Engaging the Banks In Providing End-User Financing To the Solar Water Heating Sector

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International Copper Association, Ltd.

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- UNEP is **not a bank** but we work to support the banking sector and other financial players in creating tailored clean energy finance mechanism.

- For sectors already commercialized on a “cash and carry” basis, UNEP has been implemented credit enhancement programmes that help local banks build dedicated loan portfolios.

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Example Programme:

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Prosol - Mobilising Investment for Solar Water Heating (SWH) in Tunisia

prosol

Initial Situation

Why isn't solar energy used for water heating in sunny Tunisia?

Favourable conditions

- ✓ High solar resource
- ✓ Strong institutions

Challenges

- ✗ Capital intensive, no financing
- ✗ Current option (LPG) heavily subsidised

Programme Strategy

1. Help banks to begin financing Solar Water Heaters
2. Address perverse subsidy

Goal

- ✓ Develop sustainable SWH market; displace LPG use.
- ✓ Improve energy security and reduce CO_2

Main features of Prosol

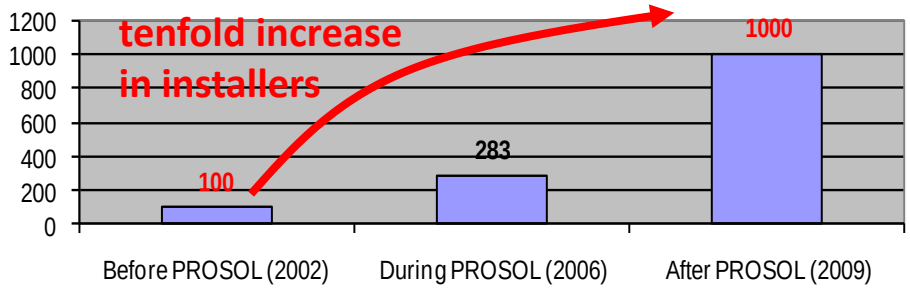
1. Loans financed through local banks

- repayments made through electricity bills
- interest rates initially softened
- interest subsidy phased out after 18 months

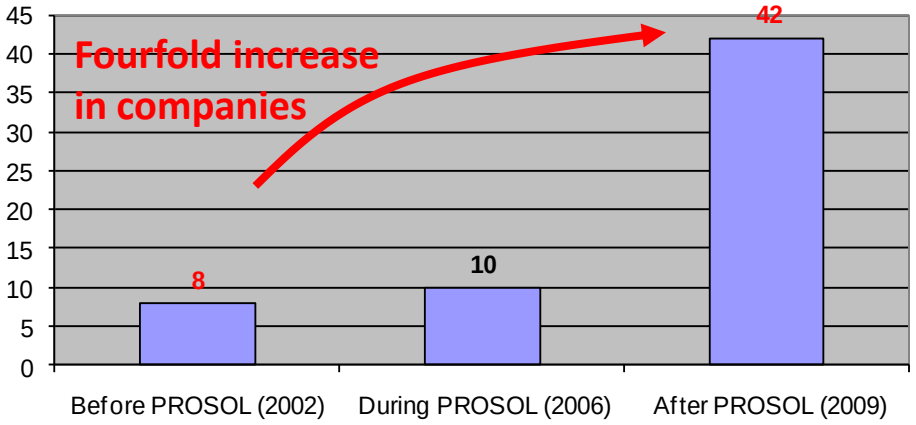
2. Subsidy equalized between SWH and LPG

