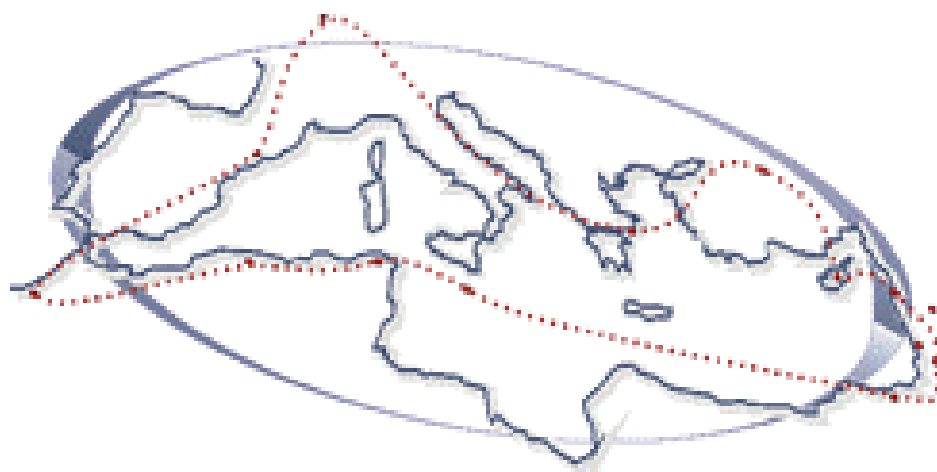




EUROPEAN COMMISSION

Project No 4.1041/D/02-003-507.21086

# Business Opportunities for CDM Project Development in the Mediterranean



## Final Report

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# 1. Introduction

Climate change has emerged as one of the greatest threats to the planet and the combat against it is becoming one of the top priorities of the European Union (EU), the national governments and international organisations. A major step to the efficient and cost-effective fight against climate change was achieved in Kyoto in 1997 through the introduction of the Kyoto Protocol and the establishment of its three Flexibility Mechanisms: Joint Implementation (JI), Clean Development Mechanism (CDM) and Emission Trading (ET). A second very important step was taken with the ratification of the Kyoto Protocol by Russia and its entry into force on 16<sup>th</sup> February 2005.

Also important is the approval of the “linking directive” and consequently, the EU - Emission Trading Scheme (EU-ETS), which is the first in the world that recognises carbon credits of the CDM (from the current year) and JI (from 2008) as equivalent to EU Allowances and allows them to be traded under the scheme. Especially as concerns the CDM, the European Commission has clearly shown its willingness to directly use the CDM for the cost-effectively emission reduction. Therefore, the *“Business Opportunities for CDM Project Development in the Mediterranean”* project was essential, given that the implementation of CDM projects is going to bloom in the forthcoming period.

The majority of the countries in the Mediterranean region possess an extensive potential to abate Greenhouse Gas (GHG) emissions by utilising Renewable Energy Sources (RES) and especially wind and solar energy. Moreover, nowadays, the increase of energy consumption in the region is, to a certain extent, an inevitable outcome of social and economic development. Thus, the use of RES systems to reduce the energy cost in the final demand sectors and generally the promotion of Rational Use of Energy (RUE) are not only important but urgent as well in order to improve the security of energy supply by reducing dependence on fossil fuels.

Therefore, it can be stated that the majority of the countries in the Mediterranean region possess an extensive potential to abate GHG emissions by utilising renewable and by conserving energy.

With respect to the above, the ultimate goal of the Synergy project “Business Opportunities for CDM Project Development in the Mediterranean” (Contract No 4.1041/D/02-003-507.21086) was to contribute to the effective application of the Kyoto Protocol in the Mediterranean, through the creation of a favourable environment for the implementation of CDM projects in the region.

In addition, the special focus of this project was the identification of appropriate projects in the Mediterranean region, achieving the double-aim of the CDM:

- To reduce the costs of curtailing GHG emissions by providing incentives to industrialized countries to invest in clean energy technologies and energy efficiency in developing countries;
- To enhance the efforts of the developing countries to achieve sustainable development.

The present volume constitutes the “Final Report” of the project. It describes the work carried out through the whole project’s duration, starting from 14/5/2003 till the end of the 2 years period on 13/5/2005.

The Final Report, apart from this short introduction includes three main chapters:

- Chapter 2, presenting a short description of the project;
- Chapter 3, presenting an overview of the project results;

- Chapter 4, presenting the conclusions derived from the project.

In addition, the Final Report includes two Annexes that comprise the results of the work carried out in all the Work-Packages. Thus, the content of the Annexes is presented as follows:

- ANNEX A: Technical - Dissemination Activities
- ANNEX B: Workshop Activities in Mediterranean Partner Countries



## **2. Project Description**

### **2.1 Project Objectives**

The goal of the project was to create an attractive and profitable business environment for CDM projects in the Mediterranean countries in order to effectively contribute to the application of the Kyoto Protocol. The common understanding of the Kyoto Protocol and its mechanisms between the EU and the Mediterranean countries will enable the quick maturity of the CDM concept throughout the region. Furthermore, a second goal of the project was to enhance the business co-operation between investors from EU and the Mediterranean countries on the basis of the development of funding mechanisms for CDM projects in these countries.

The above goal was attained by achieving the following specific project objectives:

- Capacity building and development of a common understanding for the implementation of CDM through the implementation of the two project meetings and the four workshops;
- Identification of the most promising CDM project ideas, pre-feasibility analysis and investigation of funding sources;
- Promotion of the most promising projects and facilitation of business contacts among potential investors.

The knowledge in the Mediterranean countries as regards the Kyoto Protocol procedures and modalities was improved through the specific capacity building activities of the project. In addition to this, the project contributed to the enhancement of the experience of the experts in the Mediterranean countries concerning the initial identification of promising CDM project proposals and the preparation of the corresponding Project Idea Notes (PINs) and pre-feasibility studies.

Furthermore, the project acted as a platform for the establishment of funding mechanisms for CDM projects in the Mediterranean region. The importance of stimulating and capturing the interest of potential investors in funding projects is of crucial importance for the commencement of CDM in the Mediterranean. In this framework, the project established business co-operation channels between the Mediterranean partners and financing institutions and facilitated the co-operation as well as the exchange of information, knowledge and expertise, mainly through the implementation of the four regional workshops.

### **2.2 Project Phases and Planning**

The project objectives necessitated a coherent work methodology. By focusing on each aspect of the project's components, a methodology structuring the proposed work into phases, or sets of tasks was devised. The phases reflect the project objectives into specific packages of work undertaken, as depicted in Figure 2.1.

The three phases of the project have been further decomposed into a total of eleven tasks, which structure in detail the effort applied during the project. The decomposition of each phase into tasks is schematically presented in Figure 2.2. A detailed description of the project phases and their respective tasks is presented in the following chapter.

