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Improving the Business
Climate in Morocco

Sustainable Investment in Meknès-Tafilalet

**A DAY OF REFLECTION
ON HOW TO PROMOTE RENEWABLE
ENERGY IN MEKNÈS-TAFILALET**

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Improving the Business Climate in Morocco

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LIST OF ABBREVIATIONS

AFD	<i>Agence Française de Développement</i> (French Agency for Development)
BMZ	German Ministry of Cooperation
CDER	<i>Centre pour le Développement des Energies Renouvelables</i> (Center for the Development of Renewable Energy)
CDM	Clean Development Mechanisms
CRI	<i>Centre Régional d'Investissement</i> (Regional Investment Centre)
EE	Energy Efficiency
EIB	European Investment Bank
EIS	Environmental Impact Studies
FEC	<i>Fond d'Équipement Communal</i> (Communal Equipment Fund)
GTZ	German Cooperation Agency
MEMEE	Ministère de l'Énergie, des Mines, de l'Eau et de l'Environnement (<i>Ministry of Energy, Mines, Water and Environment</i>)
ONE	Office National d'Électricité (<i>National Office of Electricity</i>)
PEM	Profitable Environmental Management
RE	Renewable Energy
SEE	Secrétariat d'Etat chargé de l'Eau (<i>Secretary of State for Water</i>)
STEP	Station d'Épuration des Eaux Usées (<i>Wastewater Purification Station</i>)
SWH	Solar Water Heaters
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development (<i>Agence Américaine pour le Développement International</i>)

Sustainable Investment in Meknès-Tafilalet

A Day of Reflection on How to Promote Renewable Energy in Meknès-Tafilalet

February 20th, 2008, Hotel Volubilis-Moulay Driss Zerhoun

SUMMARY

The USAID/Morocco “Improving the Business Climate” program organized a Day of Reflection on February 20th, 2008 at the Hotel Volubilis, as part of the “Sustainable Investment in Meknès-Tafilalet” pilot project.

The objective was to mobilize donors and technical assistance agencies around a regional strategy to promote **renewable energy** through private investment (using among other financial instruments the Clean Development Mechanism (CDM)) in the Meknès-Tafilalet region.

Several ongoing initiatives in Morocco have served to orient the development of a regional strategy. Presenters highlighted a range of opportunities and provided examples on how to:

- (1) attract investment to the renewable energy sector by exploiting the regional potential for energy self-production and developing a market for equipment, technology and knowledge transfer;
- (2) enhance the profitability of companies operating in Morocco through more efficient energy use and clean production;
- (3) make use of the Clean Development Mechanism to finance sustainable development initiatives.

The plenary and afternoon sessions generated lively debate among administrative representatives, donors and technical assistance agencies. A series of recommendations were put forth, including:

- Development of a **medium-term regional vision** (the CDER has proposed a Regional Convention, which would provide the framework for an action plan);
- Implementation of **pilot projects** to illustrate concrete opportunities (e.g. CDM certification for the Meknès landfill and waste-water treatment plant; assessment of the regional potential for wind energy self-production);
- Creation of a **regional branch of the CDER** in Meknès-Tafilalet to coordinate activities;
- **Mainstreaming renewable energy** in key sectors, such as agriculture, sustainable tourism, housing etc.;
- Assessment of the **supply and demand for renewable energy** in the region and targeting of regional opportunities for sustainable development;
- An **integrated action plan** that takes into account local human development and the predominance of rural activity in the region, etc, and
- The promotion of a regional **branding and communication strategy** to promote sustainable investment opportunities.

In preparatory meetings and at the event, representatives of several administrations and international agencies voiced their interest in contributing, within their missions, to the implementation of a regional strategy (see p. 12).

SYNTHESIS OF THE DAY OF REFLECTION

Background

The Day of Reflection was organized at the request of the Wali of Meknès-Tafilalet, as the natural conclusion to a series of diagnostic activities and institutional dialogues conducted as part of the pilot initiative ‘Sustainable Investment in Meknès-Tafilalet’:

- Three **Regional Studies** to assess the business environment and identify investment constraints and opportunities in seven of Morocco’s regions (including Meknès-Tafilalet)¹.
- **Presentation of the Meknès-Tafilalet regional economic profile**; and a workshop on how to address environmental degradation and environmental constraints to economic productivity and investment.
- Initiative of the Regional Investment Center (CRI) to work towards **transforming "environmental constraints" into opportunities**; to promote investment that protects and sustainably capitalizes on natural resources.
- **Study on regional investment opportunities** with regard to sustainable development focusing on (1) renewable sources of energy, (2) clean development mechanism projects and (3) other avenues for sustainable development, (such as ecotourism, recycling of agro-industrial waste etc.).
- **Regional Conference of 31 October 2007** on the “Results of the regional studies” and launching of a pilot project: “Sustainable Investment in Meknès-Tafilalet”.
- Initiative of the Wali, the CRI and other key players to focus on two pillars: **renewable sources of energy** and **Clean Development Mechanism projects** (promoting energy self-production by large consumers, developing services and technology distribution with regard to renewable energy, allowing for electricity generation from biogas emitted by landfills and wastewater treatment plants etc.)
- **A Day of Reflection** (at the Wali’s request) to further elaborate the regional strategy and develop an action plan, and to mobilize key local, national and international actors (especially other donors) to support the strategy.

¹ The Program published the results of the three studies in the form of “Regional Economic Profiles”.

Objectives of the Day

The purpose of the Day of Reflection, held on February 20th, 2008 in the Meknès-Tafilalet region, was for strategic players (at the regional and central level as well as donors) to think about a regional strategy aiming to:

- Attract private investment to promote renewable energy (RE) and energy efficiency (EE); explore opportunities to generate carbon credits and benefit from Clean Development Mechanism (CDM)² finance.

The initiative to promote RE/EE in Meknès-Tafilalet is based on the observation that individually or in combination with other sectors, the renewable energy sector is likely to attract investment. The Day of Reflection on February 20th aimed to lay the groundwork for a strategy that would increase the attractiveness of the region regarding RE/EE through the development of markets and services;

knowledge and technology transfer; awareness-building and communication, and a favorable regulatory framework. To mobilize common forces around the above mentioned objectives, USAID/Morocco's "Improving the Business Climate" program brought together donors and relevant local and national players to share their vision, knowledge and know-how, and mobilize funding in view of a regional investment strategy.

The morning was devoted to a plenary session; in the afternoon, workshops were held to explore specific topics.

“Sustainable development” refers to development that meets the needs of current generations without compromising those of the future. Two concepts are inherent to this notion: the concept of "needs", and more particularly, the basic needs of the most underprivileged to whom top priority must be given, and the idea of the limitation that the status of our techniques and social organization impose on the capacity of the environment to meet our current and future needs.”

(According to the definition outlined in 1987 by the *World Commission on the Environment and Development* in the Brundtland Report)

PRINCIPAL RESULTS – PLENARY SESSION

The plenary session provided an opportunity to outline the principal areas and possible action fields of a regional strategy. Following the Wali of Meknès' welcoming speech, Lara Goldmark and Caroline Huwiler described the origins of the strategy: a decision to transform environmental constraints into regional investment opportunities, allowing the region to implement current laws and anticipate changes in regulation. Ideally, the region will serve as a model and act as a catalyst for change at a national level.

Ms. Ettaik of the Ministry of Energy, Mines, Water and the Environment gave a presentation on the **legal and regulatory framework** for renewable energy, followed by Mr. Berdai's presentation on the pillars of a possible **convention to be signed** between the region of Meknès-Tafilalet and the Center for the Development of Renewable Energy (*Centre pour le Développement des Energies Renouvelables* - CDRE).

In conclusion, a "Tour of Morocco" session provided space for the presentation of several RE/EE and CDM related initiatives, pursuing the following objectives:

² A financial mechanism emanating from the Kyoto Protocol, allowing for partial funding of carbon offsetting projects; through the sale of emissions reduction certificates on the international carbon credit market. CDM applies to initiatives that (1) reduce greenhouse gas emissions (i.e. capturing, torching and valorization of biogas emanating from public landfills, waste water treatment plants; use of clean and energy efficient technology, etc.), or (2) provide substitutes to conventional fuel, by generating electricity and heat from renewable energy sources.

- (1) Improve Morocco's companies' profitability and competitiveness through more efficient energy use.
- (2) Attract investment to the renewable energy sector by developing a market for technology and knowledge transfer.
- (3) Demonstrate funding opportunities offered by CDM.

