for their customers in due time and place with adequated.
- Conduct needed research and development

Both the Egyptian Electricity Holding Company (EEHC), the New and Renewable Energy Authority (NREA) and Hydro Power Plant Executive Authority (HPPEA) are involved in initiating, coordinating and implementing GHG reduction related projects and analyzing policy issues at the national level.

There is a great potential for the potential CDM projects as it is clear in the plan of the electricity sector through:

- Natural gas operated power stations.

- Solar power (dual thermal stations solar and natural gas).
- Wind power stations.
- Hydro power station.

4.1.3.1 New and Renewable Energy Authority (NREA)

NREA was established in 1986. Its main objectives are the following:

- Conducting renewable energy resource assessment as well as studies and research necessary for developing renewable energy resources utilization with special concentration on solar, wind and biomass.
- Implementing various renewable energy types of projects including those aiming at adaptation of different renewable energy technologies to the local prevailing conditions as well as conducting renewable energy projects evaluation of different aspects.
- Conducting studies, applied research, setting standard specifications and evaluation procedures as well as issuing licensing certificates for renewable energy equipment and systems.
- Providing consultations to the various sectors of the Egyptian community.
- Support developing local capabilities in manufacturing both renewable energy equipment and systems.

4.1.3.2 Organization of Energy Planning (OEP)

OEP is the governmental body responsible for coordinating energy issues on the national level and conducting planning and analysis of energy related policies. OEP is also responsible for providing EEAA with estimates of energy and waste related GHG inventory on annual basis.

The main objectives of OEP are:

- Gathering and analyzing energy data at the macro level.
- Carrying out integrated planning for energy policies.
- Improving the energy efficiency use in different economic sectors.
- Following-up and evaluating different energy efficiency projects.
- Providing support and technical consultation in the energy field for different bodies and decision-makers.

OEP aims at achieving the above objectives by carrying out a great deal of coordination as well as cooperation with different local and international bodies such as UNDP, USAID, and GEF etc. OEP is equipped with mobile laboratories for measuring and monitoring different parameters related to energy and environment in various energy-utilizing units such as power stations, plants, oil refinery, buildings, vehicles etc. The laboratories at OEP have the capacity to monitor various parameters including the following:

- Combustion efficiency and steam system evaluation.
- Electricity related measurements.
- Air and water measurements.
- Gaseous leakage.
- Noise levels.

Within the context of CDM implementation in Egypt, OEP has an instrumental role to play. That is, it has the capability and resources, both human and technological, to perform the validation and monitoring processes of the CDM project cycle in Egypt.

4.1.4 Ministry of Industry & Technological Development (MITD)

MITD via GOFI is responsible for providing EEAA with estimates of the GHG emissions from the industrial sector. GOFI has also the potential to initiate and coordinate the implementation of GHG reduction related projects in Egypt.

4.1.4.1 Tabbin Institute for Metallurgical Studies (TIMS)

TIMS started its activities in November 1968, as a scientific establishment for continuous engineering education, training, research, and industrial consultation. The presidential decree, No.133 for 1975, was issued on 31 December 1975 to establish the Institute as an independent entity that belongs to the Ministry of Industry.

TIMS consists mainly of five scientific departments and five independent and self financed centers, of most important is the Energy and Environment Research Center (E2RC). As such, the center is of more relevance to CDM activities given that the main activities of this center are:

- Monitoring of industrial pollution, which includes measurement of gaseous emissions from different industrial sources and monitoring of ambient air for particulates and gaseous pollutants.
- Carrying out researches and offering technical and technological services as well as energy and environmental consultations to the companies in the fields of interest.
- Organizing and conducting practical and theoretical training programs for engineers and technician concerning energy saving pollution control.

4.1.4.2 Egyptian Accreditation Council (EGAC)

EGAC is a non-profit organization affiliated to the Ministry of Industry & Technological Development (MITD). Its main responsibilities include setting-up a system for evaluation of conformity assessment organizations and issuing accreditation certificates. EGAC's responsibilities also include granting, suspending or withdrawing of accreditation for conformity assessment organizations. In addition, it contributes to upgrading the quality of services of conformity assessment bodies according to the international criteria.

As regards the introduction and implementation of CDM projects in Egypt, EGAC can potentially play an instrumental role in this area. That is, this role materializes through its accreditation activities that lie essentially within its main mandate. At present, EGAC are involved in major activities leading eventually to an enhanced performance and an upgrade in the quality and range of services they offer. This in fact enforces the domestic efforts safeguarding the efficient and successful implementation of CDM projects in Egypt.

4.1.5 Ministry of Agriculture and Land Reclamation (MOALR)

MOALR plays an important role in increasing the country's CO₂ absorptive capacity through planting trees and thus, acting as sinks wherever possible. This is quite relevant for CDM projects as this sector can develop and implement CDM projects, which would act as carbon sinks. These may include the following:

- Planting and maintaining suitable types of trees along the middle islands and along the Nile, water canals etc.
- Developing man-made forests comprised of wood trees irrigated by treated water sewage. Examples of these forests are Qena forest, Luxor forest, Idfu forest, the New

Valley forest, Sinai tour forest, Sadat forest.

4.1.6 Ministry of Transport (MOT)

One of the mandates of the MOT is to promote environmentally friendly means of transportation. The responsibility of transportation between cities in Egypt lies within those of the MOT while inner city transportation is the responsibility of local administration. As a consequence of the economic restructuring program, Egypt has embarked on a policy to privatize public companies in the transport sector into private holding companies. The MOT is responsible for transportation plans in Egypt and transport sector is a potential host for CDM projects.

The following planned projects in the transportation sector are potentially CDM projects:

- The Underground (third phase).
- Electrification of Railroads.
- Utilizing compressed natural gas in public transportation.
- River Nile cargo & passenger transportation.

4.2. Existing Industrial Associations and Private Consulting Firms, As Well As NGOs, and their Potential for Participation in the CDM (Figure 4.2)

4.2.1 Environmental NGOs

At present, NGOs in Egypt operate under Law No. 32 of 1964, which governs all legal aspects pertaining to the functions of NGOs. However, a new law is awaiting submission to parliament for review and possible approval either during this current parliamentary year or the coming one.

The number of NGOs registered in Egypt in various areas has reached to-date about 14,600, of which more than 2000 carry out activities in the area of the environment. A number of these activities entail:

1. Tree planting.
2. Environmental awareness.
3. Solid waste management / recycling / composting.
4. Renewable energy projects.