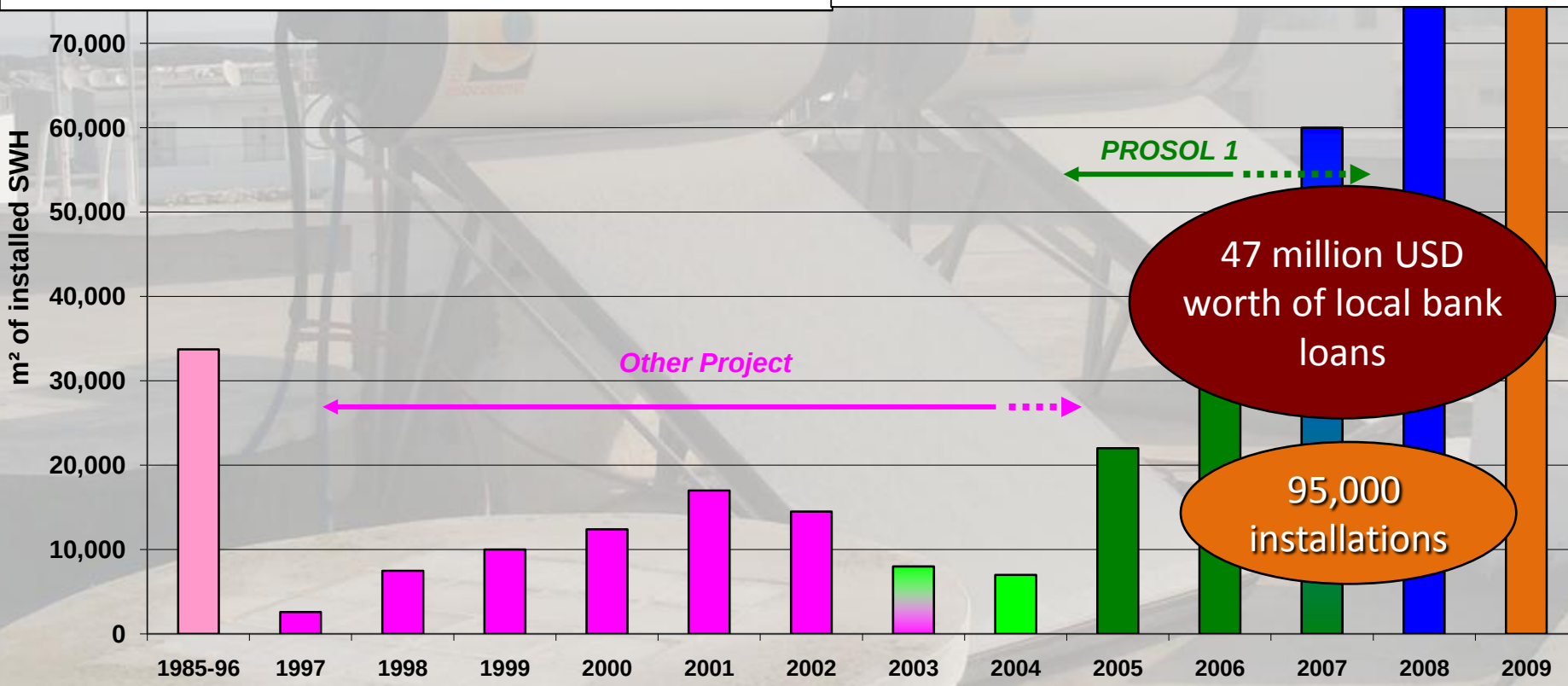
- underwritten for a trial period by Italy
- after successful trial made permanent
  - change in Tunisian legislation

Number of qualified installers (source: ANME)



Number of sales companies (source: ANME)





PROSOL Carbon mitigation:

PROSOL Results to Date

- 285,000m² SWH (95,000 installations)
  - Equivalent to 554,000 tonnes of CO_2
  - Worth $5.5 million at market prices
    - NB: programme cost $2 million

Future Target Programme

- 540,000m² (~180,000 installations)
  - 1.04 million tonnes of CO_2 - market value $10.4 million
- Programmatic CDM documentation prepared and **approved**
  - Carbon credits sold to ORBEO (Societe Generale subsidiary)

Two new Tunisian Financial Support Mechanisms:

- PROSOL Collective
- PROSOL industrial

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End-User Finance Programmes

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

NATIONS FOUNDATION

Tunisian PROSOL ELEC
- Consumer Finance
- Domestic PV Systems
- Loan repayment via the electricity bill
- Interest rates subsidized by UNEP
- State utility provides the inverter

Mexico - Green mortgages
- Cost of Solar Water Heaters included in mort
- 150,000 green mortgages written between January 2009 and April 2010.

