

# Morocco

May 2006

## 1. CDM investment climate index: regional comparison

CDM investment climate index (CDM ICI), Africa April 2006 (excerpt)

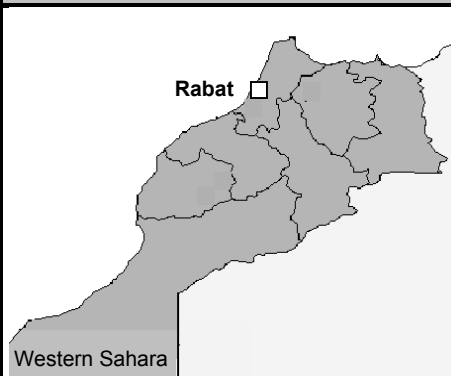
Rank	Country	CDM ICI (max. 100 pts.)	Regional classification
1	South Africa	76.4	Good climate
2	Morocco	70.9	Satisfactory climate
3	Tunisia	52.6	Adequate climate
4	Mauritius	52.2	Adequate climate
5	Uganda	49.7	Adequate climate
...	...	...	...
52	Central African Republic	5.6	Unsatisfactory climate

Source: DEG - Deutsche Investitions - und Entwicklungsgesellschaft mbH

(For calculation method see [www.kyoto-coaching-cologne.net](http://www.kyoto-coaching-cologne.net))

The CDM ICI measures the investment climate for CDM projects. It can range between 100 points (highest) and 0 points (lowest). Altogether, the climate is rated as 'satisfactory' in Morocco. In Africa, the country thus ranks No. 2. The inferior ranking to South Africa is primarily attributable to Morocco's less favourable rating for general investment climate and the corruption index.

## 2. General climate for foreign investments

General economic data 2005		
 <p>Rabat</p> <p>Western Sahara</p> <p>bfai graphic</p>	Population:	36.1 million inhabitants
	Nominal GDP:	US\$ 51.7 billion
	Per capita GDP:	US\$ 1,640
	Real GDP growth:	+1.2% (2004: +4.2%)
	Inflation (cost of living):	+1,0% (2004: +1.5%)
	Goods exports:	US\$ 10.4 billion
	Goods imports:	US\$ 19.9 billion
	Foreign direct investments:	US\$ 2,906 million
	Foreign debts (end of 2005):	US\$ 15.6 billion
	Currency reserves (end of 2005):	US\$ 16.2 billion
	Exchange rates (1 April 2006):	US\$ 1= DH 9.01, EUR 1= DH 10.94
	Country credit rating according to Institutional Investor (March 2006):	51.8 out of 100 points (Rank 63, +1.1 points on previous year)
	Corruption Perceptions Index 2005 (Transparency International):	3.2 out of 10 points (10 = free of perceived corruption)

### Locational advantages:

Broad development assistance to the country through international aid, reform efforts to modernize and liberalize the economy, progressive reduction of trade barriers, association treaty with the EU

### Locational disadvantages:

Heavy dependence on energy imports, central role of the agricultural sector which depends on weather conditions, partly intransparent administration, economic legislation in need of improvement, large social disparities amidst widespread poverty

## 3. Specific climate for CDM projects

### 3.1 Ongoing CDM projects in the country

Since ratification of the Kyoto Protocol in 2002, Morocco has built up CDM capacity quickly and consistently and has a transparent administrative apparatus for appraising and assessing projects at national level today. A three-year programme by the United Nations (UNDP/UNEP) to develop and implement the national strategy for CDM was successfully completed in 2005. In April 2006, the Designated National Authority's (DNA) portfolio contained 40 projects with estimated annual prospective emission savings of approx. 5 million tonnes of CO<sub>2</sub>. The potential is by no means exhausted, however. Renewable energies (wind, sun, biomass), energy efficiency, rationalization of local transport, waste management and afforestation still afford many different opportunities for saving on greenhouse gases. As the country imports 95% of its energy, the high international energy prices act as an incentive for Morocco to implement relevant projects.

Three Moroccan CDM projects have so far been registered at the competent UN body for the respective international approval, the CDM Executive Board (EB), including two windparks. The 10.2 MW windfarm in Tétouan worth some US\$ 10 million supplies power to a cement works run by the French group Lafarge. The plant that went on line in 2005 will save 28,600 tonnes of CO<sub>2</sub> emissions a year.