Nonetheless, NGOs in Egypt need more support to achieve higher efficiency and performance rates. The required support can be summarized in the following:

- Providing an enabling environment. This comprises more recognition and acknowledgment by officials on the instrumental role NGOs can and should play to enhance environmental quality of the population. In addition, an amendment of the existing legislation governing the work of NGOs; that is, Law No. 32 of 1964 is needed in order to provide more flexibility and support for NGOs.
- Strengthening of institutional capacity for NGOs to ensure higher efficiency and effectiveness as well as allowing them to undertake large projects. This entails providing training and capacity building of human resources as well as providing them with technological resources needed to manage their activities.
- Providing sustainable sources of funding needed for NGOs to carry out their environmental activities and projects on a sustainable basis.

In fact, one of the main sources of funding for NGOs has been through the Global Environment Facility/ Small Grants Program GEF/SGP. This program has been providing NGOs in Egypt with the financial resources to undertake projects that are in

line with GEF main themes for a decade now. Some of the projects that were successfully implemented are related to energy efficiency and tree planting. However, the issue of sustainability of GEF/SGP funded-projects has been one of the criteria (and concerns) of the national steering committee in the selection process. One way of guaranteeing sustainability is by involving a third party like the municipality, as it is often the case in tree planting, to hand over the project once it is successfully implemented and executed.

Areas Envisaged for NGOs in CDM projects

- Conducting awareness campaigns to promote CDM projects both in Egypt and abroad.
- Carrying out activities in the fields of tree planting, afforestation (especially artificial forests) and green belts.
- Rallying and lobbying support among decision-makers and various segments of the public to amass more momentum for CDM projects in Egypt.

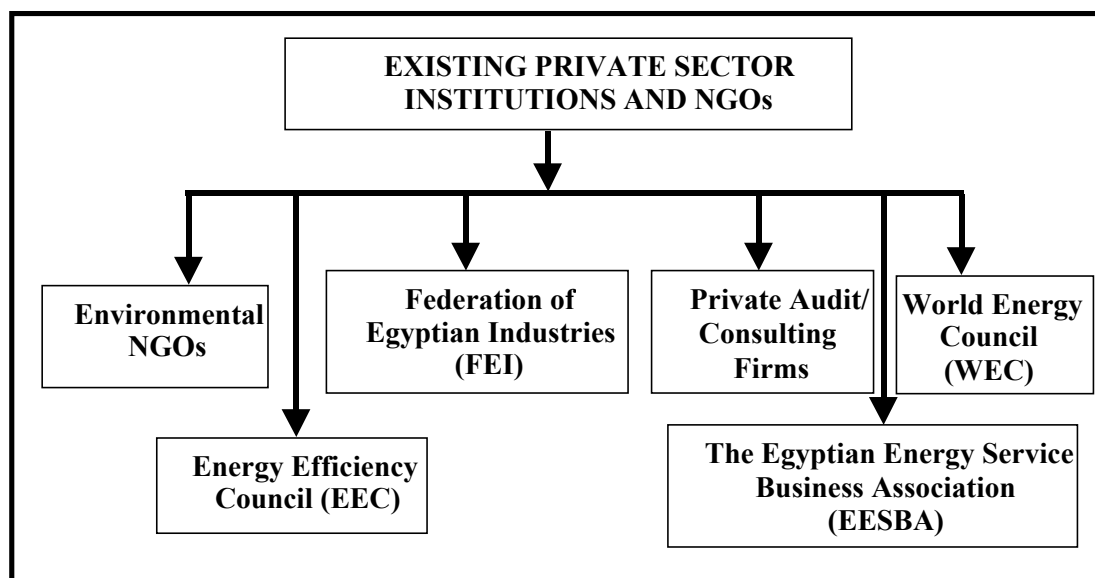


Figure 4.2: Private Sector Institutions and NGOs in Egypt with CDM Potential

4.2.2 Energy Efficiency Council (EEC)

The EEC is a consortium of public and private agencies concerned with the energy related issues to guide energy efficiency practices in Egypt. A key focus of the EEC is developing interagency cooperation to promote efficient use of energy resources. The Council is currently overseeing the development of a National Energy Efficiency Strategy. A framework for an energy efficiency strategy has been completed and it is expected that it will be ready within the next 18 months.

The members of the EEC are:

- OEP
- EEAA
- NREA
- MOP
- MOT
- FEI
- MEE
- CAPMS
- EESBA
- GOFI

The EEC members are potential hosts and supporters for CDM projects. In this context, EEC has an important role to play by providing awareness and information necessary for their members to identify potential CDM projects.

4.2.3 Federation of Egyptian Industries (FEI)

FEI is a non-profit organization, which supervises and sets policy for the entire Egyptian industrial sector. Currently, the Federation includes 15 chambers, and under its umbrella is registered about 22,000 industrial establishments.

The objectives of FEI are to directly represent its members' interests before governmental and legislative bodies as well as other local and international associations. FEI participates in developing policies and legislation that result in investment and business environments conducive to rapid growth of industry while contributing to the development of Egyptian industry by adopting new technology and international quality standards as well as coordinating and promoting technical training. In addition, FEI encourages and supports its members to participate in community development on environmental and social issues and to provide information to its members via its publications, seminars and other media in order to improve their operations.

As regards CDM, FEI can play an important role in promoting CDM projects within its large network of industrial firm members of its various chambers. FEI can also create and enhance the level of awareness among its members and contribute positively by acting as a clearinghouse for any information pertaining to CDM.

4.2.4 The Egyptian Energy Service Business Association (EESBA)

EESBA is a registered non-government organization established to support the business interests of entities offering efficiency solutions to the energy market in Egypt. In addition, the association sets out to address current market barriers facing the energy business community while working towards solutions that expand energy efficiency application in Egypt. EESBA participates in policy development issues, communicates its message to target business groups and government leaders, and helps in building the capacity of its members to meet market needs.

EESBA can play an important role in promoting CDM projects in Egypt. In this regard, the association assumes this role through:

- Creating and enhancing awareness on CDM projects within its members and other entities.
- Facilitating information exchange and technology transfer initiatives within the context of CDM projects.

4.2.5 The Role of Financial Auditing Firms in Egypt

There appears to be a considerable lack of knowledge about CDM activities and climate change in general within most of the financial auditing firms in Egypt. In fact, these firms rarely become involved in the undertaking of studies or any tasks in the field of the environment. If there is need to become involved in any environmental work, those firms hire freelance experts in the field due to the absence of this kind of expertise within their ranks.

