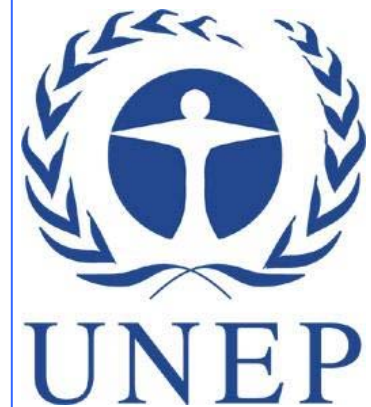


*Economic effects and spill over
impacts linked to the development
of Renewable Energy projects*

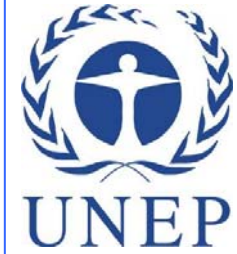
Myriem TOUHAMI
Programme Manager, UNEP-DTIE

*Energy and Sustainable Development in
the Mediterranean*



Monaco, 29 March 2007

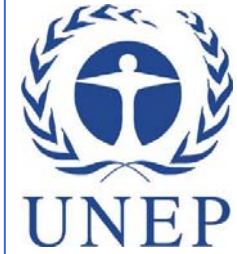
The MEDREP programme



- MEDREP => Mediterranean Renewable Energy Programme
- Launched by the Italian government as a type II initiative at the 2002 WSSD in Johannesburg
- **Main objective:**
 - To promote the deployment of renewable energies and climate change mitigation in the southern Mediterranean region



UNEP MEDREP Finance Initiative



- **Aim:**
 - Apply **financial mechanisms** that **overcome market barriers** and **increase investment in renewable energy technologies**
- Characteristics/strengths of the project:
 - Turning **the finance sector** into an ally promoting clean energy
 - Multi-stakeholder approach
 - Capacity building
 - Communication and dissemination
 - Integrating carbon reduction benefits



The SWH Loan Facility in Tunisia

PROSOL



- Launched in 2005
- **Aim:** establish the SWH market by addressing subsidy imbalance and engaging bank financing
 - ✓ Conventional water heating technology (LPG) enjoys 35% subsidy
 - ✓ No banks lending for SWH

Budget Euro1.2m

- **Key actors:** The state utility (STEG), the Tunisian Agency for Energy Management (ANME), local banks, technology providers and installers.