The 60 MW windpark in Essaouira is scheduled to start operation in mid-2006. The project executing agency is the national (state) power supplier, Office National d'Electricité (ONE). The costs amount to about US\$ 90 million and were financed in part by the German Kreditanstalt für Wiederaufbau (KfW). Annual CO<sub>2</sub> savings are estimated at 150,000 tonnes.

The third registered project is the nationwide programme by ONE for rural electrification using stand-alone photovoltaic systems (about 105,000 solar home systems). Parts of this programme are cofinanced by KfW and its French counterpart AFD.

#### *Projects in Morocco registered by the CDM Executive Board as at 8 May 2006*

Project title	Annual reduction of CO <sub>2</sub> e (t)	Methodology	DOE	Other participants
Essaouira windpower project	156,026	ACM 0002	DNV	n.a.
Tétouan Wind Farm Project for Lafarge Cement Plant	28,651	AMS-I.D	DNV	France (Lafarge S.A.)
Photovoltaic kits to light rural households in Morocco	38,636	AMS-I.A.	TÜV Süd	n.a.

CO<sub>2</sub>e = carbon dioxide equivalent; DOE = Designated Operational Entity (function here: authorship of validation report)

Source: UNFCCC website

Three other projects have been authorized by the competent Moroccan Designated National Authority (DNA) based on the Project Design Documents (PDD) and should be submitted soon to the EB for registration. These are a project by the state chemical combine Office Chérifien des Phosphates for the improvement of energy efficiency in the chemicals complex Jorf Lasfar, a windpark (10 MW) in Tan Tan to run a desalination plant of the Office National d'Eau Potable (ONEP) and a biogas facility in the city of Rabat.

Based on the Project Idea Notes (PINs) submitted, another 15 measures had passed the preliminary appraisal by the DNA as at 31 March 2006. The PDDs for these projects are presently in preparation. These comprise several windparks, two hydropower stations, a biodiesel project, several biogas facilities in waste management and a project to improve efficiency in public lighting. A complete project list with additional information can be downloaded from the DNA website ([www.mdpmaroc.com](http://www.mdpmaroc.com)).

Except for the Lafarge project, public institutions are the executing agencies in all activities approved so far (based both on PINs and PDDs). More project applications are, however, expected to come from the private sector in future. Several projects of this kind were in preparation at the beginning of 2006, others have already been announced. A large potential for raising energy efficiency has been identified in the steel, paper and cement industries.

Little is known about the involvement of the international carbon funds in the country so far. The state energy supplier ONE is, however, currently making active efforts to sound out prospective buyers for its emission certificates. This is done in part through issuing invitations to tender, which all prospective certificate buyers must take part in, including the KfW Carbon Fund.

### 3.2 Quality of Designated National Authority (DNA)

The Moroccan DNA (normally known as 'l'AN MDP Maroc' in the country, 'MDP' being the French equivalent for 'CDM') was established by ministerial decree in the same year as the ratification of the Kyoto Protocol on 18 September 2002. It is located at the Ministry of Land Planning, Water and Environment (Ministère de l'Aménagement du Territoire, de l'Eau et de l'Environnement - MATEE). The DNA consists of the Conseil National (CN MDP) and the Secrétariat Permanent (SP MDP). It has two areas of responsibility: on the one hand the regulation of CDM in line with the international requirements of the Kyoto Protocol, on the other, the initiation and assessment of projects under this regime accounting for the national criteria for sustainable development.

Chaired by the Minister of Land Planning, Water and Environment, the CN groups all important ministries as well as representatives of enterprises, banks, associations and research institutes. A list of the members is available on the DNA website. The SP provides information and analyses to the CN and is the contact point for all enquiries about CDM in Morocco. Applications and documents must be submitted to the SP which then announces the decisions of the CN.

With the help of the UNEP/UNDP programme, the institutional setup for CDM in Morocco was developed from 2003 to 2005. A sequel project by UNDP for 2006 to 2008 aims to improve efficiency further and extend activities over a broader range to include in particular the sectors forestry, agriculture and transport. Thanks to UN support, the instruments and mechanisms in Morocco meet international requirements in full.

A two-step decision-making procedure has been established at national level. First, the applicants submit a PIN with standardized contents via the SP (form available on website). The project is vetted to see whether it actually results in a reduction of greenhouse gas emissions, whether it conforms with the sustainability criteria developed as part of the Moroccan CDM strategy and whether it might have any adverse external effects. Under the CN's in-house rules in effect since May 2005, the decision must be taken and notification given within two weeks.