The apparent lack of awareness and knowledge about their potential involvement in the CDM project cycle was exhibited in the majority of the financial auditing firms in Egypt. In fact, some of these audit firms have foreign partners/associates that have already declared their willingness and commitment to participate in such projects. This in turn has some important implications for local auditing firms in terms of acquisition of international experience and expertise in such a field via their foreign partners.

Eventually, this will lead to institutional capacity building in the field of CDM project related activities within those firms, especially in strengthening the capabilities of human cadres.

The role of the financial audit firms in Egypt with regard to CDM project cycle activities –in coordination and cooperation with international partners- may include, though not limited to, the following:

- Provision of background information and updates on CDM developments.
- Carrying out GHG audits.
- Identification of the most cost-effective carbon emission reduction projects.
- Validation of baseline methodologies.
- Verification of actual emissions reduction.
- Certification of actual emissions reduction.

In addition to financial auditing firms, private consulting firms can play an important role in the CDM activities in Egypt. In fact, such firms can carry out a number of activities pertaining to the CDM project cycle. Many of these activities are similar to those that will be potential activities for the audit firms as mentioned previously.

4.2.6 The World Energy Council (WEC)

WEC is a multi-energy organization comprising about 100 member countries around the world. Its objectives are to study, analyze and discuss energy related issues and thus submitting its views, advice and recommendations to decision makers worldwide.

Egypt –through its membership of the WEC, can promote CDM projects internationally. This can be achieved through the WEC’s various forums, publications and other activities.

4.3 Present Mechanisms for Foreign Investments in Egypt

4.3.1 Legal Framework

The legislation governing investment in Egypt can be divided into the following two broad categories:

- A. The legislative framework governing the establishment of investment projects. This comprises the following:
- Law No. 8 of 1997 (Investment Guarantees and incentives)
 - Law No. 230 of 1989 pertaining to internal investment and free zones. This law replaces Law No. 43 of 1974 (which was amended by Law No. 32 of 1977) related to the investment of Arab and foreign capital and free zones
 - Law No. 159 of 1981 related to firms/companies
 - Law No. 59 of 1979 pertaining to the New Communities and Cities
- B. The legislative framework governing projects after establishment and during full operation. A number of these laws are:
- Law No. 157 of 1981 relating to Income Tax.
 - Law No. 187 of 1993 on Unified Tax which supersedes Law No. 157 of 1981.
 - Law No. 11 of 1991 pertaining to Sales Tax.
 - Law No. 95 of 1995 relating to Lease Financing.
 - Law No. 8 of 1997 (Investment Guarantees and incentives) outlines the different types of incentives for any new investment such as tax permits.
 - Law No. 159 of 1981 (the companies law) governs the legal form of the different

types of firms (individual, corporate, public limited etc.) once the investment has been decided upon.

After all, according to the nature of activity (transport, industry, and agriculture...), there is a specific law for each type of activity. According to each activity, the different governing laws can be identified. In addition, investments can be made directly with local authorities (governorates). In this case, the law pertaining to Local Administration is the governing law.

The CDM investor may deal with an existing investment (a holding company for example). In such case, the governing laws of such activity are to be realized and this law identifies the current benefits of such activity.

4.3.2 Privatization Program

Law No. 203 of 1991, the Public Business Sector Law, and its Executive Regulations, represent the first step towards the privatization of public sector organizations in Egypt. Law No. 203 of 1991 has paved the way for the transformation of public organizations and the companies that they assumed responsibility of into Holding companies and Subsidiary (or Affiliated) companies. The new companies must all take the form of joint stock companies. The privatization process is proceeding rapidly in line with the government's policy of promoting both domestic and foreign direct investment. In fact, ongoing privatization is expected to reduce the public sector's role in industrial sector activity and in total output within the next few years.

Out of the original portfolio of 314 companies, the government has sold controlling interests in 109, and minority interest in another 18 companies. Egypt's privatization performance is exceptional because the major share of its proceeds emanates from the manufacturing sector.

Methods of Privatization

Privatization in Egypt takes one of the following forms:

- The transfer of ownership and control of state-owned enterprises to the private sector through a partial or full public share flotation on both the domestic or foreign stock exchanges.
- Direct sale of a controlling interest to domestic and/or foreign investors.
- Direct sale of a controlling interest to employees
- The law also allows the sale or lease of company assets, unlimited sale of government-owned shares, or liquidation.

The privatization program in Egypt is two-fold. The first, and most dynamic fold involves divestment of public sector holdings in production and manufacturing companies. The second fold of the privatization program is the encouragement of private sector investments in those sectors which were historically controlled and operated by the public sector, including electricity, roads, airports, maritime ports, and oil and gas transmission.

Throughout the reform period, the government has provided a favorable privatization environment through the removal of trade barriers, the decrease of industrial investment licensing procedures, the reform of trade and financial markets, as well as the legal, taxation and regulatory frameworks.

4.3.3 Actors, Authorities, and Institutions

Table 4.1 clarifies different authorities and their roles & responsibilities in the foreign direct investment system of Egypt:

Table 4.1: Different Authorities and Their Roles & Responsibilities in the Foreign Direct Investment System of Egypt

Role and Responsibility		Institution
Attraction of Potential Investors	1. External promotion to attract potential foreign investors and investments	Ministry of Foreign Affairs, Ministry of Information - State Information Office, Ministry of Economy -Commercial Offices in Egyptian Embassies, NGOs
	2. Information on foreign investments in Egypt	Ministry of Economy, The General Authority for Industrialization (GOFI), The General Authority for Investment (GAFI), Federation of Egyptian Industries (FEI), NGOs
	3. Facilitation of investments	Cabinet of Ministers – Prime Minister’s Office
Approvals	4. Allocation of land	GAFI, governorate or New Communities Authorities
	5. Issuance of the preliminary approval for the project	The General Authority for Industrialization (GOFI) or The General Authority for Investment (GAFI)
	6. EIA approval	Egyptian Environmental Affairs Agency (EEAA)
	7. Final approval for the project	The General Authority for Industrialization (GOFI) or The general authority for investment (GAFI)
	8. Acquiring a permit for construction	Municipality / governorate or New Communities Authorities
Organizational Procedures & Implementation	9. Issuance of an import card for the project (if necessary)	Ministry of Economy and Ministry of Finance
	10. Issuance of a license for operation	Municipality / governorate or New Communities Authorities
	11. Issuance of a tax card and registering in the commercial register	Ministry of Economy/ Ministry of Finance/ Ministry of Internal trade
	12. Registering at the Federation of Egyptian Industries (FEI), for industrial projects under companies’ law	Federation of Egyptian Industries (FEI)
	13. Insuring the workforce	Social Insurance Authority – Ministry of Social Affairs
	14. Acquiring a certificate of production compliance with standardized specifications	Egyptian Standardization Authority – Ministry of Industry & Technological Development
	15. Verification of the share of the local component in products	The General Authority for Industrialization (GOFI)
	16. Acquiring other permits for production expansions or product diversification	General Authority for Investment (GAFI)/ The General Authority for Industrialization (GOFI)

In the following section, the two main models of foreign investment, which are familiar in Egypt, are briefly described. These two models are the most relevant ones for any CDM investor.