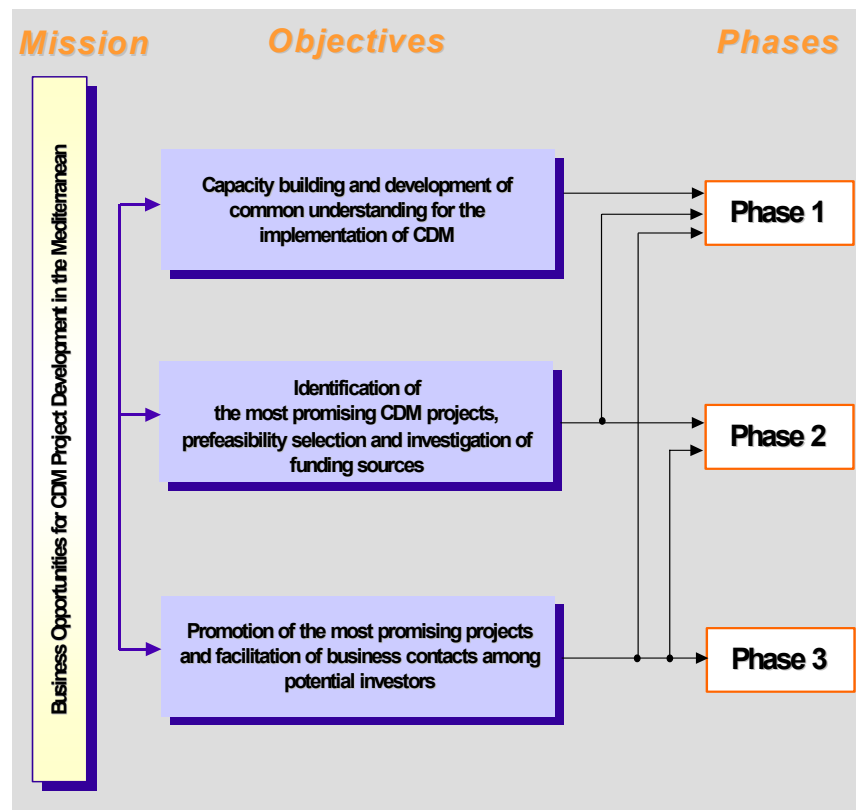


Figure 2.1: The Reflection of Project Objectives into Phases

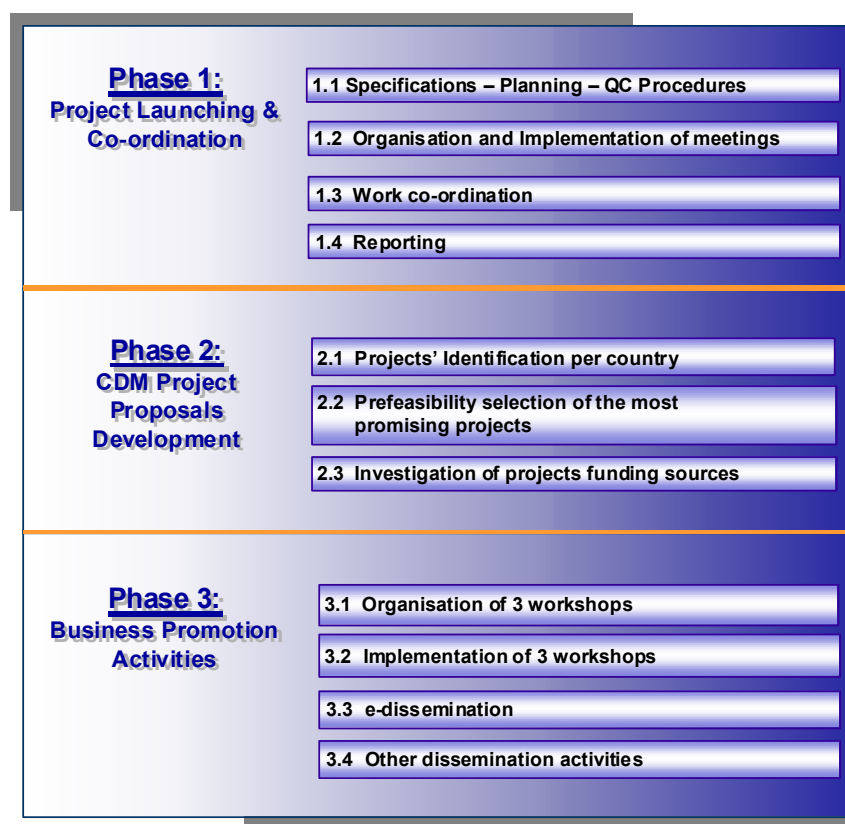
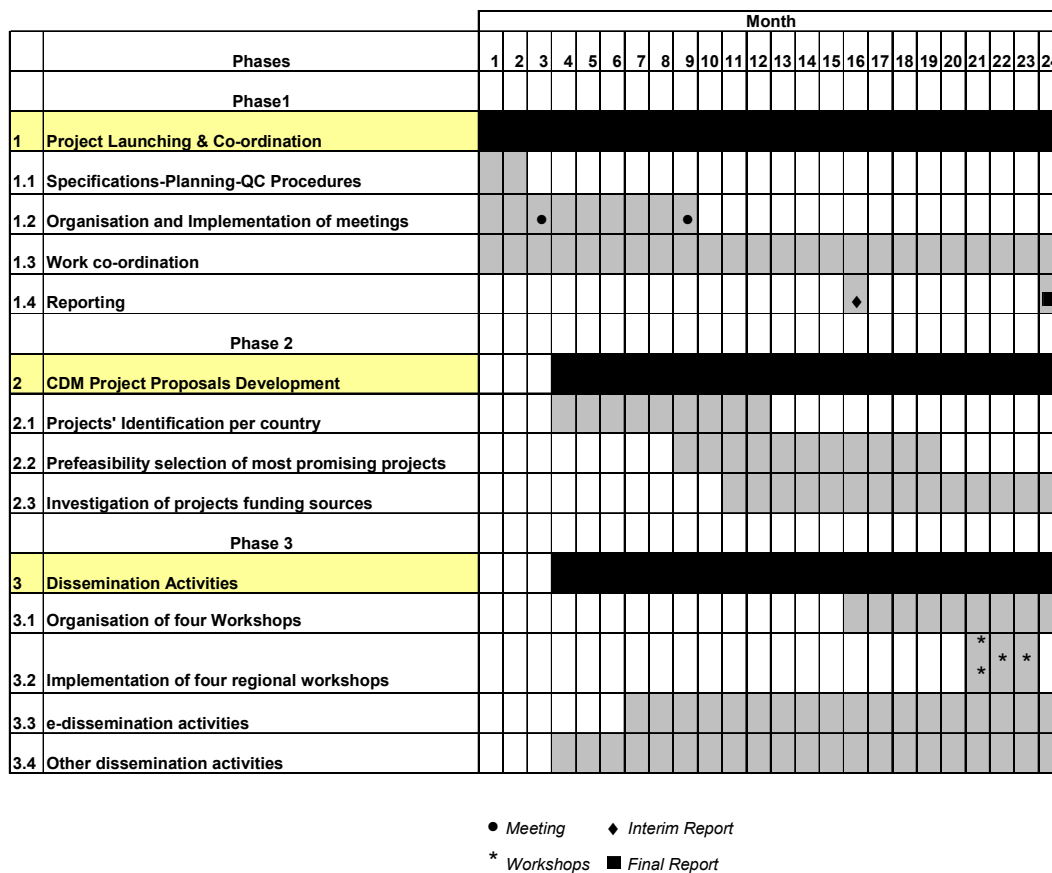


Figure 2.2: The Decomposition of Phases into Project Tasks

progressed beyond the planned schedule.



**Figure 2.3: Project Planning**

Based on the above figure, the following observations can be noted:

- All project activities were successfully implemented within the initially planned time schedule of the project.
- The timetable of phase 1 was the same as it was envisaged at the beginning of the project. Furthermore, there were no differentiations on the tasks' planning. The project tasks of the phase 1 concerned the mapping out of the specifications and the quality control procedures, the organisation and implementation of the two meetings, the work coordination and the reporting activity.
- Phase 2 progressed beyond the initially developed schedule. In particular, the pre-feasibility selection of the most promising projects and the investigation of possible funding sources were extended, so as to enhance the outputs of the phase and to ensure the project objectives. The investigation of the project funding sources was a continuous activity till the completion of the project.
- Phase 3 activities were enhanced and the time schedule was adjusted appropriately so as to achieve the goals set in the beginning of the project. More specifically:

✓

planned to start on the 16<sup>th</sup> month. This action was necessary in order to best follow the rapid developments of climate change issues worldwide. This additional effort was essential for the awareness rising of the CDM actors in the Mediterranean in order to enable the progressive creation of a favourable CDM business environment in the region.

- ✓ Special attention was laid on the project's promotion through a number of dissemination activities such as participation in international conferences (Annex A.7), publications (Annex A.8) and development of e-services (web sites of the project, CDM-PAT). In the above framework and in order to present and promote the most promising CDM project proposals to potential investors from the EU, the organization and implementation of the four regional workshops was realized.

In addition, it is noted that based on the proposal of the former Deputy Minister of Electricity of Syria, an additional workshop was organized and finally implemented in Syria, which was agreed during the second project meeting (February 2004). This additional effort offered a substantial contribution to the spread of climate-friendly technologies in the region.

### 3. Project Results

The tasks of all three phases have been successfully implemented and the project's outcome is derived through the three phases as presented in Figure 3.1.

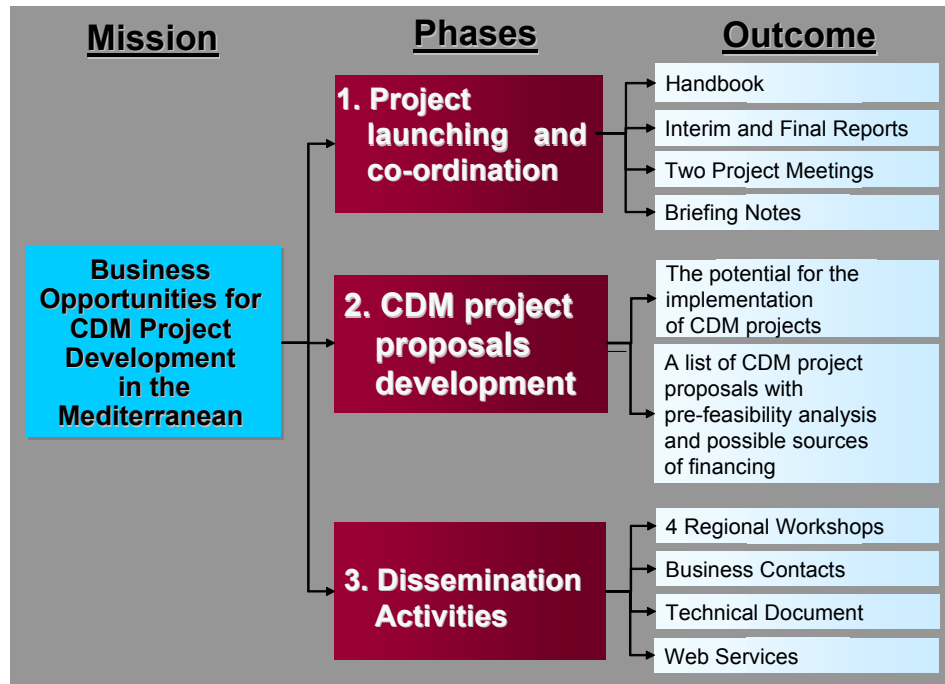


Figure 3.1: The Project's Outcomes

More analytically, the project results of each phase are described as follows:

#### 3.1 Project Launching and Co-ordination

The project launching and co-ordination included all activities related to the management and co-ordination of the project team, the specifications and planning of the project work, the organization of the project meetings and project reporting (writing and delivery of reports to the European Commission as well as briefing notes to be distributed at international workshops and conferences). The project was managed by the consortium leader EPU-NTUA, in close co-operation with the other consortium partners.

The management procedure was simple and effective. Each partner had designated a team leader who was responsible for the work that the team had offered to carry out under the project. This person was the main contact for any communication with the other partners. The leader appointed by the project co-ordinator was the project manager, who had the overall responsibility for the co-ordination, the project implementation and the realisation of the regional workshops. Communication and exchange of drafts was effected via electronic means, while steps were taken to ensure software compatibility among the partners.

More specifically, the results of the first phase are presented per task as follows:

- Specification – Planning – QC Procedures;
- Organisation and Implementation of Meetings;
- Work Co-ordination;

- Reporting.

The above-mentioned tasks will be thoroughly described in the following paragraphs.

### **3.1.1 Specification – Planning – QC Procedures**

Firstly, the project co-ordinator prepared and proposed detailed specifications for the implementation of the project procedures and activities. Furthermore, the co-ordinator elaborated a specific plan for the project implementation as well as quality control procedures for each task of the project. The specifications and the planning of the work were developed for each project partner and disseminated to each partner for discussion and finalization. For each project partner two documents were developed:

- A Technical Annex (as Annex B of the project agreement of the partner). This document included the specifications for the work to be carried out by the partner for the whole project duration. It also included a specific action plan and a timeschedule regarding the contribution of each partner to the project work.
- Guidelines for each project partner that described in detail their responsibilities and activities to be undertaken within the period before the first project meeting (October 2003). In addition, a detailed time-schedule concerning the activities of each partner before the first project meeting was elaborated.

The two documents were delivered to each project partner to establish a discussion base. Based on the fruitful comments received by all partners these documents were finalized and the final versions were developed.

Furthermore, the project co-ordinator provided continuous guidance on the specification and planning of the project work to the project partners.

Moreover, the project co-ordinator elaborated Quality Control (QC) procedures that were applied to all parts of the project and especially the project's outputs such as the project's presentations in the regional workshops and the pre-feasibility studies. More specifically, the QC was based on clear procedures and all data received from the project partners were thoroughly examined.

In this framework, all technical details provided by the partners for the identification and selection of the most promising project proposals were crosschecked with data from the international literature, while in case where valid technical information did not exist, data from the specialized literature were gathered and utilized.