Support measures

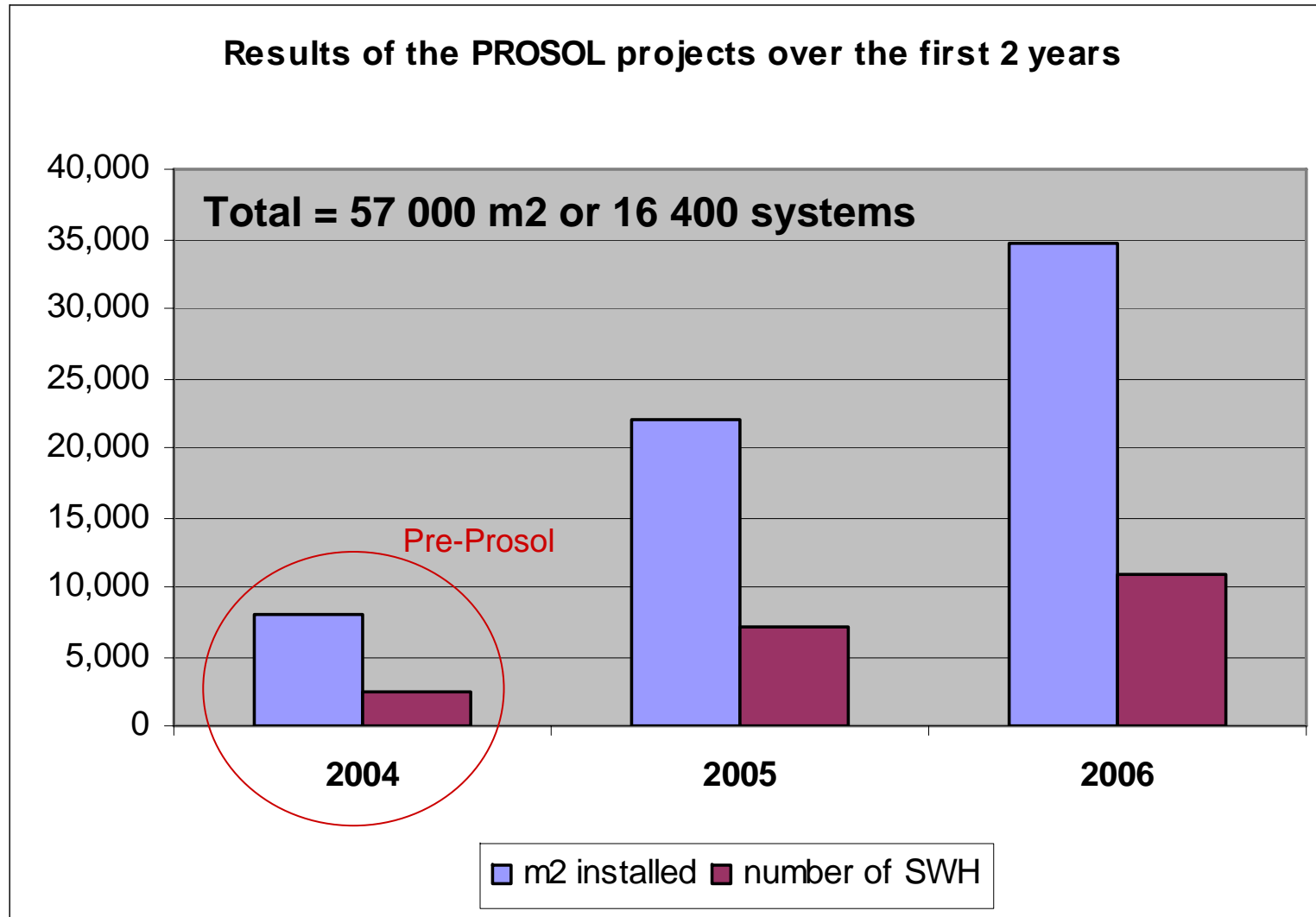
- A **credit mechanism** for buyers of SWH - 5 year period and repayments through state utility bill
- A **capital cost subsidy** for each SWH provided by the Tunisian Gov (20% of system cost with a maximum of 100 dinars/m²)
- **Interest rates subsidy** on the loans to help local banks build loan portfolios in RE area
 - Full benefit passed on to the customer

The PROSOL Mechanism



- Provides the necessary stimulus for the **creation of new business and jobs**
- Helps **the growth** of the solar thermal industry (technology transfer)
- Helps **increase financial flows** in the SWH market
- Helps **reduce energy imports** thus contributing to the balance of payments.
- Contributes to **avoiding fossil energy sources**