4.3.4 Models of Foreign Investment in Egypt

In Egypt, there are a number of models for foreign investment pertaining to the form of the companies' undertaking investment. In this section, a brief note on two of the most common forms is presented.

A. Joint venture (JV)

In general, an association of two or more companies (one of which is an Egyptian company, private, public or governmental) to operate jointly owned properties. However, in case of cooperation between the Egyptian government and any foreign partner, an "operating company - JV" is to be named by mutual agreement between both partners. Despite being a private company, the provisions of a JV agreement or the charter of the operating company are subject to the laws and regulations of Egypt and therefore, the former has to be in conformity with the latter.

B. Foreign Companies

A company may be wholly owned by non-Egyptians as in the case of foreign companies either as a local branch of a global body or as a separately established entity according to Egyptian investment laws. This model of investment is quite common in various sectors of Egypt such as petroleum, industry, banking etc.

Given the aforementioned two commonly used forms for foreign investment in Egypt, potential CDM projects can adopt either form. That is, there is already a framework for foreign investment in place in Egypt and therefore, CDM projects can be fit into this a framework.

4.3.5 Incentives and Barriers for CDM Foreign Investment in Egypt

According to the current regulatory system in Egypt, there are laws facilitating and providing a wide range of incentives to attracting foreign investment into the country. In the following, we review Law No. 8 of 1997 which constitutes a major landmark in this regard.

Guarantees and Incentives Provided Under Law No. 8 of 1997

The main features of this law are as follows:

- Non-Egyptians may wholly own a project.
- Guarantees against nationalization and expropriation of the project besides, any seizure of the asset of a project is to be effected through a court ruling.
- Output of the project is not subject to price control.
- Projects are allowed to repatriate their capital and profits.
- Non-Egyptians may comprise the majority of the board of directors.
- Salaries and wages of foreign experts are exempt from income tax if their stay in Egypt is less than one year.

Barriers for Foreign Investment in Egypt

Nonetheless, there appears to be a number of obstacles and barriers impeding the pace and magnitude of foreign investment in Egypt. This in fact has a number of implications for the implementation of CDM projects in Egypt, which will be discussed in the recommendations later on in this chapter.

Within this context, the obstacles for foreign investment in Egypt and thus, for the implementation of CDM projects can be classified into two main groups; too many

authorities and too many procedures as illustrated in the previous table.

In addition to the above-mentioned obstacles, CDM projects may face other barriers. That is, in order to design investment-friendly incentives to increase the flow of GHG mitigation projects, the following barriers should be overcome.

Institutional

The domestic institutional capacity of Egypt to create and manage CDM projects as well as the motivation is somewhat lacking momentum. This necessitates institutional capacity building of the relevant national agencies prior to or simultaneous with carrying out CDM projects. Needless to mention that the institutional setting, to handle all matters pertaining to the approval and the handling of all CDM affairs within the Egyptian government, does not exist. For this, as will be discussed later on, the Climate Change unit at EEAA will need to accommodate a section for CDM.

Technical Knowledge and Human Resources

In this regard, there are two points warranting special attention. First, specific knowledge on the various aspects of CDM as related to its regulation, monitoring and enforcement is needed before and during implementation of CDM projects in Egypt. Secondly, the level of technical skills in Egypt and the quality of trained personnel in many fields of expertise require enhancement and upgrading. This is the case despite of Egypt's high ranking in terms of skilled labor in comparison to other countries (Chapter 3). Therefore, capacity building in the area of human resources appears to be a necessary prerequisite for adoption of CDM projects in Egypt.

Information and Awareness

One of the important and necessary conditions for the successful implementation of CDM projects is the availability of clear and unbiased information as pertains to CDM, coupled with a high degree of awareness. In this context, Egypt -through various institutions in government, civil society etc.- needs to gather and disseminate information on various aspects related to CDM. Simultaneously, Egypt -also through its various institutions- has to create, strengthen and/or enhance awareness of various stakeholders on CDM. One of the reasons for the lack of momentum in motivation, as pertains to CDM implementation in Egypt, is due to the fact that information and awareness fall short of the optimal levels in this aspect.

Fuel Subsidies

Many CDM project types e.g. in the area of renewable and energy efficiency, suffer from the high level of subsidies on fossil fuels in Egypt, because the effect of fuel saving does only result in small savings in fuel costs. Fuel subsidies in a country can make many CDM projects financially unattractive and represent a major barrier for their implementation.

The Egyptian government seeks to reduce fuel subsidies gradually since the 1990ies. However, the general socio-economic situation of the population and the national economy in Egypt poses many challenges to this strategy and impeded major progress so far. It is save to say that a fast transition to unsubsidized fuel prices is rather improbable in the short to medium term in Egypt, given the country's socio-economic context.

4.4 Domestic Prerequisites for CDM

In the following, the main activities or tasks required for the participation in CDM both outside and inside the CDM project cycle are described. For every task, possible governmental and private sector actors are identified, forming a national framework for the participation in the CDM market. The main governmental body in this framework, the CDM committee supported by the CDM unit, will be described in Section 4.5.

4.4.1 Tasks Preceding the CDM Project Cycle

A number of jobs outside the CDM cycle are to be done prior to the project cycle as follows – Table 4.2.