This procedure was carried out in continuous communication with the project developers, mainly via electronic means, activity that promoted the complete and technically documented description of the projects presented at the workshops. In this context it was important that the co-ordinator found a balance between providing guidance and checking quality standards on the one hand and on the other hand, leaving the initiative in terms of potential CDM project identification and data gathering as part of the capacity building process on the case study country partners.

As stated above the QC was applied in many aspects of the project's outputs, among which was also the development of the pre-feasibility studies and the leaflets handed out at the workshops. Although this procedure was mainly based on the initial inputs received by the project partners, however there were many cases that these data were updated during the project's evolution, fact that required their continuous QC.

Another stage of the QC procedures' application was the provision of guidelines to all workshop participants regarding the main axes of their presentations, in order to promote and establish communication bridges between the local and the international delegates.

To further establish the desirable result all presentations were thoroughly examined before being presented at the workshops. This same QC took place also during the implementation of the project meetings.

### **3.1.2 Organization and Implementation of Meetings**

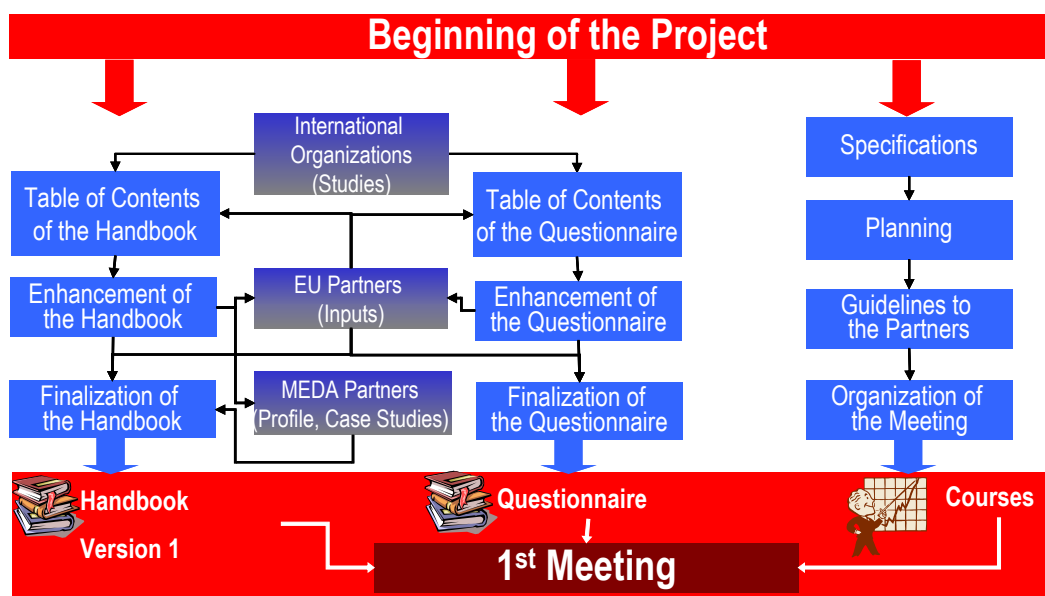
The two general project meetings were implemented as scheduled. During the period from the project start and before the first project meeting, a handbook was developed (Annex A1). The handbook, developed with the contribution of all the project partners, included the following:

- Energy and environmental profiles of all the Mediterranean project partners;
- The main administrative terms of the CDM;
- The modalities and procedures of the CDM;
- The CDM project cycle;
- The requirements for the development of a CDM project;
- Guidelines on how to develop baselines and dispersion of baseline elaboration methodologies;
- Instructions on the calculation of emission reductions attained through CDM projects;
- Explanation and analysis of the additionality issue and methods to assess project additionality;
- Analysis of project monitoring issues;
- Analysis of the assessment of a CDM project's contribution to the sustainable development goals of the host country;
- Analysis of the environmental impact assessment of CDM projects;
- A methodology for the initial identification of CDM project opportunities in the Mediterranean countries;
- The simplified modalities and procedures for small-scale CDM projects;
- Review of funding programmes;
- Selected case studies of implemented CDM projects;
- All necessary documents for the development of a CDM project (Project Design Document, Simplified Project Design Document for Small-Scale Project Activities, Indicative Simplified Baseline and Monitoring Methodologies for Selected Small-Scale CDM Project Activity Categories).

The Handbook aimed at improving the capacity of the project partners in the modalities and procedures as well as in all issues that are correlated with the development of a CDM project. It also provided guidance on how to explore priority areas in the non-EU Mediterranean countries in order to identify CDM project opportunities.

Within the handbook, a questionnaire (Annex A1) was also included. The questionnaire was a document to be used by the project partners in order to identify the characteristics of potential CDM projects in the participating non-EU MED countries and to collect information on these CDM project proposals.

The project progress and the step-by-step implementation of the handbook, the questionnaire and the meeting courses from the beginning of the project until the 1<sup>st</sup> meeting is schematically presented in the following Figure 3.2.



**Figure 3.2:** The Project Progress Until the 1<sup>st</sup> Meeting

In the framework of this task, the first project meeting was organised and held in Athens, Greece, on 20 and 21 October 2003.

The 1<sup>st</sup> Project Meeting (agenda and list of participants in Annex A5.1) successfully achieved its two main objectives:

- The presentation, discussion and finalization of the handbook and the included methodology for the identification of promising CDM project proposals. Moreover, in this meeting, the questionnaire, the project specifications as well as the quality control and planning procedures were discussed and finalised.
- The delivery of training to the non-EU project partners. The training focused on the methodology for the identification of promising CDM projects and the usage of the questionnaire, the CDM modalities and procedures, the methodologies to design and develop a CDM project and the specific issues regarding the CDM (baselines, emissions reduction calculation, additionality, monitoring, sustainable development, environmental impact assessment). The training aimed at increasing the capacity of the non-EU project partners for effective CDM project identification, proposal preparation and project development.

The meeting resulted in a capable, well-trained and well-informed group of experts from the non-EU Mediterranean countries on the methodology for the identification of promising CDM opportunities as well as on all the procedures, modalities and issues of the Kyoto Protocol and the CDM. The enhanced capacity of the project partners, which was a result of the successful training courses of the first meeting, has allowed the non-EU project partners to transfer the CDM knowledge to the appropriate market players in their countries. The increased interest of the meeting participants to the analytical courses that were delivered during the two-days meeting contributed very much to the meeting's success.

At the 1<sup>st</sup> Meeting, a number of issues were raised, several points were emphasised and relevant decisions were made.

- It was decided that, because of the large potential for small-scale projects in the Mediterranean countries, the efforts for the identification of potential CDM projects should, besides large-scale projects, also consider small-scale project opportunities.
- A decision was made regarding the areas and sectors on which to concentrate for the identification of a CDM project proposal. These are mainly the electricity, heat



and public sectors. It was pointed out that examples of project types may be RES including biomass, energy efficiency improvement, energy management, fuel-switch to lower carbon fuels, clean technologies, waste management etc.

- It was also decided that location specific conditions (e.g. local air pollution, community benefit, etc.) should be considered in the project selection process due to their important role in the conception and design of a project proposal.
- Another decision concerned the concept of sustainable development. Due to its crucial importance for a CDM project, it was emphasised that the project's contribution to the sustainable development goals of the host country is a key criterion for the eligibility of a project under the CDM, if not the most important. This also formed the basis for the development under the project of a tool to determine the contribution of a CDM project to sustainable development in the host country.

In addition to the project partners, a distinguished audience participated in the 1<sup>st</sup> meeting and enhanced the fruitful dialogue regarding CDM in the Mediterranean region. Five managers of the Greek Public Power Corporation, who were actively supporting the project, as well as managers/consultants from private companies, participated in this meeting. The interest and the active support of the private sector to the project contributed significantly to its success.

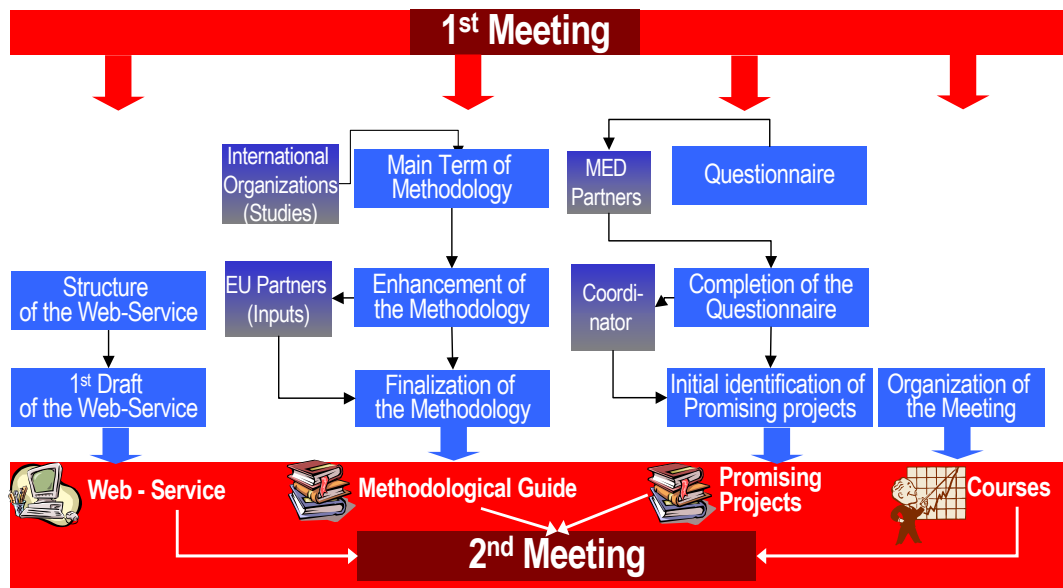
After the 1<sup>st</sup> project meeting, the Mediterranean partners contacted the relevant institutions, energy sector players and experts in their countries in order to collect information on potential CDM project opportunities. In this way, the promising project proposals were initially identified and information about these proposals was collected with the questionnaires. The completed questionnaires of the promising project proposals were sent to the co-ordinator.

Meanwhile, the project team developed a methodological guide in order to provide guidance on how to conduct a short pre-feasibility study on CDM project proposals. The purpose of a pre-feasibility study is to assess through a relatively simple procedure whether a possible project meets the basic requirements of the CDM and is sufficiently attractive to be further developed and registered as a CDM project. The study was set up as a step-wise, user friendly tool. Using the tool enabled exploring promising CDM project proposals within the set of project ideas submitted by the project partners. The methodological guide comprises mainly the following:

- Description of the host country circumstances that affect the project and the baseline (including whether the host country has ratified the Kyoto Protocol);
- Description of the project proposal's technical and economic data;
- Risk analysis;
- Assessment of additionality;
- Assessment of the potential project's contribution to the sustainable development goals of the host country;
- Brief environmental impact assessment.