Participant	Subject	Investment potential
CDER Mr. Touzani Mr. Ababou	RE equipment sector - "Energy Houses" program (micro- and small businesses in the RE trading, installation and equipment sectors) - "Promasol ³ " (promote thermo-solar technology for heating systems in hotels, schools, etc.)	Attract international equipment producers and investment for professional training and promotion. Allow for diversified energy supply, enhance competitiveness and attract equipment producers.
CDER Mr. Makaoui Ms. Kartout	Energy efficiency - Firewood project (efficient use of wood in hammams) ⁴ - Energy efficiency in buildings	Attract technology manufacturers (improved boilers) Attract "clean technology" suppliers and related know-how
GTZ Mr. Amrani Mr. Gabi	Energy efficiency - Profitable environmental management - C3TEM Project	Enable local industries to increase productivity by using "clean technology"; attract clean technology suppliers and develop local expertise Build a platform for know-how and technology transfer to serve both present and future companies
ADS Morocco Mr. Dr. Lahbabi	Renewable energy self-production and CDM - The Lafarge (Tétouan) experience of energy self-production in wind farms; and CDM finance opportunities	Ensure sustained energy supply to current and future firms; attract wind farm developers and carbon credit buyers
GTZ Mr. Chouaouta	Environmental Impact Studies	Shorten the delays of Environmental Impact Study assessments (by establishing and building the capacity of a regional committee) and turn them into a valuable tool for investors (to explore niche markets, get access to certification etc.).
INGEMA Mr. Elhanid	CDM – efficient use of methane Rehabilitation and controlled management of the Oulja/Salé landfill.	Generate and sell carbon credits by capturing, torching biogas and generating electricity from methane emitted by landfills.

During the plenary session participants made the following statements:

- The initiative should **take into account the region's agricultural tradition**. In fact, agricultural production accounts for 80% of Meknès-Tafilalet's rural households (Mr. Corrado, European Commission). In example, Mrs. Haddouche (CDER director) mentioned solar energy based water pumps, with an evident benefit for farmers. A

³ Moroccan solar market development program for sanitary hot water production, by solar water heaters (SWH)

⁴ According to the CDER, the program enables hammam owners to cut down on an average of 50% of wood consumption. Return on the investment occurs after less than one year.

UNDP representative emphasized the importance of encouraging local participation and ownership and strengthening local capacity – through a community-based action plan. “In Bali,” said Mr. Alaoui, “the mayors turned out to be key agents of change.”

- Representatives of the CDER (Ms. Haddouche and Mr. Berdai) suggested that the region of Meknès-Tafilalet act as a model for sustainable investment promotion, by implementing an **Integrated Priority Action Plan** with several action fields; a "**triangle of projects**" linked to **water, energy and waste management** would respond to the most pressing needs.
- Once established, the regional strategy should interact with **‘regional marketing’ efforts and** a communication strategy to disseminate information among potential investors; a **regional charter** should define certain principles and norms to be respected by locally established and operating firms.
- A UNDP representative recommended that renewable energy promotion be associated with **human development**, with a focus on equitable access to investment spillovers and poverty alleviation (inseparable from environmental concerns).
- Also it was suggested that the promotion of RE and EE should not be pursued as an isolated goal but **related to the region’s key sectors**, namely agriculture, sustainable tourism and real estate. A cross-sector approach would enhance the impact of renewable energy promotion and provide concrete opportunities.
- CRI director Mr. Bahi recalled the original goal of a “Green Meknès” strategy and “label”: attract private investment towards the sustainable development of the region. This entails designing a **regional strategy aimed at creating investment opportunities whose** spillovers would boost the sustainable development of the region. He also pointed out that the development of a strategy must go hand in hand with the implementation of concrete projects, such as the rehabilitation of the Meknès public landfill and CDM certification for the Meknès wastewater treatment plant. Furthermore, the “Midelt corridor” should boost the attractiveness of the region with regards to wind energy generation. Initial measures will be announced towards the end of 2008.
- The European Investment Bank (EIB) announced the availability of funds for **applied research and technical support with regard to environmental projects**. Funding could also be provided to support the establishment of a **regional investment fund** to grant loans and create local incentives to investors.

WORKSHOP RESULTS

Workshop I: Energy Self-Production: biomass and clean development mechanism (CDM)

Valorize biogas to generate Carbon Emissions Reduction (CER) units

The region's greatest CDM potential has been associated with controlled landfills⁵ and wastewater treatment plants. In both instances, the biogas (mainly methane) emitted from solid refuse and liquids can be captured, torched and/or converted into electricity. Burning (torching) methane reduces greenhouse emissions by a factor of twenty-one. Investment in more sophisticated technology can further allow for methane-based electricity generation; thus, landfills or wastewater treatment plants can become generators and supply electricity to entire municipalities.