A. Awareness Raising Including Provision of on CDM Procedures in Egypt

Prior to the initiation of the CDM project cycle, there is a need to create, enhance and raise awareness pertaining to CDM activities and procedures especially within the Egyptian context. This task is quite instrumental for the successful introduction of CDM activities into Egypt. It comprises a number of procedures and logistics including the compilation and dissemination of data and information related to CDM activities. This could be achieved through issuance of brochures, leaflets, information packages, websites etc. This task can be assigned to NGOs, a number of governmental agencies and line ministries such as EEAA/Climate Change Unit, Ministry of Foreign Affairs, Ministry of Information. However, it is highly recommended that unified information and awareness packages are prepared by all the relevant authorities while disseminated through all parties as well as NGOs. It might be fruitful to actively approach targeted industries, e.g. by making presentations/discussions on CDM in already existing industrial forum, conferences, meetings etc.

B. Training in GHG Mitigation Technologies in Egypt

Capacity building of human resources in the area of GHG mitigation technologies is a necessary prerequisite to ensure that the required technical cadres are able and capable of catering for the various CDM activities in Egypt. In this regard, extensive training in the field of GHG mitigation technologies is required. This entails on-site training in some cases, while classroom instruction is required in other instances. Training can be carried out in a number of institutions both governmental and private.

C. Continuous Monitoring and Analysis of International GHG Offset Market

A database or a national clearinghouse for the international GHG offset market has to be established and updated in a frequent and continuous manner. The objective of such a database or clearinghouse is to provide a systematic view with in-depth analysis and monitoring of the international GHG offset market. This is quite important for enabling Egypt –as well as national host institutions- to maximize its benefit from participation in the CDM activities on an international level. EEAA/Climate Change Unit in coordination with other government agencies and line ministries such as Ministry of Economy and Foreign Trade, Ministry of Petroleum etc. are potential candidates for such task.

D. Supporting the Egyptian Government in International Negotiations

In general, international negotiations usually result in the signing of protocols, agreements, conventions etc. In any case, they entail commitments, responsibilities as well as benefits to many countries. To ensure fair representation and optimal results in international negotiations, nations therefore need to be well prepared for such important events. This entails gathering data and information, as relates to Climate Change, on a

global level while taking into consideration the regional/national perspective and interest. Dossiers of information and analytical reports have to be prepared. In addition, all the necessary logistics needed to ensure Egypt's participation and preparedness in international negotiations is to be sufficed. In this task, the Ministry of Foreign Affairs and EEAA are the two main entities that should be assigned to such a responsibility.

E. Attraction of Foreign Investors for CDM in Egypt and Facilitation of Matchmaking between Investors and Egyptian Hosts

In general, the attraction of foreign investors has to be in line with the facilities offered and the incentives provided to them in host countries. In the case of CDM implementation in Egypt, legislative amendments need to be introduced in order to include CDM project components within the investment incentives law. In addition, the lengthy and timely procedures for undertaking investments in Egypt need to be revised in order to facilitate the implementation of CDM projects both in an efficient and effective manner. The General Authority for Investment (GAFI) appears to be the main player in facilitating the procedures for foreign investors. The Federation of Egyptian Industries (FEI), NGOs, Ministry of Economy and Foreign Trade and Ministry of Foreign Affairs play an important role in attracting foreign investors for CDM in Egypt. Moreover, these entities are suitable candidates for providing the forum for matchmaking between foreign investors and their Egyptian hosts in the area of CDM.

Table 4.2 summarizes the tasks to be carried out prior to the initiation of the CDM project cycle activities. These tasks can be conducted by the following options:

- Option (1): through which government agencies play the only or main role in fulfilling such task.
- Option (2): whereby the private sector and NGOs play the only or main role in fulfilling such task.

Despite the fact that all tasks can be more-or-less carried out by both options, it is anticipated that the second option will gain momentum in the future due to the on-going privatization program in Egypt. Furthermore, the Egyptian government is increasingly giving incentives and support for the private sector to step up its instrumental role in the economy. In addition, foreign private companies investing in CDM in Egypt obviously prefer clearly to work with private sector partners.

However, whether the government or private sector and NGOs conduct those tasks, the CDM unit (see Section 4.5) will closely monitor the performance of the parties mandated to ensure the quality and efficiency of the tasks carried out.

Table 4.2: Tasks to be Carried Out Prior to the Initiation of the CDM Project Cycle Activities

Task	Institutions	
	Option 1: "Government"	Option 2: "Private"
Awareness raising	EEAA/ CDM Unit/ CDM Committee	NGOs
Training in GHG mitigation technologies	Governmental Institutions	Private Firms
Continuous monitoring and analysis of international GHG offset market	EEAA / CDM Unit / CDM Committee	
Supporting the Egyptian government in international negotiations	Ministry of Foreign Affairs / EEAA/ CDM Unit / CDM Committee	
Attraction of foreign investors for CDM in Egypt and facilitation of matchmaking between investors and Egyptian hosts	Ministry of Foreign Affairs / EEAA / CDM Unit / CDM Committee	The Federation of Egyptian Industries (FEI), NGOs, Media & Public Relation Firms

4.4.2 Tasks in the CDM Project Cycle

CDM Cycle Description

The cycle of a typical CDM project is described in a series of steps. Each step in the evolution of the project has its own CDM related tasks and conditions, which are described in the following. Figure 4.3 gives an overview of the project cycle. The following steps may be identified:

Project identification and formulation of a feasible project-by-project participants (in consultation with the national CDM implementation unit) according to the international rules of the CDM and national CDM eligible criteria. The national CDM eligible criteria concentrate on identifying national interest fields for CDM as described in chapter 6. Most important is taking into account the expected CER benefits.

A '**designated operational entity**' is a public or private entity (designated by the COP/MOP) accredited and spot-checked by the CDM executive board to validate, verify, CDM project activities, certify emission reductions in by sources and/or enhancements of removals by sinks.

Validation is the process of evaluation of a project against the requirements of CDM projects based on a project design document. This is to be carried out by governmental or private companies under a contractual arrangement with project participants. The main elements of a project validation are the assessment of the baseline data, the assessment of a monitoring plan, verification that all parties involved have voluntarily approved the project, verification of compliance with host country criteria, verification that project opponents have consulted with and adequately addressed the concerns of local populations that may be affected by the project.

Independent entities shall validate, approve the project upon request of a project participant and verify that it complies with relevant guidelines and principles. A project needs to be validated before emission reductions resulting from that project may be certified.

Registration is the formal acceptance of a validated project as a CDM project, based on a recommendation by the independent local entity. Validation and registration of a project are prerequisites for the verification, certification and issuance of CERs related to that project activity.