The methodological guide was discussed and finalised during the 2<sup>nd</sup> Project Meeting.

The project progress and the step-by-step implementation of the methodological guide, the development of the web-service and the initial identification of promising projects from the 1<sup>st</sup> meeting until the 2<sup>nd</sup> meeting are schematically presented in the following Figure 3.3.



**Figure 3.3:** The Project Progress from the 1<sup>st</sup> Meeting Until the 2<sup>nd</sup> Meeting

The 2<sup>nd</sup> meeting (agenda and list of participants in Annex A5.2) had duration of three days and was held in Athens on 17, 18 and 19 of February 2004. The administrative and technical organization of the Meeting was designed and managed successfully in great detail.

The main aim of the 2<sup>nd</sup> project meeting was to deliver training to the members' team of the Mediterranean project partners on the elaboration of short pre-feasibility studies and the investigation of appropriate funding sources for the potential CDM project opportunities. In this framework, the methodological guide for the pre-feasibility studies was presented. Moreover, promising CDM projects from the Mediterranean region were presented and fruitful discussion on the potential for their implementation has followed.

More specifically, the 2<sup>nd</sup> Project Meeting comprised the following key issues:

- The methodological guide for pre-feasibility study analysis, assessment of the proposed projects' financial feasibility, additionality and contribution to the sustainable development goals of the host countries, was presented and discussed. The valuable suggestions by the meeting participants on the methodological guide contributed to its enhancement (Annex A2.).
- The Mediterranean project partners were trained on how to use the methodological guide in order to elaborate short prefeasibility studies and seek appropriate funding sources for the CDM project opportunities.
- Analytical sessions for the presentation of promising CDM projects were implemented during the three-day meeting. In the above framework, more than 15 proposed CDM project activities in the Mediterranean region were presented. The discussion, which followed the presentations, was directed to strengthen the project proposals and provide guidance to the Mediterranean project partners on how to promote these projects to international financing institutions.
- The project Web service (<http://meda-cdm.epu.ntua.gr/>), which was developed in order to support the project dissemination activities and to facilitate business contacts, was also presented at the 2<sup>nd</sup> meeting.

Further to the planned work, an additional e-dissemination activity was implemented. In particular, the user-friendly web-based platform CDM-PAT (Clean Development Mechanism – Pre Assessment Tool) was developed in order to facilitate host countries and investors to identify attractive CDM projects and to assist project investors/proposers to pre-assess potential CDM projects (<http://cdm-pat.epu.ntua.gr/> - Annex

A3.). The CDM-PAT, which was largely based on the pre-feasibility methodology described above, was presented and discussed and its usefulness and practicality in pre-assessing potential projects was pointed out together with its vertical and horizontal expandability. Valuable suggestions were posed by the project partners in order to advance the system and elevate it into a sustainable portal for the CDM in the Mediterranean region.

Within the framework of the fruitful meeting discussions, it was agreed that:

- The part of the methodological guide which concerned the assessment of a project's contribution to sustainable development would be developed as a stand-alone document and would be disseminated to all interested CDM actors of the Mediterranean region (Annex A4.). the reason for this decision was that a project's contribution to sustainable development is typically a decision to be taken by the host country. The guide can thus only assist host countries in the assessment rather than prescribe what the contribution to sustainable development should be;
- The CDM-PAT manual (Annex A3.) would have to be designed, developed and uploaded on the project website;
- There was a significant need for capacity building as regards CDM in all Mediterranean countries. In this framework, the co-operation between all the project partners will continue to be strong and fruitful. Furthermore, the project would continuously facilitate and enhance the contacts between the project partners and potential investors and it would act as the channel for the exchange of information and knowledge between them;
- Great emphasis should be given in the enhancement of the dissemination activities of the project. In this direction, the following four points were agreed, which would contribute significantly to the creation of a favourable CDM business environment in the Mediterranean:
  - ✓ Organization of an additional workshop in Syria in order to better take into consideration the concerns of this country under the CDM;
  - ✓ Enhancement of the web service;
  - ✓ Dissemination of the project results through International Conferences and Workshops.
  - ✓ Active consultation of potential CDM investors in order to inform them about the CDM opportunities in the Mediterranean.

It was agreed that the close co-operation between energy-sector decision makers and investors in the EU and Mediterranean countries could be the vehicle to achieve enhanced investment climate, capacity building and knowledge in the Mediterranean countries regarding the development and implementation of CDM projects.

A distinguished audience participated in the second meeting (list of participants, Annex A5.2.1). Beyond our EU and the Mediterranean region partners, managers from the Public Power Corporation, who were actively supporting the project, as well as the representatives of the Hellenic Ministry for the Environmental Physical Planning and Public Works and participants from the most important Greek industries (Hellenic Petroleum, Halyvourgiki INC., TITAN, etc.) contributed significantly to the project objectives with their proposals and ideas.

It is noted that the strong support of the project from the industrial and power sectors and the Greek government is a very strong sign that the project attracted and increased the interest in CDM projects and that the potential investors view the Mediterranean region as a place which offers many opportunities for carrying out CDM projects. In addition to this, the participation of the private sector is a significant step to further disseminate the project's results, to increase the awareness for CDM project funding and to establish business contacts. This strongly supported the achievement of the project's objectives.

### **3.1.3 Work Co-ordination**

For the appropriate co-ordination of the project activities in the non-EU Mediterranean countries, the co-ordinator maintained close contacts with all partners and informed them about the progress with each other's phases. This ensured that the information coming out of one phase that was important as input to other phases was circulated immediately, preferably via electronic mail and the Internet, but also by telephone if better suitable. A co-ordinator was appointed for each phase.

The phase co-ordinators observed the progress made and made sure that the work done was in conformity with the objectives of the proposed project and the objectives of the phase. Furthermore, they kept the overall project co-ordinator informed about the progress of the work.

An important action of the co-ordinator was to carry out an ongoing quality control based on the specifications developed for each part of the work resulting from task 1.1. The co-ordinator commented, sometimes in co-operation with the other team members, on the progress made within the phases. As such, the co-ordinator kept an overview of the overall progress and advised team members, if necessary, on adjustments required in order to keep the progress of the project on the initially agreed path.

In this way, it was ensured that the team members at all times during the project implementation period focused on the project's objectives.

In addition, the cost statements have been prepared twice during the project's implementation with the close cooperation between the co-ordinator and project team. In particular, the cost statements of the period till the submission of the Interim Project Report (October 2004) were developed firstly. Moreover, the final cost statements of the total project period were developed after the end of the project.

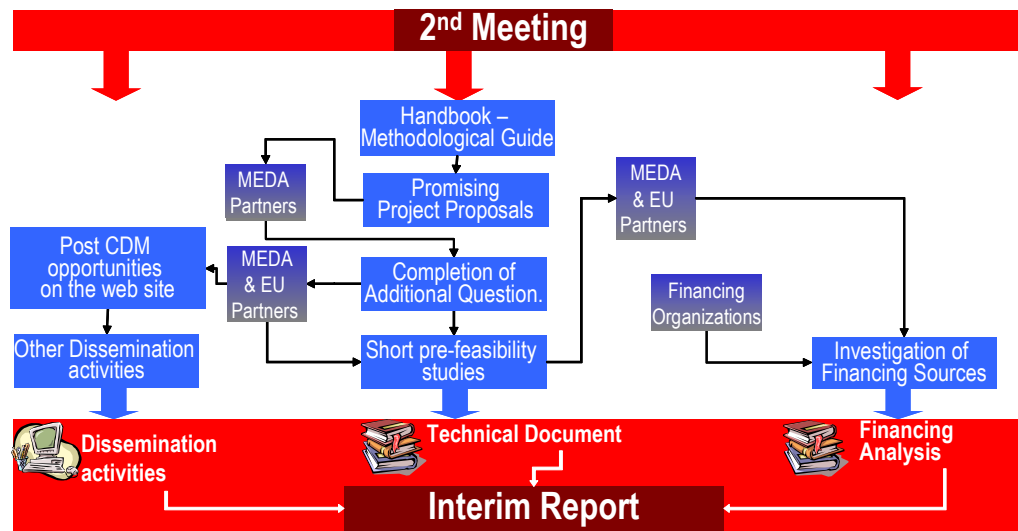
### **3.1.4 Reporting**

This task was mainly targeted towards the implementation of the project commitments under the signed contract. These obligations comprise the development of two reports for the European Commission, which describe in detail the project progress.

First of all, a Project Note was submitted to the EC in January 2004 (Annex A.9.4). In addition, the 1<sup>st</sup> Report - Interim Report - was submitted in mid-September 2004 and included all the project activities implemented from the beginning of the project till September 2004, as well as the project planning for the period remaining till the end of the project. After the second project meeting, the project activities followed three distinct routes:

- The first activity had to do with the dissemination of the project's accomplished achievements;
- The second activity regarded the development of a firm scientific framework, on which the technical documents of the selected CDM projects were based;
- Finally, the third activity concerned the continuous investigation of financing sources that would ensure the projects' implementation.

In particular, as concerns the period from the 2<sup>nd</sup> project meeting until the submission of the Interim Report, the project progress included the finalisation of the Methodological Guide, the identification of promising project proposals, the implementation of the pre-feasibility studies and the investigation of financing sources, as schematically presented in the following Figure 3.4.