Morocco Efficient Lighting Programme
- Household receives up to 10 Compact Fluorescent Lightbulbs (CFLs) from state utility STEG
- Cost of CFLs reimbursed over 2 yrs on electricity bill
- Programme financed through KfW
- Target of 22 million lamps

Indian Solar Loan Programme
- Consumer Finance
- domestic PV systems
- Canara and Syndicate Banks provided training and interest softening incentive
- 2,017 bank branches
- 19,560 homes financed

GSWH Mexico

GSWH Algeria

EGYSOL Hotels Egypt

PV Solar India

GSWH India

ISLP Indonesia

GSWH Chile

Key

SWH: Solar Water Heating Projects

GSWH: Global Solar Water Heating Programme

PROSOL: Programme Solaire - Solar Water Heating Programme in Tunisia

EE Lighting: Energy Efficiency Lighting Programme in Morocco

EGYSOL: Egyptian Solar Water Heating Programme

PV Solar Loan Programme India

PV Solar project; Photovoltaic solar project in Tunisia

FACET: Financing Access to Clean Energy Technologies (3 countries Asia)

ISLP: Indonesian Solar Loan Programme

GVC: Green Village Credit China

Implementation Stage

Completed

Operating

In Development

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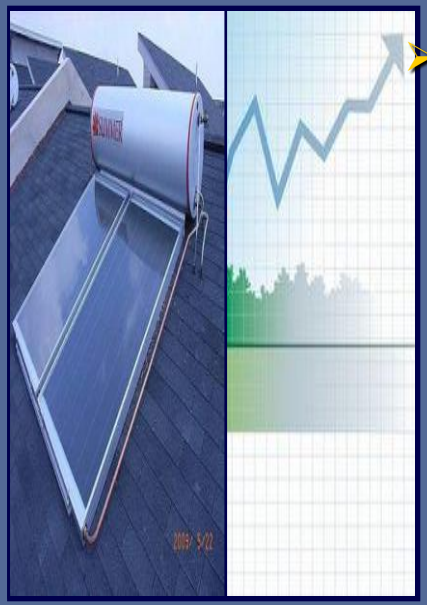
Global Solar Water Heating Market Transformation and Strengthening Initiative

- **Duration:** *5 years*
- **Start date:** *May 2009*
- **Countries:** *Global, starting in the six countries (India, Lebanon Algeria, Mexico, Chile)*
- **Partners:** *UNDP, UNEP, GEF, Intl. Copper Association*
- **Objective**: *Accelerate global commercialization and sustainable market transformation of solar water heating*

Expected Programme Impact

- Installation of an additional **3 million square meters** of SWH panels by the end of the country programs

- GHG reduction **14.9 million tons of CO_2eq** over 15 years



- Sustainable growth of these markets at the **minimum annual rate of 20%**

Main Components

The Project Consists of 2 Main Components:

Global Component – UNEP Led

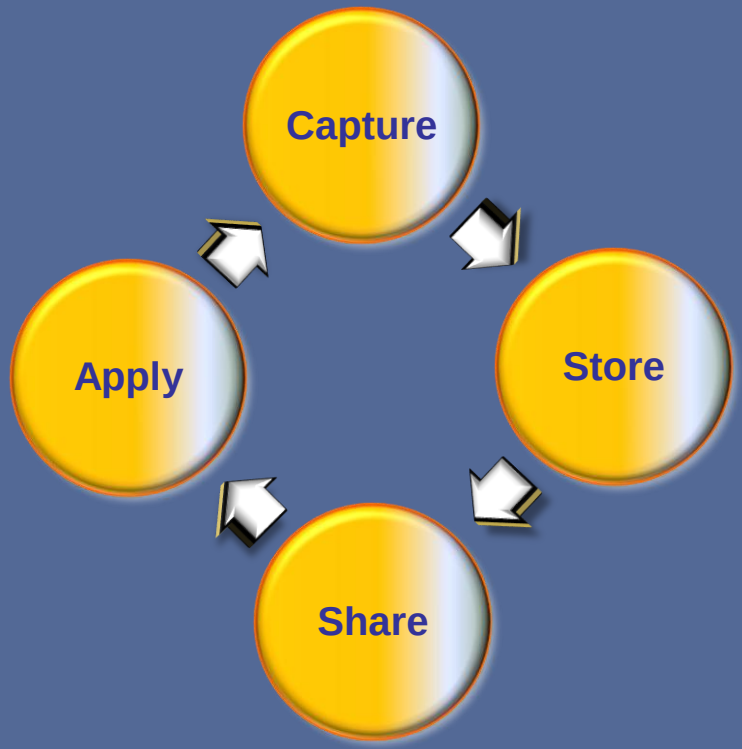
Knowledge Management and
Financial Mechanisms Support