To promote CDM certification in the region, participants proposed:

- Assessments of **the nature and volume of biogas emitted** by the region's landfills and wastewater treatment plants (i.e. CDM feasibility studies).
- Outsourcing of **waste management / wastewater treatment** to private firms (i.e. Oulja, Oum Azza, etc.). This requires that contractual terms between private firms and municipalities be clearly defined (for example, the right to exploit the biogas).
- Use the services and finance offered by the **Communal Equipment Fund (*Fond d'Équipement Communal - FEC*)** which acts as both a technical advisor and creditor for municipalities.

A couple of CDM principles

- The clean development mechanism (CDM), if it is **taken into account from the initial stage of a project**, can contribute to funding sustainable development projects.
- CDM is based on the "**principle of additionally**": it must be shown that without CDM funding, the investment would not be profitable; and that the planned activities are not required by law.
- A strong and obvious **commitment of the project developers** is the primary condition for CDM certification.
- Given the cost of CDM development and certification, it can be taken into consideration only for **projects of a certain size** (e.g. wastewater treatment plant for 200,000 or more inhabitants). For smaller projects, the possibility of "bundling" to optimize development costs should be considered.

Exploit other local sources of energy, by encouraging **self-production**:

- Measurements are currently being taken (by ONE and private firms) to assess the region's wind energy potential; the Midelt corridor, the most promising location for the development of **regional wind parks**, may allow for local firms (large energy consumers) to produce their own energy.
- Assess the region's resources in **biomass** (organic waste issued by agricultural production and forestry) and identify opportunities to generate biomass-fueled energy;
- **Explore opportunities for the region to produce bio-fuel from plants** (a study is currently being carried out by the EIB). The Jatropha plant whose oil can be converted to biodiesel has proven to be the most promising and cost-efficient plant. According to participants, it would not compete with existing agricultural crops⁶.

⁵ Law n° 28-00 pursuant to waste management and the elimination thereof was enacted on 22 November 2006. It sets 5 years as the timeframe granted to communes to develop a management plan.

⁶ The Jatropha plant requiring a lower level of purification could be fed with water issued from wastewater treatment plants.

More generally, participants recommend to:

- **Assess the region's renewable energy potential**, demand vs. supply of renewable energy (wind, biomass⁷, solar etc.) and related investment opportunities.
- **Disseminate information** on funding options and the nature of assistance provided by international donors and technical agencies.
- Identify key actors at the regional level (CRI, Regional Council, local authorities, etc.) and **set up a regional unit** for the coordination and facilitation of projects.
- Establish a **regional action plan** with medium-term objectives while implementing **pilot projects**, i.e.:
 - Promote wind-based energy generation by large consumers in the Midelt wind corridor (and other wind parks).
 - Reduce greenhouse gas emissions of the Meknès wastewater treatment plant and convert biogas into electricity to benefit from CDM finance.
 - Rehabilitate the Meknès public landfill to reduce greenhouse gas emissions, convert biogas into electricity and benefit from CDM finance.
- Follow up on the **law on Environmental Impact Studies (EIS) of 2003** and the "*Décret d'Application*" with regard to the regionalization of EIS evaluation approved by the Governmental Council on January 4th, 2007. The establishment and the training of regional committees (a GTZ-sponsored initiative) to assess EISs locally allows for a much faster handling of EIS (a mandatory passage for many investors).

Workshop II: Equipment and services related to renewable energy; clean and energy efficient technology in industries and buildings

While workshop I focused on energy production (available sources of energy and their profitable development), workshop II focused on the use of renewable energy in industries, buildings, agriculture and tourism, in particular through the promotion of equipment and related services.

Recommendations made by the workshop participants referred to both a national and sub-national level:

Recommendations referring to the regional level

- Create (regulatory, fiscal and other) **incentives** to attract private investment and encourage entrepreneurs to meet environmental (EE etc.) standards through:
 - A guarantee fund (i.e. allowing for the finance of audits for businesses to assess their energy balance and the benefits from adopting clean technology)
 - Tax cuts for entrepreneurs who respect environmental and social standards (for example, those who have earned the CGEM label)
 - Bonuses to entrepreneurs who take initiatives towards environmental protection
 - Idea contests
- Promote **renewable sources of energy in tourism and agriculture**, two regional key sectors. UNDP would like to capitalize on the "Energy Houses" program, by establishing linkages between service providers associated with the program and opportunities offered by those specific sectors.

⁷ For example, waste from olive oil output (pulp), agricultural work, slaughtering, wine production, sylviculture (forestry sector), mud, grease, etc.