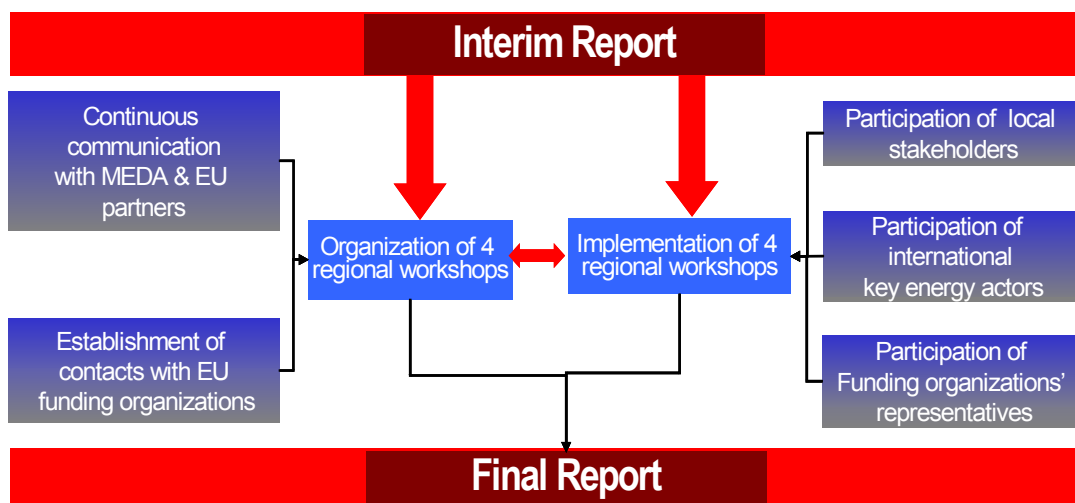
**Figure 3.4:** The Project Progress from the 2<sup>nd</sup> Meeting until the Interim Report

Moreover, the project activities during the period from the submission of the Interim Report till the end of the project are presented as follows:

- The co-ordination continued keeping close contact with all partners, informing them about the progress of each other's phases and ensuring the progress of the project.
- The finalization of the pre-feasibility selection of the proposed projects was an ongoing activity till the end of the project.
- The continuing investigation for European and international financing sources and formulation of regional and national communication bridges between potential investors and project developers, so as to ensure the promising project's implementation.
- The successful organization of the four regional workshops in close collaboration each time with the local Mediterranean partners. Special emphasis given on the support of the relevant ministries, universities, non-governmental institutions, organizations and private companies.
- The successful implementation of the regional workshops, where besides the large-scale participation of local actors, various international Mediterranean and European delegates from large organizations and funding institutions participated.
- The organization and implementation of bilateral meetings that contributed to the discussion of the technical, social and economic characteristics of the proposed projects. The bilateral meetings focused on the establishment of business contacts between potential investors of EU and the Mediterranean countries and brought together:
  - ✓ Potential investors demonstrating strong activity in the EU and in the Mediterranean region;
  - ✓ Key energy market decision makers of the (public and private) energy sector of the EU and the Mediterranean countries;
  - ✓ International companies acting in the Mediterranean energy sector;
  - ✓ Key energy advisors of the EC and energy experts of international recognition;
  - ✓ Key players of CDM in the Mediterranean region, including project developers and brokers.

- The on-going improvement and update of the project web service and the CDM-PAT in order to elevate the whole web-based system into a sustainable node with strong development perspectives and multiplying results in all the countries of the Mediterranean region.

All these activities are included in the current Final Report. Especially as concerns the organization and implementation of the four regional workshops (Annex B), the correlated activities are schematically presented in the following Figure 3.5.



**Figure 3.5:** The Organization and Implementation of the Regional Workshops

### 3.2 CDM Project Proposal Development

This phase contributed to the identification of the best project proposals for the efficient and effective application of the CDM in the non-EU Mediterranean region.

In particular, the project team evaluated for each target country the potential for implementing CDM projects. This potential was derived initially from an assessment of the energy structure in the potential CDM host countries.

Subsequently, selected energy producers and consumers were approached in order to identify attractive projects and prepare proposals by using the handbook developed in the 1<sup>st</sup> phase. The users of energy that were approached were industries, municipalities or other governmental institutions, and energy firms. In this way, the project ideas were initially identified and information about these proposals was collected with the questionnaires (see first phase). Finally the project ideas were tested on their feasibility with the help of the pre-feasibility study tool (see first and second phase)

The approach adopted from the project team is graphically illustrated in the following Figure 3.6.



**Figure 3.6:** The Approach of the Selection of Proposed Projects

The short pre-feasibility studies revealed the possibility of an investment in RES, energy efficiency or other clean technologies to be implemented under the framework of the Kyoto Protocol. Also an assessment of investment barriers that were directly related to the proposed projects was carried out. The objective of this phase was achieved through the continuous coaching and collaboration between experienced EU and non-EU Mediterranean experts.

More specifically, the progress made in the following tasks is analyzed below:

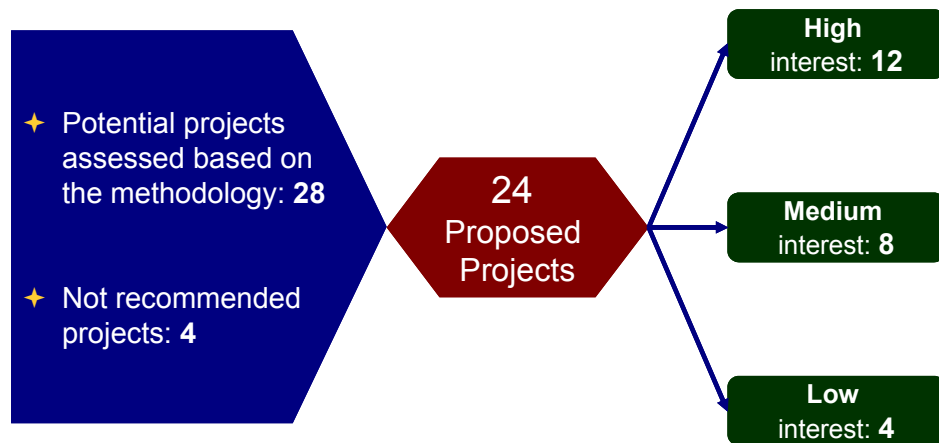
- Project's identification per country;
- Pre-feasibility development for the most promising projects;
- Investigation of project funding sources.

### 3.2.1 Project Identification per Country

After the 1<sup>st</sup> Project Meeting, the Mediterranean partners contacted the relevant institutions, energy sector players and experts in their countries in order to collect information on potential CDM project opportunities. In this way, CDM project proposals were identified and information about these proposals was collected with the questionnaires. The completed questionnaires of the promising project proposals were collected by the project co-ordinator.

Following the 2<sup>nd</sup> Project Meeting, additional data were collected on the CDM project proposals in order to implement the short pre-feasibility studies. These studies quantified the costs and the benefits of each promising project proposal and ended up in the selection of the best project proposals.

This activity aimed at the completion of gathering the required data sets regarding the specific project proposals. The typical eligibility test (according to the methodology guide) was applied to the full set of the aforementioned project proposals and it resulted to the identification of 24 CDM project proposals, which were selected for further elaboration.



**Figure 3.7:** Proposed CDM projects

The titles of these 24 CDM project proposals are mentioned below:

- Egypt:
  - ✓ Electrification of Cairo-Alexandria Railroad Engines to replace low efficiency diesel engines;
  - ✓ Improving energy efficiency in governmental buildings in greater Cairo.
- Israel:
  - ✓ Arrow Bio – generating green electricity from unsorted waste;
  - ✓ Solar air-conditioning in school building in Beit Shemesh.
- Jordan:
  - ✓ BOO wind power project;
  - ✓ Extension of wind parks.
- Lebanon:
  - ✓ Energy efficiency in public lighting at the municipality of Jounieh;
  - ✓ Stimulation of the thermal solar market in Lebanon: upgrading of the KYPROS solar domestic hot water manufacturing plant;
  - ✓ Electricity wind farm project for the JBEIL electrical company (concession of Byblos).
- Malta:
  - ✓ Malta waste to energy (biogas) project;
  - ✓ Waste water treatment for a leading local hotel;
  - ✓ Malta wind project;
  - ✓ Integrating renewable energy from sound waste management practices on small islands.
- Morocco:
  - ✓ Installation of solar water heaters in public hospitals;
  - ✓ Installation of high efficiency furnaces in public baths (hammams).
- Syria:
  - ✓ Syrian waste to energy power plant project;
  - ✓ Syrian solar water heaters project;



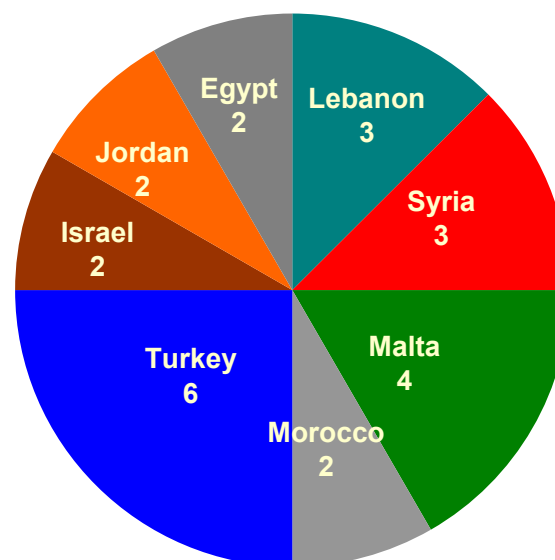
- ✓ Homs wind farm project;
- Turkey:
  - ✓ Energy efficient schools in the city of Erzurum, East Anatolia;
  - ✓ Ground cooling with boreholes for telecommunication stations;
  - ✓ Komurcuoda and Odayeri sanitary landfill area LFG – to electricity project;
  - ✓ Pyrolysis-Gasification of MSW to electricity project;
  - ✓ SigmaPOWER, power plant efficiency monitoring and optimization software project;
  - ✓ Wind energy for ISKI (Istanbul Water Authority) Durusu district pumping station.

The majority of them are small-scale projects with strong community benefits, apart from some waste treatment projects that achieve a significant emission reduction (more than 100.000 ton CO<sub>2</sub>-eq. per year and totally more than 500.000 ton CO<sub>2</sub>-eq until 2012).

These projects comprise the following common characteristics:

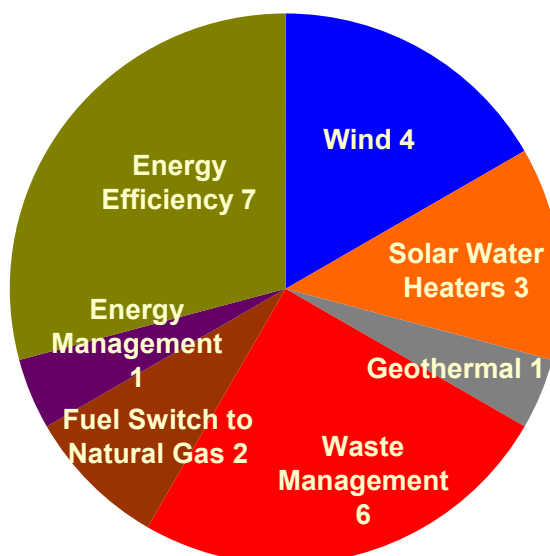
- Contribute to the environmental, social, economic and technological aspects of sustainable development;
- Provide substantial benefits over and above the reduction of GHGs emissions;
- Are approved and/ or supported by the governments of the host countries;
- Successfully utilize the potential of countries from the region for RES and RUE.
- Could largely use already approved Baseline and Monitoring methodologies (by CDM Executive Board) for the calculation of GHG emission reduction.