Monitoring is the systematic surveillance and measurement of after being implemented aspects related to the implementation and the performance of a CDM project activity in accordance with a registered monitoring plan. Designated entities shall perform such periodic and technical monitoring of projects. However, monitoring data reported has to demonstrate that the CDM project has resulted in additional emission reductions by sources, or an additional enhancement of removals by sinks. Moreover, monitoring data has to demonstrate that these emission reductions or enhancements of removals by sinks are real, measurable and long-term.

Verification is the periodic independent review and ex-post determination by a designated international entity of the emission reductions by sources and/or enhancements of removals by sinks that have occurred because of a specific project.

Certification is the written assurance by a designated international entity that during the verification period a project has achieved the stated emission reductions and/or removals by sink in compliance with all project performance criteria.

A '**Certified Emission Reduction**' (CER) unit shall be equal to one metric ton of CO₂ equivalent emissions reduced or sequestered arising from a CDM project.

Issuance is the formal release of CERs based on a certification by a designated international entity. International entities shall certify the emission reductions resulting from a validated project upon request from a project participant. Additional emission reductions resulting from a project shall be calculated based on the baseline submitted to the independent entity in the course of the validation of the project. They shall be certified after they have occurred, only if:

- A participant in the project applies for the certification of the emission reductions resulting from the project during a specific period
- The project has been validated and continues to meet the requirements for project validation
- All Parties involved are entitled to participate in CDM projects

The independent entity shall inform the applicant of its decision in writing immediately after the completion of the certification process. Independent entities shall publish their decisions on the certification of emission reductions in a suitable manner.

Again, most tasks can be carried out by both governmental and private bodies. In line with the national privatization efforts and the preference of international investors for private company partners in CDM projects, emphasis should be made to encourage the private sector to build up the necessary engineering, consulting and verification skills.

Based on the CDM project cycle and its different activities to be carried out in each stage, Figure 4.3 represents the CDM project cycle with the potential national participation for both the governmental and non-governmental institutions. This figure facilitates determination of capacity building needs for national institutions to be able to participate in CDM projects.

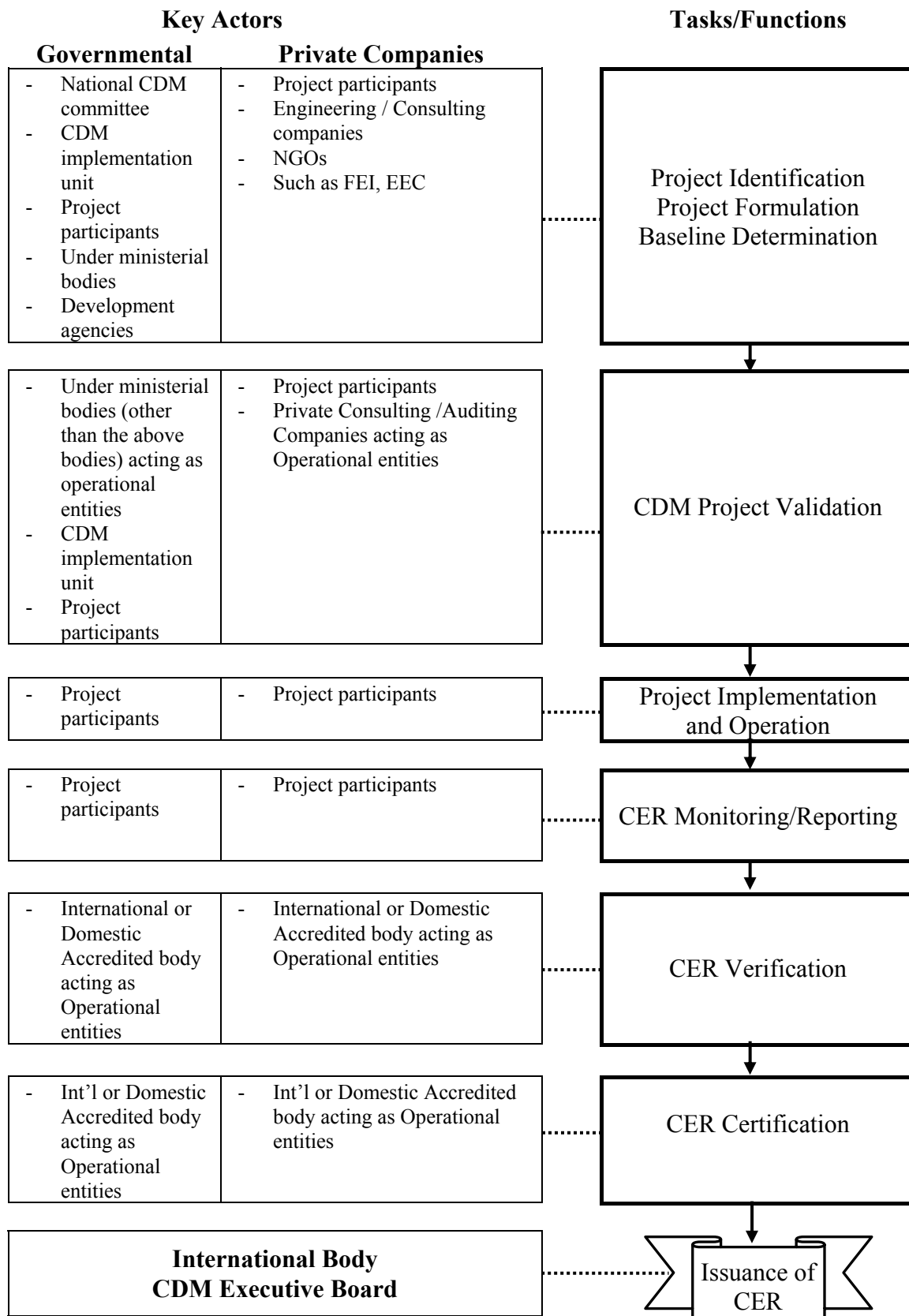


Figure 4.3: CDM Project Cycle Flow Chart

4.4.3 Transaction Costs

The development of CDM projects is subject to certain transaction costs. They include¹:

- Costs of international rent seeking and risk mitigation costs.
- Costs of national rent seeking and risk mitigation costs.
- Costs for project formulation.
- Costs for project approval.
- Domestic taxes.
- Costs for monitoring, verification and certification of projects.

