

**A. Definition of the Project**

<b>A.1 Title</b>	<b>Solar Water Heating Loan/Leasing Facility – PROSOL Maroc</b>
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<b>A.2 Type of project</b>	
Solar thermal	<b>X</b>

<b>A.3 Stakeholders</b>	<p><i>Partners involved in the project activities:</i>  Italian Ministry for the Environment and Territory  United Nations Environment programme</p> <p><i>Other main Partners involved:</i>  Office National de l'Electricité (ONE)  CDER (Centre de Développement des Energies Renouvelables)</p> <p><i>This project involves other partners such as several local financial institutions, SWH suppliers etc.</i></p>
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<b>A.3 Location of the project</b>	
City / Town / Village	
Brief description of the location	South of Morocco (from Marrakech to Agadir)

<b>A.4 Forecasted Planning for the project</b>			
Status of the project	Phases	Status	Forecasted timing
	Idea / concept Pre feasibility study On going Done	<input type="checkbox"/> <b>X</b> <input type="checkbox"/>	2 years from the beginning of 2006

**B. Stakeholders**

<b>B.1 Main promoters</b>	
Name	<i>Italian Ministry for the Environment and Territory</i>
Type of organisation	Governmental
Address	Via C.Colombo, 44 00147 Roma – Italy
Contact person	Mr Francesco Presicce
Telephone/ fax	Tel: +39 06 57228162 Fax: +39 0657228178
e-mail	<a href="mailto:Presicce.francesco@minambiente.it">Presicce.francesco@minambiente.it</a>
Name	<i>United Nations Environment programme</i>
Type of organisation	International Organisation
Address	Tour Mirabeau, 39/43 Quai André Citroën, 75015 Paris, France
Contact person	Mrs Myriem Touhami
Telephone/ fax	Tel: 00 33 1 44 37 16 30 Fax: 00 33 1 44 37 14 74
e-mail	<a href="mailto:Myriem.touhami@unep.fr">Myriem.touhami@unep.fr</a>
<b>B.2 Other partners</b>	
Name	<i>Office National de l'Electricité</i>
Type of organisation	Public
Address	65 Rue Othman Ben Affan, 2000 Casablanca – Maroc
Contact person	Amina Lamrani
Telephone/ fax	Tel: 00 212 22 66 81 18 Fax: 00 212 22 66 80 17

## C. Technical description of the project

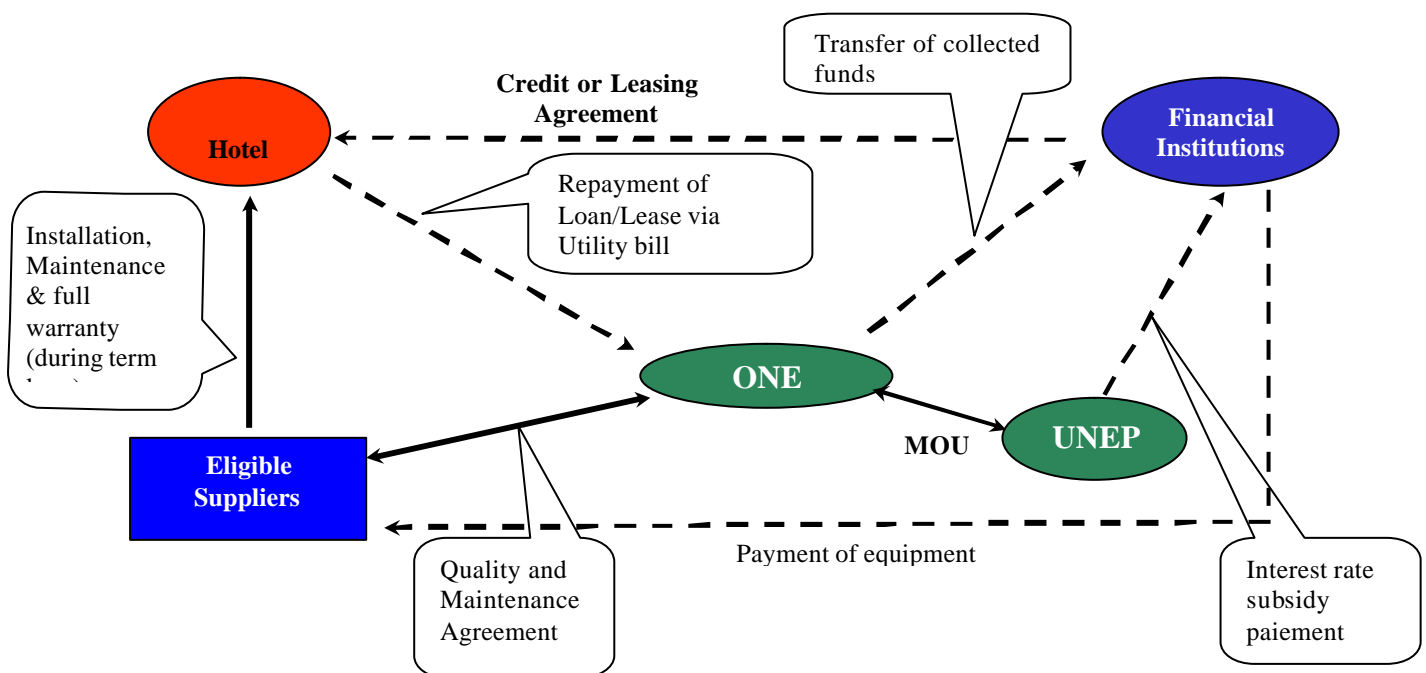
### C.1 Technical description of the project