A brief description for each project is described in the briefing notes (Annex A6.2). Figure 3.8 is a schematic representation of the 24 projects as proposed by each Mediterranean country.



**Figure 3.8:** Proposed Projects per Country

Figure 3.9 gives a schematic representation of the different types of the proposed projects and their number.



**Figure 3.9:** Technical characteristics of proposed projects

### 3.2.2 Pre-feasibility Selection of the Most Promising Projects

The selection of the most promising projects was based on the implementation of their short pre-feasibility studies. These studies are heavily depended on a firm scientific framework that was developed during the time period from the project start through the 2<sup>nd</sup> project meeting. This framework was defined through the:

- Finalization of the proposed methodological guide (Annex A.2);
- Preparation of a technical document, which consisted of the handbook, the methodological guide, the methodology for sustainable development assessment and the manual of the CDM-PAT (Annex A.3);
- Preparation of a separate document for the assessment of the projects' contribution to sustainable development goals of the host countries (Annex A.4).

Additionally to the web service, the CDM Pre-Assessment Tool (CDM-PAT) was developed as a freely accessible web based tool. The CDM-PAT models the provisions of the methodological guide for the implementation of the short pre-feasibility studies on the promising project proposals. In this way, the CDM-PAT provides e-services to potential CDM investors, to host countries and to CDM funding organisations for the initial identification of promising CDM projects. The CDM-PAT is expected to reduce the high transaction costs associated with the initial identification of CDM projects and to facilitate the widespread implementation of CDM. The on-going improvement and update of the project web service and the CDM-PAT aims at the elevation of the whole web-based system into a sustainable vertical portal for CDM investment in the MED and a node with strong development perspectives and multiplying results in all the countries of the MED region. At this stage, it has to be highlighted that the results of the CDM-PAT pilot application are considered as very positive. Several CDM actors and our Mediterranean partners have expressed their satisfaction from the use of the CDM-PAT. In addition, very positively was appraised the ability of CDM-PAT as regards the procedures and modalities of CDM, especially for users who are not familiar with such procedures.

The completion of the above procedure was followed by the implementation of the short pre-feasibility studies for the most promising project proposals. These studies have been improved according to more exact and detailed data acquired by the project partners, in order to describe as accurately as possible the project and its potential.

### 3.2.3 Investigation of Project Funding Sources

The outcome of phase 2 was a list of CDM project proposals with a successful short pre-feasibility analysis and potential sources of financing.

The efforts for the promotion of the best project proposals to various financing institutions included the investigation of appropriate funding sources, as well as the continuous establishment of contacts with potential investors. Particularly, for the identification of financing solutions for the CDM projects proposals, a number of contacts have been established with representatives from:

- International CDM programs, such as the Prototype Carbon Fund (PCF), the Community Development Carbon Fund (CDCF) and the World Bank Bio-Carbon Fund.
- Governmental Programs, such as the Austrian, Finnish, Italian, Netherlands, Portuguese and UK Funding Programs.
- Commercial/Development Banks Programmes, such as the World Bank, the Rabobank, the KfW Bankengruppe, the Japanese Bank of Industrial Cooperation and the Development Bank of Japan.

In the above framework, an appointment with the CDM programme director of Rabobank, Mr. Daan Dijk, in order to investigate their interest in the collected CDM project proposals, was realized. The Rabobank demonstrated high interest in the initially identified CDM project proposals and requested the relative CDM Project Idea Notes (PINs) in order to further elaborate on the potential of financing one of them. Considering the critical importance of finding investors, the project team undertook the additional activity of developing and submitting 6 PINs to Rabobank. Following the initial elaboration of the 6 PINs, Rabobank demonstrated high interest for the Moroccan project "Installation of high efficiency furnaces in public baths (hammams)" and directly contacted the local partners for the acquisition of additional data elements.

Furthermore, the project team has contacted the KfW Group and more specifically Mr. Rainer Sünner, in order to inform them on the project results and to investigate the potential of financing one or more of the CDM project proposals. KfW submitted to the project team the ToR (Terms of Reference) of their CDM funding program and demonstrated high interest on the collected projects. Preliminary contacts have also been implemented with World Bank and more specifically the Prototype Carbon Fund, the Italian fund (Mr. Andrea Pinna), the BioCarbon Fund (Mr. Benoit Bosquet) and the NCDMF (Ms. Noreen Beg).

Significant interest has also been demonstrated for the initial identification of CDM project proposals by the Austrian JI/CDM Programme. In this framework, Mr Clemens Plöchl has delivered to EPU-NTUA the call for expression of Interest for emission reductions generated by CDM projects under the Austrian JI/CDM Programme (Call for Expression of Interest: KPC/CDM/2003/01). Following the receipt of the call by EPU-NTUA, all partners of the project team were informed and the preparation of further PINs was initiated.

Moreover, at a later stage and in the framework of the workshops' organization, business contacts were also established with other representatives of significant European funding organizations and generally energy organizations and institutions interested in CDM projects. Indicatively are mentioned the IXXIS bank, ICECAP, CDM Gold standard, Finnish CDM/JI pilot programme, Belgium Federal JI/CDM Tender, Climate Change Projects Office of the United Kingdom, SenterNovem, PointCarbon, CBNet, Carbon Management International and RISOE. Representatives from the aforementioned organizations and institutions clearly illustrated their interest in the proposed projects and actively participated in the workshops, having tensely discussions with project developers.

### 3.3 Dissemination Activities

The objective of this phase was to disseminate the project results obtained from the short prefeasibility studies developed in task 2.2 and to enhance business contacts between potential investors from EU countries (funding sources) and CDM market actors from non-EU Mediterranean.

In particular, the dissemination activities are divided in four categories:

- Organization of the regional workshops;
- Implementation of the regional workshops;
- E-dissemination activities;
- Other dissemination activities.

These activities are thoroughly described below.

#### 3.3.1 Organization of the Regional Workshops

The main aim of this task was the successful preparation of the regional workshops, in order to ensure that business co-operation channels between the Mediterranean project partners and potential financing institutions will be established. An additional goal was to facilitate CDM project co-operation, through:

- An exchange of information for CDM opportunities in these countries;
- The identification of the necessary country institutional structure for the hosting of CDM projects (e.g. existence and efficient operation of Designated National Authorities - DNAs);
- The identification of investors' preferences for CDM project types.

To achieve these ambitious objectives, the whole consortium has conducted a significant effort in the current task. More specifically, the organization and logistical part of the workshops were within the responsibility of the co-ordinator and the host Mediterranean partner. Therefore, the planning of the workshops was basically conducted by the co-ordinator and the corresponding local partner. However, the EU partners as well as the other Mediterranean partners contributed in this effort by providing important advice on the content and the scope of each regional workshop.

The original preparation steps for the organization of the regional workshops included mainly a number of advertising activities, in order to choose potential participants for the four Mediterranean workshops. The intention of the team was to develop a number of lists in accordance with the number of workshops, where all relevant national and international actors for CDM development and promotion of CDM projects would be incorporated.

In this framework, thorough research of international organisations that promote and finance CDM projects was also conducted and their relevant members of the staff were identified. The EU project partners investigated the possibility of attracting the interest of their national CDM programs (Portuguese and Netherlands CDM programmes) to participate in these workshops. On the other hand, the Mediterranean partners elaborated all necessary actions to stimulate the interest of relevant key energy actors of their countries. For example, the Turkish partner developed a Web site for the corresponding workshop (<http://www.cdm-tr.net/>).

Moreover, many announcements regarding the implementation of the four regional workshops were made to all CDM actors who are subscribed in the Climate-L network (Annex A9.1). In accordance with these activities, sedulous research in the participants' lists and records of workshops with similar thematic areas was conducted, and also in this case the prominent delegates were singled out. Finally, dissemination of the project and the workshops to be conducted was realized through several announcements and

articles in the CDM investment newsletter (e.g. CBNet, Annex A8.1) and in the Joint Implementation Quarterly – JIQ (Annexes A8.2.2, A8.2.3).

This thorough research resulted in the development of the above mentioned lists, which were also focused on each workshop's specific characteristics and targets, as described below:

- **1<sup>st</sup> Workshop - Lebanon:** Appropriate initiatives were taken and contacts were established in order to develop the agenda and choose the relevant representatives of the governmental institutions of both countries. These delegates were appropriately prepared to successfully provide an overview of their countries' status in order to enhance the new CDM market in the region. In particular, they planned their presentations and took consideration the actions regarding on the one hand the efforts and progress related to the Kyoto Protocol's ratification in Lebanon and on the other hand the status of its enforcement in Jordan.
- **2<sup>nd</sup> Workshop - Turkey:** The identified projects from the participated countries were so many that an extra day was necessary (three-day workshop) for the broad coverage of all aspects. Another important aspect of the preparation of this workshop derived from the fact that Malta and Israel have ratified the Kyoto Protocol, while the situation regarding Turkey's consideration as a host country for CDM projects is more complicated. Turkey is a so-called non-Annex B Annex I country, i.e. without commitments under the Kyoto Protocol (non-Annex B) and not eligible as a CDM host (Annex I). This situation was discussed and it was agreed that this issue was to be elaborated more analytically during the workshop and that the government of Turkey should be communicated for their consideration. In this framework, governmental representatives were invited in order to present the Maltese, Israeli and Turkish status regarding the Kyoto Protocol.
- **3<sup>rd</sup> Workshop - Syria:** An important aspect of the workshop's organization involved the fact that Syria is preparing to sign and ratify the Kyoto Protocol. Therefore, governmental representatives were invited in order to present the Syrian status on the energy and environmental policy. Moreover, and in order to provide the participants with a spherical view of the situation, it was requested by the apposite governmental institution to hold a presentation regarding the Kyoto Protocol ratification status in the country, with specific emphasis on the barriers delaying its ratification.
- **4<sup>th</sup> Workshop - Morocco:** There was a very successful and efficient period during the preparation of the workshop among the series of potential investors, as both participating countries have ratified the Kyoto Protocol and have established a Designated National Authority (DNA) for the CDM. Morocco and Egypt were very interested in the exploitation of the enormous RES and energy efficiency potential though the business opportunities of the projects. Therefore, great emphasis has been given to the preparation of a session for the financing of CDM projects in order to encompass all participated investors.