While this initial appraisal phase is confined to the national level, the project is checked for conformity with the rules of the Kyoto Protocol in the second phase. A prerequisite for Host Country Approval (HCA) is proof of an environmental impact study as required under national law and the consent of all the Moroccan authorities responsible. A simplified procedure is adopted for small-scale projects. The second appraisal phase may not exceed a period of four weeks as of submission of the PDD. The complete approval procedure including the appraisal criteria is documented on the DNA website cited.

As most of the projects that have passed through the national approval procedure so far have been pilot projects to test and adapt methods and procedures in practice, no final assessment can be made yet on the work of the Moroccan DNA. Delays have occurred with individual projects, but some were due to inadequate PINs or PDDs. According to Lafarge, the preparations for the PDD took approx. four months from January to April 2005 (the idea for the project dated back to 2001, though). DNA approval was issued in May 2005 and the validation by the Designated Operational Entity (DOE) was carried out in June. The

project was finally registered by the EB on 23 September 2005. Considering it is still undergoing a learning phase, the Moroccan DNA is highly efficient and transparent.

A CDM guide in French was prepared for the Moroccan Government by the Belgian firm of solicitors Huglo Lepage, which can be downloaded from the DNA website.

### 3.3 Local consultants, validators and verifiers

According to the DNA, there were eleven consulting firms or freelance consultants in the country in the spring of 2006 specialized in assisting CDM projects and preparing documentation (see listing on the DNA website). All these have taken part in training under the UNEP/UNDP programme. With support from UNEP/UNDP, the first two baselines were also prepared for Moroccan projects (one for the electricity and one for the landfill gas sector).

It is hardly possible to classify the different consultants. Clean Tech and Noratech can reportedly draw on most experience but SCET Maroc and Gerere also took a major part in the UNEP/UNDP programme. Amongst other things, the foreign company EcoSecurities acted as PDD consultant for the projects in Essaouira and Jorf Lasfar.

No Moroccan DOE exists as yet. The Lafarge project was validated by the Norwegian company DNV, which serves Morocco from its Spanish office. TÜV Rheinland Group, whose TÜV Industrie Service GmbH is registered as a DOE at UNFCCC, maintains a representative office in Casablanca and TÜV Süd, which is also registered as a DOE, is currently starting to do business in Morocco (initially with a project that does not fall under CDM, however).

### 3.4 Local legal requirements for CDM projects and taxation aspects

The Moroccan DNA was established by ministerial decree. No specific CDM law has been adopted as yet. Three new environmental laws are, however, in force as of 2003, one on environmental impact studies that are also required for CDM projects (some implementation regulations with obligatory standards are still missing, however). All laws, decrees and ordinances to do with the environment can be read on the website of the ministry responsible ([www.matee.gov.ma](http://www.matee.gov.ma)).

Foreign investments are promoted in different ways in Morocco. Information on legislation and associated links can be found on the DNA website. In the environment sector in general, there are no restrictions for foreign investors. There is still a ceiling of 10 MW for the private operation of power stations where they are supposed to be run as independent power projects (IPPs) outside the ONE grid.

According to the Moroccan DNA, CDM income is generally taxed like export earnings. There is no separate fiscal legislation on the sale of emission reduction certificates (CERs) or other aspects of CDM projects in Morocco. Nor are there any special tax incentives for projects in renewable energy. Plant and machinery imported for an investment in a CDM project are usually subject to a preferential customs duty of 2.5% unless the requisite goods are also produced in Morocco itself. As a rule they are exempt from all other import charges. The practical application of customs and tax provisions is not generally regarded as a serious problem in Morocco.

### 3.5 CDM partnership agreements

Morocco has bilateral cooperation agreements on CDM with France, Austria, Italy, Japan, Spain, Canada and Denmark (concluded on 8 February 2006). Talks begun in January 2006 with Japan's Mitsubishi Corp. on bilateral projects.