As previously mentioned in this chapter, a number of obstacles for foreign investment in Egypt exist that tend to increase transaction costs. This has several implications for the implementation of CDM projects in Egypt. One of these implications entails a timely and lengthy process for new projects to be established. If coupled with institutional rent seeking, this may lead to an increase in the costs CDM projects, making them unattractive on the international GHG market. In fact, the degree by which the CDM will be efficiently implemented in Egypt is affected by the net amount of resources that ultimately reach the project level. Therefore, as more resources are extracted due to transaction costs and rent seeking, fewer resources will be made available for emissions reduction. The final result of high transaction costs is that less CDM projects will be realized in Egypt.

The transaction costs and any rent seeking in CDM projects should be minimized as much as possible in order to achieve a more efficient and cost-effective CDM mechanism in Egypt. The anticipated CDM unit will, through its “one stop shop”, facilitating and coordination role be to a large degree responsible for low transaction costs in CDM projects.

4.5 National CDM Committee and CDM Unit

Supporting CDM projects on the national level is crucial for attracting investors to Egypt to implement GHG reduction projects. This support should be a secure, strong institutional as well as technical basis. This requires building both the institutional framework for implementing CDM projects within Egyptian main GHG emitting sectors with a facilitating management scheme and building national capacities to deal with different issues within the project cycle and the real implementation of the project.

As for the institutional framework, two levels of coordination are proposed, the national committee for CDM and the CDM implementing unit.

The National CDM committee is the executive board or policy-making body for the CDM in Egypt. It is a sub-committee of the Inter-Ministerial Committee on Climate Change. It will have the following powers and responsibilities – Table 4.3.

¹ For more information on the impact of transaction costs see NSS Colombia.

Table 4.3: Powers and Responsibilities of the National CDM Committee

To define and implement a national CDM action plan.
Implementation of a CDM Unit (see below). Regular review of the performance of the CDM Unit with specific comments and guides for improvement.
Formulation of a national policy regarding CDM and preparation of position papers for Egypt on CDM. Formulating the feedback from the CDM Implementation Unit, and probably other stakeholders, in the form of specific regulation proposals to higher levels to overcome CDM implementation barriers, if any.
Formulation of specific regulation proposals to legislative bodies to regulate and facilitate CDM project implementation and transfer of CERs.
Issuing guidelines for CDM projects and defining the national criteria for CDM project approval as well as the regular revision and adaptation of these guidelines and criteria.
To finally decide on the approval of CDM projects submitted.
To organize the transfer of CER from CDM projects
To keep track of the CDM projects in Egypt in a national registry.

The proposed CDM Unit will be established within the existing Climate Change Unit at EEAA. It will act as an executive secretariat of the National CDM Committee. The CDM unit is a one-stop-shop delivering or mediating services for the CDM committee as well as for private and public institutions interested in CDM in Egypt. The mandate of such a CDM Unit will include the following – Table 4.4.

Table 4.4: Powers and Responsibilities of the CDM Unit

Undertaking activities for awareness raising and promotion of CDM in Egypt.
Organizing training and workshops, seminars and exhibitions for capacity building on different aspects of CDM activities in co-operation with existing governmental or private institutions.
Monitoring the international market for GHG offsets and strengthening of investors relations.
Facilitating matchmaking between potential project hosts, investors, technology suppliers etc.
Supporting the Committee in issuing guidelines for the CDM projects as well as carrying out monitoring and follow-up activities for CDM projects initiated in Egypt.
Acquiring various approvals and permits on behalf of CDM hosts without having them to go through a timely and tiresome process themselves. This will lower transaction costs considerably and thus, be instrumental in catalyzing CDM projects in Egypt.
Liaising and coordinating with line ministries and governmental agencies to support the committee in the preparation of position papers for Egypt on CDM (COP/MOP) and representing Egypt in international meetings and conferences in this field.
Organizing the transfer of CER from CDM projects.
Keeping track of the CDM projects in Egypt in a national registry.
Assisting the Committee in the evaluation of CDM projects submitted for approval.
Assisting the Committee in examining and evaluating appeals in the approval and implementation period of the project.

The CDM Unit will be rather small and lean in its organization, but will heavily depend on private and governmental institutions that are mandated to carry out certain services on a contractual basis – Figure 4.4. Detailed tasks are described in the Action plan. (See Chapter 5).