These activities were followed by the development of personalized invitations for each potential participant (Annex A9.5) that were originally sent along with a provisional agenda for the workshops. Moreover, all organizational issues (e.g. Venue, audio visual equipment, participants material and other services) were arranged by the host Mediterranean partner after due consultation with the co-ordinator.

### **3.3.2 Implementation of the Regional Workshops**

Following the above preparations, the project consortium managed to successfully implement the following four regional workshops, with respect to all aspects (technical, scientific, organizational):

- 1-2 February 2005: Workshop in Lebanon with the participation of Syria and Jordan;
- 16-18 February 2005: Workshop in Turkey with the participation of Israel and

Malta;

- 1-2 March 2005: Additional workshop in Syria;
- 18-19 April 2005: Workshop in Morocco with the participation of Egypt.

These workshops increased participants' understanding of the environmental policy and climate change issues and altered their vision on the CDM benefits. In addition, significant opportunities were provided to local stakeholders to participate in discussions, share the experiences with the EU key actors, refine their project ideas and identify partners for collaborative work. Therefore, communication bridges, through the organization and implementation of the bilateral meetings, were created and close links have been established between local and international actors, which will assure the continuity of dialogue on these topics and the sustainability of the projects' results.

In addition, many important delegates of international organizations and institutions as well as key local energy actors with vast experience in climate change issues participated in the four workshops and enhanced with their views the audience's understanding in these fields. More specifically, the workshops brought together potential investors from the EU and local CDM stakeholders in the potential CDM host countries in the Mediterranean in order to explore the challenges and opportunities of the emerging climate change market. This enabled the quick maturity of the CDM concept in the region. Moreover, individual energy actors travelled to the host countries and were keenly interested in outputs of the project.

More specifically, the first workshop was successfully implemented in Beirut, Lebanon, on 1 - 2 February 2005. The projects presented in this workshop were mainly small-scale projects with strong community benefits, and in particular wind and solar projects in Jordan and Lebanon, as well as one energy efficiency project in Lebanon. This was the reason that representatives from many local industrial units implicated in the activities of such projects, actively participated in the workshop and had detailed discussion with investors so as to enhance the attractiveness of their CDM proposals. In addition, important governmental representatives attended the meeting, clearly illustrating the willingness of the government to give emphasis on these fields.

In this context, the Director General of the Ministry of Lebanon, Dr. Fadi Commair, announced that appropriate actions will be developed so as to advise the parliamentary committee on these subjects. In addition, the majority of the participants stressed the remark that the necessity for increasing awareness and persuasive actions/ plans to enhance capacity building is essential and should be continued after the project ending. Finally, important local energy actors confirmed that they will urge the Lebanese government to ratify the Kyoto protocol.

The second workshop was implemented in Istanbul, Turkey, on 16-18 February 2005. This workshop was signified by a fortunate coincidence, the entry into force of the Kyoto Protocol. Given that the projects presented covered a large spectrum of CDM activities, like energy efficiency, waste management, wind farms development and solar water heaters, local representatives of relevant industrial units actively participated in the workshop. It has to be pointed out that the interest of the Turkish community was tremendous since 51 private sector, 21 public sector, 43 academicians and 11 NGO found the opportunity to be informed about the Kyoto flexibility mechanisms and especially the CDM.

Moreover, in the context of the workshop, financing opportunities emerged since the World Bank's Prototype Carbon Fund (PCF), the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) provided a CDM project road map for current and potential CDM project developers and investors. In addition, 15 bilateral meetings were organized under the "Communications Bridges" function in order to initiate long-term business relations between project developers, financiers and experts of the field.

Finally, the countries presenting projects at the workshop identified the most important

weaknesses that ought to be rectified:

- The present status of Turkey in the global climate policy context seems not to be clearly clarified yet. The Turkish interest in hosting GHG emissions reduction and sustainable development support projects needs to be complemented with an official endorsement towards ratification of the Kyoto Protocol if the CERs shall become eligible for issuing and trading (see above). An important topic of discussion was therefore the country's possible role under the Kyoto Protocol and the heated discussions on this topic took place in several working group meetings.
- The Israeli delegation stressed that project approval is time consuming, in part because of a lack of aggressiveness on the part of the DNA, while the private sector is largely unaware or skeptical of the CDM opportunities.
- The Maltese delegation pointed out that the Government of Malta is giving ever-increasing importance to the environment. However, more still needs to be done especially in preparing the groundwork and necessary infrastructure that will facilitate the implementation of these and other projects in Malta.

The third workshop was implemented in Damascus, Syria, 1-2 March 2005. The identified projects were mainly targeted at RES, and in particular wind energy, solar energy and waste management. In this framework, several representatives from local manufacturing organizations, mainly from small industrial units constructing solar water heaters participated to be informed about the emerging CERs market. During the interactive discussions that took place, a lot of important recommendations were derived, such as:

- The delegates of the ministries should be urged to speed up the procedures for the ratification of the Kyoto protocol, which is on the way.
- The necessity for the establishment of a specialized committee, where all presidents from local ministries would participate, in order to promote the projects under the CDM, even though a Designated National Authority (DNA) already exists in Syria.
- The huge potential for project implementation under CDM in Syria underlines the important work that should be done for the preparation of interesting proposals and their promotion to funding organizations.
- The need for updating the existing energy data is urgent and therefore a report including energy data is proposed to be delivered in a year's time.

Last, the event closing this series of workshops was realized on 18-19 April 2005 in Casablanca, Morocco, which was the most interesting for potential investors, since both Morocco and Egypt can be considered as successful CDM host countries in terms of capacity building progress and developed CDM project pipeline. This can be illustrated by the fact that highly levelled representatives from the UK Climate Change Projects Office, the Italian Carbon Fund, the IXXIS Corporate & Investment Bank, the Finnish CDM/JI Pilot Programme, ICECAP and the Belgian Federal JI/CDM Tender attended the workshop and presented the main investment opportunities emerging and options in order to sell CO<sub>2</sub> credits to the aforementioned programmes.

Moreover, the expressed interest of these major EU CDM investors in receiving CDM project proposals (e.g. the Belgian Federal JI/CDM Tender delivered an open invitation for good CDM project proposals) is considered of major importance and highlights the success of the workshop in achieving its main objectives to act as a bridge between project proposers from the Mediterranean region and EU CDM funding organizations.

For each one of the aforementioned workshops, briefing notes were elaborated (Annex A6), which include among others the most important points that were drawn up from the detailed discussions of the workshops' sessions.

It is noted that the workshops were successfully implemented, since all the administrative issues (e.g. appropriate meeting venues, audio visual and other type of equipments,

calendars, documentations, CDs, and other participants material and relevant services) were arranged by the host Mediterranean partners who were responsible for the implementation of the workshop according to the grant agreement.

In addition to the discussing topics of the regional workshops, all the participants had the chance to participate in the official meals and social events as well as to visit beautiful refectories of the host countries.

### **3.3.2 E-dissemination Activities**

The project Web service (<http://meda-cdm.epu.ntua.gr/>) was developed in order to support the project dissemination activities, to increase awareness for CDM funding opportunities and to facilitate business contacts. The project web site includes a short description of the project, downloadable Information about the project events (meetings and workshops) and technical documents. Moreover, the site has been promoted to a number of Internet search engines (e.g. Google) and it was also one of the top results of the "Google search" (3<sup>rd</sup>: 06/09/2004). In addition, it is linked with the CDM Pre-Assessment Tool (CDM-PAT).

More specifically, till the end of the project, a significant number of users were registered on the CDM-PAT, which navigated them through its several stages. Moreover, the site has been promoted to a number of Internet search engines. The fact that the CDM-PAT was in the first place of the google search list (06/09/2004) explicitly suggests that most of the searchers for CDM via the Internet have visited this web tool.

The development of the project's web service and the CDM Pre-Assessment Tool (CDM-PAT) were aiming at the creation of a web-based system that would be elevated to a sustainable vertical portal for CDM Investment in the MED and a node with strong development perspectives and multiplying results in all the countries of the MED Region.

Finally, in the framework of the e-dissemination activities, an article describing the project (aims, phases, partners) was published to the electronic magazine e-JIQ in September 2003, "Business Opportunities for CDM Projects in the Mediterranean" (Annex A8.2.1). Since now, near to 3.000 were the "downloads" of this issue of the magazine from the internet.

### **3.3.3 Other Dissemination Activities**

Great emphasis has been laid on the project's promotion through a number of dissemination activities such as articles and conferences. These activities are described in detail below.

- Articles:
  - ✓ A number of articles regarding the project and its progress were published in the JIQ (Joint Implementation Quarterly) Magazine on the Kyoto Mechanisms. A significant number of interested CDM market actors had the opportunity to be informed about the project through this magazine, since the December issue reached near to 5.000 readers (2.551 downloads from Internet site: <http://jiq.wiwo.nl> + 1.900 hardcopies sent to subscribers + 350 email subscribers) while the March issue more than 9.000 (6.830 downloads + 1.900 hardcopies sent to subscribers + 350 email subscribers). More specifically these articles are the following:
    - Publication of "Synergy: CDM Business Opportunities in the Mediterranean" in JIQ, Vol. 9 - No. 4, December 2003 (Annex A8.2.2);
    - Publication of "The CDM-PAT e-Tool for Initial Identification of CDM Projects" in JIQ, Vol. 10 - No. 1, March 2004 (Annex A8.2.3);
    - Publication of "CDM Business Opportunities in the Mediterranean" in JIQ, Vol. 10 - No. 1, March 2004 (Annex A8.2.3);



- Publication of “CDM Business Opportunities in Lebanon and Jordan” in JIQ, Vol. 10 – No. 4, December 2004 (Annex A8.2.4);
- Publication of “Turkey: Large Abatement Potential but under the CDM?” in JIQ, Vol. 11 - No. 1, April 2005 (Annex A8.2.5);
- Publication of “CDM Business Opportunities in Morocco and Egypt” in JIQ, Vol. 11 - No. 1, April 2005 (Annex A8.2.5);
- Publication of “Municipal Solid Waste Management in Israel and the Palestinian Area” in JIQ, Vol. 11 - No. 1, April 2005 (Annex A8.2.5).
- ✓ Article in the CDM Investment Newsletter CBNNet: “Business Opportunities for CDM Project Development in the Mediterranean” CDM Investment Newsletter, Nr. 4/2004 (Annex A8.1).
- ✓ Publication on the Greek newspaper: “EXPRESS” (Annex A8.3).
- ✓ A. Flamos, H. Doukas, K. D. Patlitzianas and J. Psarras (2004) “CDM – PAT: A Decision Support Tool For The Pre-Assessment Of CDM Projects”, International Journal of Computer Applications in Technology 2005 - Vol. 22, No.2/3 pp. 80 - 89 (Annex A8.4).
- ✓ A. Flamos, A. Anagnostopoulos, H. Doukas, Y. Goletsis, J. Psarras, Application of the IDEA-AM (Integrated Development and Environmental Additionality - Assessment Methodology) to compare 12 real projects from the Mediterranean region, Volume 4, Number 2, May - August 2004 (A8.5).
- Conferences:
 

In all the conferences that our project team participated, a number of brochures were prepared and distributed among the participants concerning general information of the project (objectives, partners, milestones, results, and contacts) and some CDM project proposals from the Mediterranean region (background, objectives, project description). An indicative number of these briefing notes are annexed (Annex A7.12). The following list includes all the conferences in which the project team participated.