- Illustrate, through **pilot projects** (e.g. an energy self-sufficient building with zero emissions), examples of sustainable construction; build public awareness via a "regional museum on renewable energy and energy efficiency."
- Invest in **research on solar-based systems for heating and air conditioning**, to meet the climatic needs of the region (e.g. "Promasol").
- Develop a **regional communication and branding strategy** and exploit available communication channels (publications, radio/television programs, Internet, etc.).
- **Upgrade the services** provided by the region's "Energy Houses" and help them improve quality and reliability (sales, installation, and equipment maintenance).
- Establish a **regional charter** with a set of norms to be respected by both the private and public sector, to encourage:
 - Moral commitment and responsibilities for everyone (public and private players, etc.).
 - A regional road map and incentives to comply with environmental and social standards.
 - A short and medium-term action plan for businesses and public sector institutions to comply with environmental and social standards.

Recommendations referring to the national and central level

- Integrate the **RE component in both the code for urban planning** (undergoing approval) and **construction** (in the process of being launched).
- Integrate the notion of **RE in public action plans**, encourage the use of RE and set mandatory energy standards for public buildings.
- **Channel part of the funds provided by the European Union** (60 million Euros to be managed by the Moroccan Treasury) towards the promotion of renewable energy and energy efficiency in Meknès-Tafilalet.

SUMMARY – WHO DOES WHAT?

Technical Agencies and International Bodies	
USAID	Has decided to finance two CDM pre-feasibility studies for: (1) the wastewater treatment plant (STEP) and (2) the rehabilitated and controlled public landfill in Meknès.
UNDP	<p>Proposes to establish links between the “Energy Houses” program managed by the CDER (micro and small businesses of merchants, installers, maintainers) and the agriculture and tourism sectors. The project fits into a broader vision of promoting renewable energy related services and technology “in application to” the region’s key sectors.</p> <p>Furthermore, the UNDP is ready to participate in the development of a “regional marketing” strategy, particularly with regard to its oasis ecotourism project in the Tafilalet region.</p> <p>Finally, the UNDP has offered to share its experience of the ART GOLD program currently being conducted in Morocco's North and Oriental regions with regard to strengthening decentralized cooperation and partnerships between Morocco’s and other countries’ communities.</p>
European Union	<p>In 2008, the EU is launching a program to support the reform of the energy sector with an investment of 60 million Euros (projects to benefit from the funds are currently being identified).</p> <p>Will contribute 30 million Euros to the wastewater sanitation and purification program in Morocco (in partnership with the Ministry of the Environment and other donors such as the EIB, the World Bank, etc.).</p> <p>In 2009, the EU is launching an environmental program with an investment of 50 million Euros, including water sanitation and industrial de-pollution units.</p>
EIB	Is willing to finance studies (e.g. to assess regional opportunities to generate bio fuels) and technical support to environmental project developers. Moreover, it could create and co-finance a regional investment fund to grant loans and incentives for sustainable development projects.
GTZ	<p>Has agreed to work with USAID in order to:</p> <ul style="list-style-type: none"> - Allow for the Meknès-Tafilalet region to benefit from the initiative led by the State Secretariat in charge of Water (SEE) towards compliance with the regulations pertaining to Environmental Impact Studies (EIS): establish regional committees in charge of EIS evaluation (GTZ supports the SEE for the training of regional committee members, in two or three pilot regions). - Allow for the region to benefit from the GTZ’s training on “Profitable Environmental Management” (GEP) in Mohammedia; allow for regional consultants to be trained over a period of 6 months, on clean production and energy efficiency, and offer their services to local industries.
UNIDO	Structures financial deals for enterprises that are willing to comply with environmental standards and invest in clean technology, and offers training to entrepreneurs. UNIDO responds to specific project-based requests, and may raise funding via other donors.

Public and Academic Bodies	
CRI	Committed to contact (through a survey) leading businesses in the region to assess their eligibility for an interest in energy self-production.
CDER ⁸	Proposed to set up a partnership with local players to develop an <i>Integrated Priority Action Plan</i> , which fits into a triangle of projects linked to water, energy, and waste management. It also stands ready to create a regional office for coordination and assistance to regional projects.
Ministry of Habitat, Urban Planning and Development	Is committed to promote energy efficiency in the building sector, and to integrate a “renewable energy” component in the urban planning and construction codes (several initiatives are currently underway).
Al Akhawayn and Meknès Universities and <i>Ecole de l’Agriculture</i>	Proposed the development of a curriculum and an associated Master’s Degree to strengthen research and development with regard to renewable energy and sustainable development in the region.

⁸ Attached to the Ministry of Energy, Mines, Water and the Environment