Based on the already carried out baseline survey for Morocco by UNEP/DTIE, the SWH sector has reached an initial level of market penetration, where new efforts in terms of financing mechanisms could achieve substantial deployment of SWH systems. UNEP is implementing a financial support mechanism, the Loan/Leasing Facility for Solar Water Heating Systems (Euro 1 million), jointly with the state utility, Office Nationale de l'Electricité (ONE), to install collective SWH installations for an initial target of 100 hotels to 200 hotels.

The Facility is intended to help local financial institutions build loan and leasing portfolio in the SWH area by subsidizing a determined percentage of the interest rate loans for SWH technology, i.e. if a loan is at 5% interest rate, the subsidy could pay the entire interest percentage (5%) or some fraction of the interest to the lending institution thus subsidizing the borrower. Using ONE as a channel of recovering the monthly payments through its electricity invoices would induce a fall of the consumer default risk, reduce then significantly the interest rates, and achieve a sustainable deployment of SWH systems. The Facility will phase out progressively over 3-4 years to allow smooth transition to an unsubsidized market leading to 100 to 200 big-scale SWH systems installations. This impact will increase as financial institutions build confidence and begin to expand retail lending to the SWH sector. The facility would promote a competitive market for SWH by offering an interest rate subsidy through a number of local banks for SWH credit loans and/or leasing.

The objectives of this Loan/Leasing Facility with ONE are to lower the charged interest rates to the customers, to ensure financial institutions' participation by reducing the risk in entering a new market segment, to support the development of partnerships between commercial banks and SWH suppliers and to increase the total emissions reduction by having collective installations.

### C.2 Photo/drawing of the project/building:



<b>C.3 Typical indicators</b>	Investment –euros	1.000.000
	Energy produced – MWh / year	23,776 per year
	Population concerned	200 hotels

<b>C.4 Detailed technical indicators</b>	
M <sup>2</sup> installed	32 000 m <sup>2</sup>
Power per m <sup>2</sup>	743 kWh/m <sup>2</sup> /year

#### **D. GHG emissions: reduced / avoided**

<b>D.1 Type of GHG reduced or avoided</b>	
CO <sub>2</sub>	23,800 metric ton per year

<b>D.2 Base line</b>	
Description of the level of reference	<ul style="list-style-type: none"> <li>- We assume that the SWH systems displace 1 metric ton of CO<sub>2</sub> (mtCO<sub>2</sub>) /1,000 kWh of energy saved (this would ultimately depend on the approach used for baseline calculation).</li> <li>- We assume that the lifespan of a SWH system is 15 years</li> </ul>
Other elements	

<b>D.3 Total emission reduction per year</b>	
In Tons CO <sub>2</sub> equivalent	23,800 per year

<b>D.4 Estimated CER gains – thousand euros</b>			
Estimated price (euros/t)	3	5	10
- Tons CO <sub>2</sub> equivalent	357,000	357,000	357,000
Total estimated gain	1,071	1,785	3,570

#### **E. Financial aspects**

<b>E.1 Estimated costs - euros</b>	
Total investment	1.000.000
Allocation	
Development costs	1.000.000 (Loan/Leasing Facility)

#### **F. Contribution of the project to sustainable development**

Natural environment	The project will ensure sustainable global benefits in terms of long-term GHG emission reductions. This will be achieved through introducing a renewable energy alternative for the provision of hot water in the main touristic hotels of Morocco where the use of hot water is important.
Social (employment, health, education, ...)	The project would ensure the creation of several hundred direct jobs by 2010, plus the indirect employment generated by the second-tier participants: wholesalers, distributors, maintenance contractors.
Economy (local, national, ...)	This proeject would ensure long-term viability of the entire sector, with several players: banks, manufacturers, importers, operators, wholesalers, distributors, maintenance companies
Environmental impact assessment studies	
Other relevant elements	

#### **G. Other relevant information**

List of available documents	<ul style="list-style-type: none"><li>- Baseline Study carried out by UNEP</li><li>- Solar Water Heating Loan/Leasing Facility Concept Paper</li><li>- Survey on the potential hotel market interested in SWH systems carried out by ONE</li><li>- MoU between IMET and UNEP, referring to the development of financial support mechanisms</li><li>- MoU among IMET, ONE and UNEP on the implementation of the project</li></ul>
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