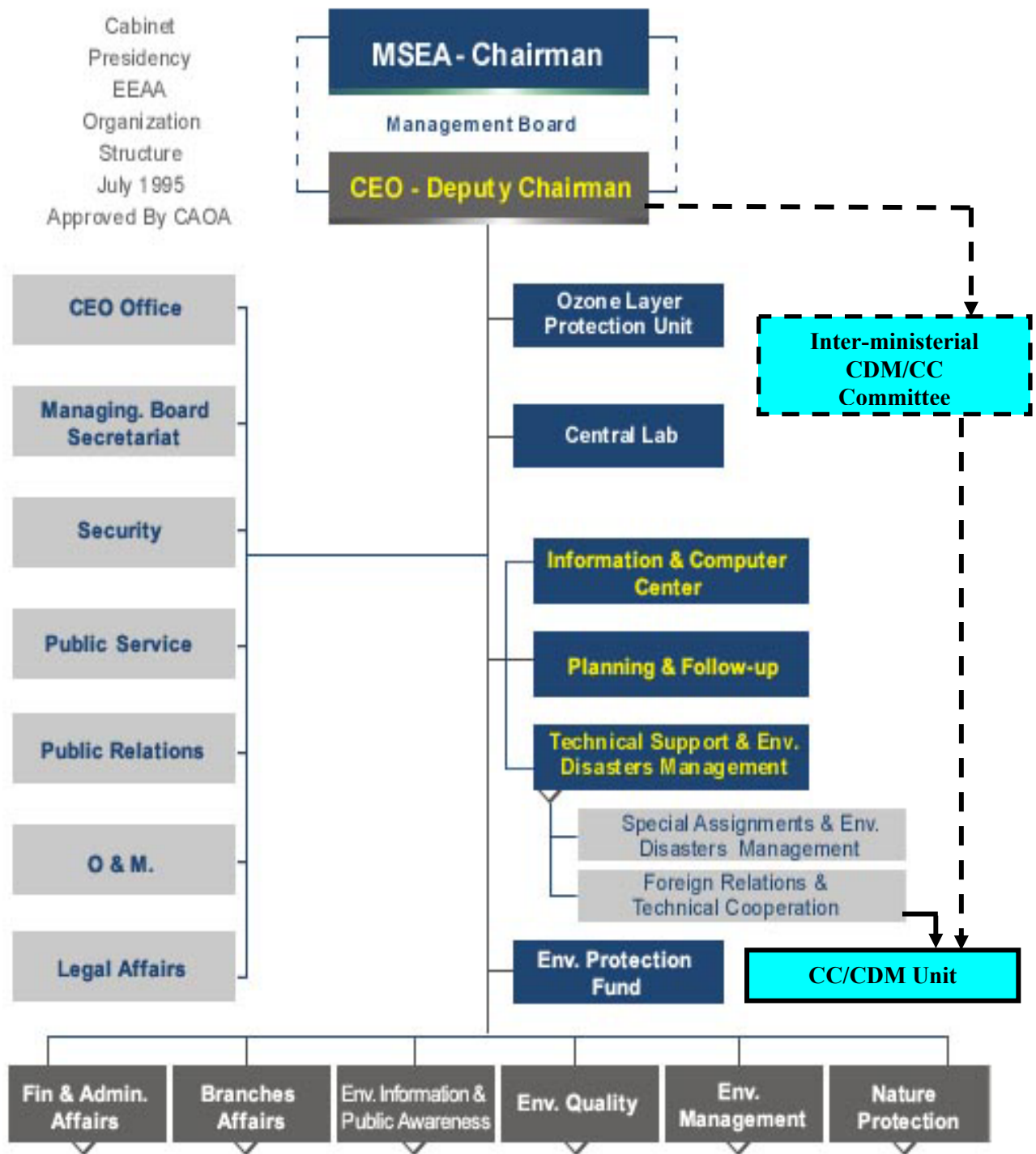


Figure 4.4: The Climate Change/ CDM Unit within the Organisational Chart of EEAA

4.6 Options in CDM Design

4.6.1 Arrangements for International CDM Co-operation

The CDM project host and the project investor are normally separate entities. Contractual agreements between the two specify how the investment costs and the resulting CERs will be shared. In general, the unilateral model may be distinguished from the bilateral and multilateral approaches:

Unilateral CDM

According to the unilateral CDM model, the project hosts are also the project investor. The CDM project development and financing, as well as its associated risks, will be shouldered entirely by Egypt. In this case, Egypt would be free to develop and fund domestic activities that lead to additional emission reductions. The CERs will then be sold on the international market. However, this would require Egypt to set up a centralized investment fund for CDM, which may be established through loans or other sources of funding. One of the main advantages of such a model lies in the fact that Egypt could utilize the fund resources in CDM projects that bear high priority in the country's developmental plans and its strategic objectives. Also, a higher share of project investment and return will remain in the country. However, a major obstacle of such a model is the limited capacity and resources available at the time in Egypt to select, develop, finance and operate CDM projects. The government of Egypt currently does not consider the unilateral model as a viable option for the country.

Bilateral and Multilateral CDM

In bilateral CDM, private or public investors in Annex-1 countries make a bilateral agreement with a developing Non-Annex I country to implement a CDM project. The investor and the developing country project host will jointly implement the project.

This type of model is perceived more relevant for application in Egypt for a variety of reasons. One of the main reasons in favor of this model is the close relationship between Annex B investor and Egypt in the development, financing and possible operation of a CDM project. That is, the project selection, financing, and sharing of credits are worked out directly between participating parties on a project-by-project basis. In the case of Egypt, this might ensure better performance and higher efficiency and effectiveness of project operation. Moreover, technological know-how will be shared between the parties and thus, technology transfer and capacity building will materialize during the project implementation.

The multilateral arrangement is similar to the bilateral, but here a broker institution collects a portfolio of several projects and finds several investors from different countries. The institution managing the portfolio could be a private entity (e.g. "carbon funds"), an international development agency (e.g. the UNDP) or an independent body specifically established for this purpose. Multilateral arrangements and GHG brokers may become important elements of the international GHG market that will help to spread risks and to increase market transparency.

4.6.2 Groups of Small Projects

In this option, a large number of smaller CDM projects of similar type are grouped together in a package of CDM projects. This can be organized by an association of project hosts, NGOs, private companies or by governmental bodies. This grouping reduces the transaction costs per project, and may render small projects such as fuel

switching in transport projects in smaller companies, viable CDM projects.

4.6.3 Fast Track for Small Projects

Following the decisions of COP-7, the following small-scale CDM project activities might be subject to a simplified procedure by the end of COP-8:

- Renewable energy project activities with a maximum output capacity of up to 15 megawatts (or an appropriate equivalent).
- Energy efficiency improvement project activities that reduce energy consumption, on the supply and/or demand side, by up to 15 GWh per year.
- Other project activities that both reduce anthropogenic emissions by sources and that directly emit less than 15 kilotons of carbon dioxide equivalent annually.

In order to facilitate small-scale CDM projects, Egypt should define the type and size of projects that are eligible for fast track approval and should define the fast track procedures needed, in line with the UNFCCC provisions.

4.6.4 Standardization of Baselines

In order to lower transaction costs, the baseline for certain project types might be standardized. Instead of defining the baseline (Business as Usual) scenario for every project separately, the standardization simplifies baseline setting by providing standard baselines for certain project types and technologies. The definition of baseline requires researching the typical GHG emission patterns of the focused technologies, sectors or region. They may significantly simplify the determination of the amount of CERs produced and therefore reduce transaction costs. On the other hand, standardized baseline may lead to the issuance of CERs for projects that would be implemented any way and that are not additional (danger of free-rider ship).

4.6.5 Insurance of CERs

Some insurance companies are developing products to insure CDM projects. Reinsurance solutions, both for CER trading risks and GHG professional liability insurance, are interesting both for domestic and international trading schemes. Insurance companies can develop and arrange such risk protection for organizations involved in CDM projects.

4.7 Conclusions

The preceding chapter has attempted to identify the present institutional set-up in Egypt that will be relevant for the implementation of CDM projects. To set the framework for CDM investment, the existing legislation and regulatory framework pertaining to foreign investment in Egypt was reviewed. This chapter has highlighted the obstacles and barriers impeding the introduction of new foreign investment projects into Egypt, lying primarily in the institutional setup and the lack of technical capacity. Egypt has also competitive and comparative advantages in the CDM market, including cheap and skilled labor, tax exemptions for investment projects, favorable conditions for renewable energy technologies such as wind and solar etc.

Regarding the institutional setting for CDM, it is proposed that Egypt establishes a National Committee for CDM supported by a CDM unit. These institutions would facilitate the necessary activities in order to meet the identified needs in capacity building, with regard to CDM mandating existing institutions and licensed independent consultants, on a contractual basis.

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