## 3.6 Opportunities for CDM projects in the energy sector

### Energy and environmental data

	Morocco	Africa	OECD
Primary energy supply (million toe, 2003)	10.9		
of which from renewable energy sources	approx. 1% 1)		
Electric power generation (TWh, 2003)	18.1		
of which from renewable energy sources	approx. 9% 2)		
CO <sub>2</sub> emissions from fuel combustion (million t, 2003)	33.12	763	
Electricity consumption per capita (kWh/capita, 2003)	552	518	8,044
CO <sub>2</sub> /primary energy supply (t of CO <sub>2</sub> /toe, 2003)	3.04	1.36	2.37
CO <sub>2</sub> per capita (t of CO <sub>2</sub> per capita 2003)	1.10	0.90	11.08
CO <sub>2</sub> /GDP (kg of CO <sub>2</sub> /US\$, US\$ purchasing power parity in 2000; 2003)	0.29	0.40	0.45

1) Excluding the private use of wood for domestic purposes (wood combustion is estimated to make up about 30% of primary energy consumption altogether); 2) Approx. 8% hydropower, 1% windpower

Source: International Energy Agency

With the continuing growth in energy needs (lastly about 7% to 8% a year in the electricity sector) and the exceptionally heavy dependence on fossil fuel imports, Morocco is under considerable pressure to promote efficient energy use and expand renewable energies.

Due to large energy imports, the higher international prices place an increasing burden on Morocco's foreign exchange reserves and may hamper general national development. According to information from the German Energy Agency (dena), the Moroccan energy deficit for 2003 had already reached about US\$ 2 billion, a large amount for a developing country.

Dependence on energy imports is an important reason why renewables are accorded key status in official plans for the energy sector. A national strategy foresees increasing their share in Moroccan energy supply to 10% by 2011. The country is basically very well suited for the use of renewable energies. With a 3,000 km-long coast and mean wind speeds of up to 11 m/s, the viable windpower potential alone is estimated at about 6,000 MW. The conditions for solar energy are also extraordinarily favourable. In addition, the electrification of remote rural areas with solar home units is a major policy goal. Furthermore, Biogas is of special interest for CDM projects. Several cities are reportedly seeking partners for the utilization of landfill and sewage gas.

Till now though, the development of renewable energies has made slow progress in Morocco. Of special importance in this connection is the strong position of the national provider ONE as a 'single buyer' of electricity. Even if progressive liberalization on the electricity market eases market access for private investors, installed windpower capacity will likely only amount to little more than 400 MW by 2008. The main constraint on the sector is the lack of legislation or its inadequate scope. There is no supporting law to date to regulate mains feeding of renewable electric power in detail.

## 3.7 Finance facilities for CDM projects

Owing to high income from agricultural exports and inflows of capital from the oil-rich Gulf states the financial sector in Morocco is currently highly liquid. Long-term loans for project finance in both local and foreign currency are also available in adequate measure. Market experts, however, see bottlenecks in access to venture capital or also subordinate loans.

Both bilateral and multilateral donors provide a variety of finance facilities for CDM projects. KfW has already participated in several projects in renewables, e.g. the Essaouira windpark and the photovoltaics

project to supply the rural population. Negotiations are currently underway with the World Bank on a programme for promoting landfill gas projects under CDM. Spanish and French development corporations are also very active. The Moroccan government has set up a Fonds de Dépollution Industrielle (FODEP), which also promotes investments to improve energy efficiency (financed by KfW). In addition, the government takes part in projects in the environment sector via the Hassan II Fund.

The DEG - Deutsche Investitions - und Entwicklungsgesellschaft mbH provides customized long-term finance instruments on market terms in Morocco (including long-term loans, mezzanine finance, equity and guarantees). Drawing on the CDM know-how available in the Kyoto Coaching Cologne network, DEG appraises how far revenue from CER proceeds can be accounted for in project costing.

Moreover, DEG can cofinance projects with special developmental impacts under the Public Private Partnership (PPP) Programme of the Federal Ministry for Economic Cooperation and Development (BMZ) with up to EUR 200,000.

### 4 Recap

It is too early to arrive at an overall assessment of the investment climate for CDM projects in Morocco. The state utility companies (offices), primarily the power supplier ONE, which have been the dominant players in the sector till now, show satisfaction with the CDM in the country. This tells us little about the conditions for private investors, however. Experience with the only registered private project so far, has also been good, though.

The extensive and well-diversified portfolio that has been built up with international assistance in a short time is a measure of the favourable CDM conditions in Morocco. Moreover, the Moroccan DNA is rated as highly transparent.

The establishment of CDM is opportune for Morocco. High international energy prices and low fossil reserves call for the rapid development of renewable energies and higher efficiency in energy use. There are also large investment needs in solid waste and wastewater management. Besides the 'classical' project segments there are also opportunities in afforestation measures to combat desertification in the country.

## 5. Advice/Service

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