Country Programs Component – UNDP Led

Why Knowledge Management?

Knowledge Management enables programme stakeholders to:

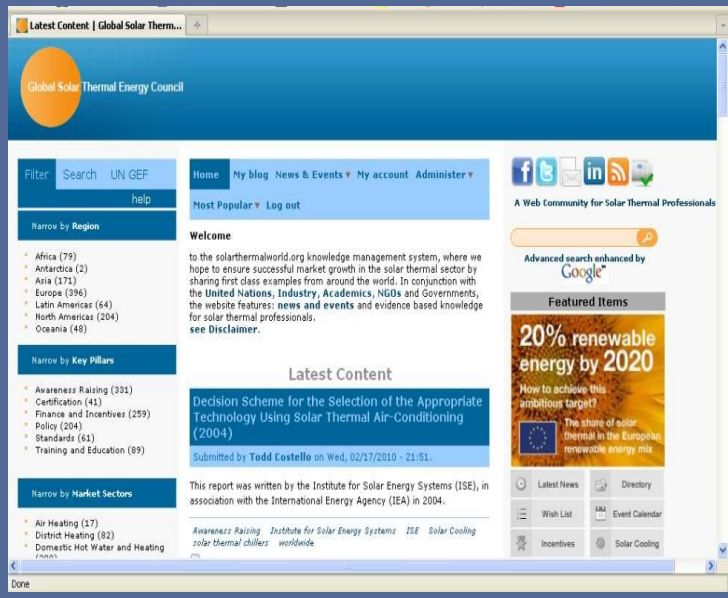
capture, ***store***, ***share*** and ***apply*** their knowledge towards global market commercialisation.



Knowledge Component Outputs

- Network of international and regional agencies established as a local / regional interface for knowledge management

- Knowledge Management System through a web based tool: **www.solarthermalworld.org**



What we have learned…

- Besides the need for enabling policy frameworks, the other barrier to uptake has been **the lack of tailored financing** to help these highly capital-intensive technologies compete with conventional options.

- Renewable Energy companies in developing countries frustrated by lack of bank interest to finance their operations or lend to their customers.

What we have learned engaging the banks…

- Banks need help to get started
  - *Assessing technologies,*
  - *Marketing new loans,*
  - *Kick-starting demand.*
- Typical goal: 10,000 loans.
  - *At this scale partner banks will usually continue on their own and others will follow.*
- Solar thermal markets scale up quickly once banks start to lend.
- Lending gives feedback signal that technology is mature.
  - *Policy makers take a technology more seriously once banks are lending for it.*

Conclusions

- **No standard** bank engagement strategy

- End-user finance initiatives must employ **a variety of approaches and tools:**
  - Institutional support from local governments
  - Multi-stakeholder approach (government, banks, suppliers, installers, state utility)
  - Technical support for setting up dedicated loan instrument
  - Targeted capacity building, training, communication and dissemination to specific financial incentives

- **Integrating carbon reduction benefits**

Institutional Framework

- The project is overseen by a Project Management Committee (PMC) including the International Copper Association (as co-financing partner), UNDP and UNEP
- UNEP-DTIE monitor implementation of the activities undertaken across the UNDP executed country subprojects and the global knowledge management functions including aggregated progress reports for clearance through UNDP to the GEF
- The UNEP-DTIE is the co-executing agency with responsibility for global project management, monitoring and technical assistance components including financial instruments