  - ✓ Announcements of “The Threats Emerging and Correlated Opportunities of the EU Emission Trading Scheme” in the Cleanair 2005, Eighth International Conference on Energy for a Clean Environment”, 27-30 June, 2005, Lisbon, Portugal. (Annex A7.1):
  - ✓ Announcement of the “Sustainable development through the CDM opportunities in the Mediterranean region” in the International Conference SB04MED “Sustainable Construction: Action for Sustainability in the Mediterranean”, 9 - 11 June 2005, Athens, Greece. (Annex A7.2)
  - ✓ Announcement in the Conference of the Technical Chamber of Greece “Lignite and Natural Gas in the country’s electricity sector”, 9 & 10 June 2005, Athens, Greece. (Annex A7.3)
  - ✓ Announcements in the “International Scientific Conference, HELECO '05”, 3-6 February 2005, Athens, Greece. (Annex A7.4):
    - Flamos A., Patlitzianas D. K., Doukas H., Papadopoulou A., Psarras J., “Investigation of the utilization potential of the Clean Development Mechanism in the Mediterranean region”;
    - Patlitzianas D. K., Papadopoulou A., Doukas H., Flamos A., Psarras J., “The Environmental Policy of the European Union Member States for the Emission Trading Scheme”;
    - Doukas H., Patlitzianas D. K., Flamos A., Psarras J., “Financing options for environmental friendly technologies through the clean development mechanism”.
  - ✓ Announcement of the “Business Opportunities for CDM Project Development in the Mediterranean region”, Psarras J., Patlitzianas D. K., Doukas H.,

Papadopoulou A., in the IENE workshop on “Institutional framework, sequestration and storage of carbon dioxide”, 20 January 2005, Athens, Greece. (Annex A7.5)

- ✓ Announcement of the “Climate Change: Emerging Opportunities and Challenges” by J. Psarras in the Board of European Students of Technology (BEST), 20<sup>th</sup> December 2004, Athens, Greece. (Annex A7.6)
- ✓ Announcement on the First United Nations Global Compact Academic Conference: “Bridging the Gap: Sustainable Development”, Wharton School, University of Pennsylvania, USA. (Annex A7.7)
- ✓ The presentation of the Turkish partner activities “Business Opportunities for Climate Change Related Activities in Turkey”, in the Ankara Climate Change Conference on September the 2nd, 2004, Turkey. (Annex A7.8)
- ✓ Announcements in the 20th European Conference on Operational Research OR and the Management of Electronic Services», EURO XX, the 20th European Conference On Operational Research, 4-7 July, 2004, Rhodes, Greece (Annex A7.9):
  - A. Flamos, H. Doukas, K. Patlitzianas, and J. Psarras, Presentation of “CDM – PAT: The e-tool steering towards the reduction of CDM transaction costs”;
  - A. Flamos, K. Anagnostopoulos, Y. Goletsis and J. Psarras, Presentation of “Application of the IDEA-AM (Integrated Development and Environmental Additionality - Assessment Methodology) to real projects in the MED region”.
- ✓ Announcements in the International Conference on New and Renewable Energy Technologies for Sustainable Development, June 2004, Evora, Portugal, (Annex A7.10):
  - A. Flamos, H. Doukas, K. Patlitzianas, A. Botsikas and K. Anagnostopoulos, Presentation of “CDM – PAT: An Integrated Tool For The Identification of Attractive CDM Project Proposals”;
  - K. Anagnostopoulos, K. Patlitzianas, A. Flamos, H. Doukas and J. Psarras, Presentation of “Development of RES through the Clean Development Mechanism - Special Focus On Small-Scale Projects”;
  - K. Patlitzianas, A. Flamos, K. Anagnostopoulos, H. Doukas, and J. Psarras, Presentation of “The Role of CDM Funding Programmes in promoting RES And Energy Efficient Technologies”;
- ✓ Organisation of a side event on the Synergy project "Business opportunities for CDM project development in the Mediterranean within the framework of the International Conference. This side event was ideal for disseminating the project results and directly invited potential participants to the regional workshops to be implemented in the Mediterranean (Annex A9.2).
- ✓ Second roundtable: “Reinforcing Asia-Europe Cooperation on Climate Change”, of the Asia-Europe Environment Forum, 25-26 March 2004, Cheju Island, South Korea (Annex A7.11).
- ✓ International Workshop: “Expert Workshop on Baselines and Standardisation”, 6-7 November 2003, Groningen, The Netherlands (Annex A7.12):
  - A. Flamos, “e-SEREM: The Web-based smart emission reduction estimation manual – an electronic baseline manual”;
  - A. Flamos, “SYNERGY: Business Opportunities for CDM Project Development in the Mediterranean”.
- Letter of Instituto Superior Tecnico: Request to use the “CDM MEDA” Handbook developed by our project as a work base document for the Synergy Project: “CDM for Sustainable Africa”. (Annex A9.3)

At this stage it is very important to note that the project partners and a significant number of energy experts are very satisfied to note that the project outputs may be

used as reference documents for CDM projects development. In addition, the close contact with the project team of the “CDM for Sustainable Africa” project may generally broaden the basis of climate change actions and will significantly contribute to the creation of a favorable environment for the implementation of CDM projects to the Mediterranean as well as to the Africa region.

- A Progress Report Note, January 2004.

A Progress Report Note was prepared in January 2004 regarding the project progress so far and the planning of the next tasks. This report summarized the issues emerged during the first project meeting and gave a brief description of the main forthcoming activities. The Progress Report was disseminated to all relative parties (partners, private companies from the energy sector and potential investors).

## 4. Conclusions

The implementation of CDM projects is likely to bloom in the forthcoming period, since the Kyoto Protocol entered into force on 16 February 2005 and the EU-ETS linking directive has already been approved.

In the above context, the activities of the current Synergy project were of significant importance for engaging the Mediterranean countries in implementing CDM investments. It can be generally stated that the project successfully fulfilled its ambitious objectives. In particular, the project achieved the following goals:

- The non-EU Mediterranean countries are currently stating a process of environmental awaking. The governments, the private sector and the general public are realizing the inevitability of putting climate changes issues on the top of the list of priorities in the process of economic and social development, since most of them have ratified the Kyoto Protocol and have established a DNA.
- Most of these countries are able to take a more active part in the development of CDM investments. The majority of the countries in the Mediterranean region possess an extensive potential to abate GHG emissions via CDM projects, by utilising RES and by conserving energy, since:
  - ✓ There exist a significant potential for exploiting RES and especially solar energy and there are areas with many remote villages that can benefit from RES applications;
  - ✓ RES as indigenous sources can both enable local development and secure the environmental integrity through the minimisation of CO<sub>2</sub> emissions. In addition, these projects can contribute to the transfer of innovative technologies.
  - ✓ RUE projects are both important and urgent to reduce the energy cost in the final demand sectors and upgrade living standards, since the increase of energy consumption in the region is, to a certain extent, an inevitable outcome of social and economic development.
  - ✓ Significant technological background based on research activities in the region. Applications of RES and RUE technologies (i.e. solar) have already been developed and can be assumed as matured.
- The application of CDM funding programmes could contribute to exploiting the significant potential of RES and RUE in the region and these countries can be considered as potential CDM host countries.
- An additional result was the contribution to the creation of an attractive and profitable business environment for CDM projects in the Mediterranean countries and the enhancement of business co-operation with investors from the EU. Till now, these countries have hardly benefited from the CDM, since most attention from investors has turned to Latin America and some regions in Asia. Potential investors in most cases find it extremely difficult to establish contract with the Mediterranean region. This unbalanced geographical distribution of CDM projects in the region underlines the lack of capacity building which our project has addressed. More specifically:
  - ✓ The project enlightened the CDM procedure so as hurdles for CDM investments to be overcome. This provision of guidance to local partners in the potential host countries was an on-going process, which went through the whole CDM project cycle. The main contribution of the project was that investors and local partners will not be hampered by initial transaction costs.
  - ✓ The project team provided guidance to potential investors, who are discouraged by the complexity of the CDM project cycle, by streamlining the procedures and

modalities of the CDM project cycle, such as:

- The initial identification of CDM projects and consequently, the reduction of the high transaction costs associated with the separation of attractive CDM project proposals from the non-promising ones;
  - The pre-feasibility study phase, which is generally overlooked in a baseline & additionality-dominated CDM technical discussion.
- A larger scope for unilateral CDM project development was created, by training local parties in the host countries, which is good for the position of countries in the CDM market.
  - The four regional workshops succeeded to establish business co-operation channels between the Mediterranean project partners and potential financing institutions in order to facilitate CDM project co-operation, through an exchange of information for CDM opportunities. The participation of representatives from industries, organizations, banks, institutions and governments in the workshops and the tense discussions with project developers, clearly illustrated their interest in the proposed CDM projects. Through the developing communication bridges as achieved in the regional workshops, mutual trust and awareness between investors and host country partners preferences was gained. Consequently, after the end of the project they can easily continue with their co-operation, fact that secures the sustainability of the project results. As a result, the workshops opened a “new avenue” for EU-Mediterranean cooperation, due to the active participation of:
    - ✓ Potential investors demonstrating strong activity both of the EU and the Mediterranean region;
    - ✓ Key energy market decision makers of the (public and private) energy sector of the EU and the Mediterranean countries;
    - ✓ Representatives from local governments;
    - ✓ International companies acting in the Mediterranean energy sector;
    - ✓ Key energy advisors of the EU and energy experts of international recognition;
    - ✓ Key players of CDM in the Mediterranean region.