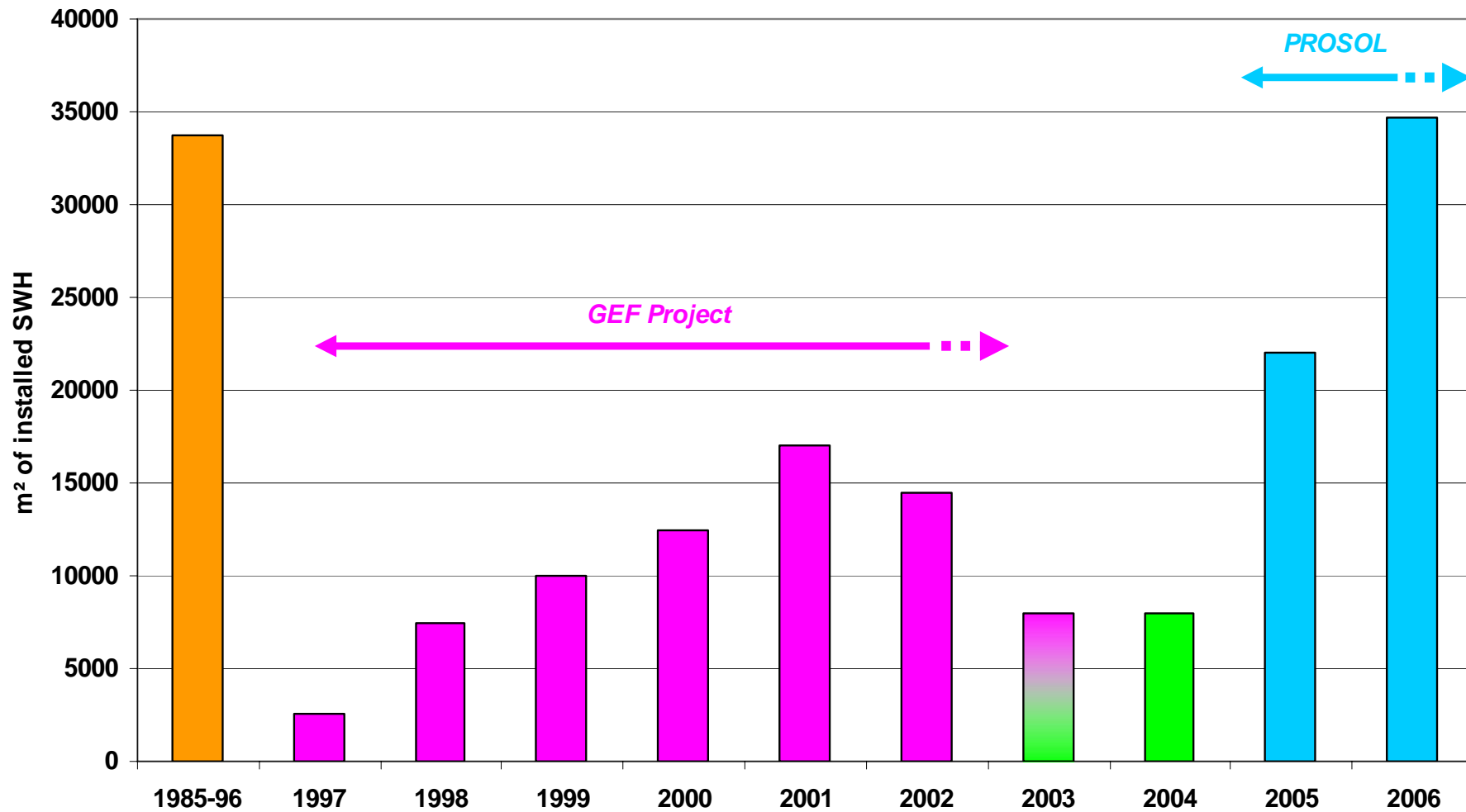
Achievements since March 2005



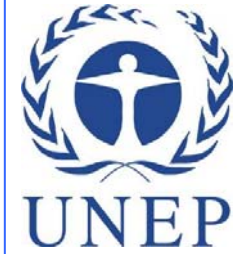
With and without project



Solar Water Heaters Market Growth in Tunisia
1985-2006



Market Development and Jobs



- **SEN (1982-1994):** 35 000 m2
- **GEF (1995-1st quarter 2002):** 56 000 m2
 - Creation of the SWH market
 - **8 suppliers** (1 manufacturer and 2 assemblers) and approximately **100 installers**
- **Prosol (march 2005-Dec2006):** 57 000 m2
 - **14 suppliers** (including 2 manufacturers and 2 assemblers)
 - **384 installers** (individuals and companies)
 - Competitive market
- **Over 700 direct jobs will be created by 2011**



Financial /subsidy implications

Financial data year (March 2005 – Dec 2006)	
Total investments	\$ 18,439,463
- Subsidies (capital cost + interest rate subsidies)	\$ 3,902,981
- Bank Loans	\$ 10,421,893
Average cost (per m ²) (systems size 2 to 3 m ²)	\$ 353

Macro-economic impact

- Within the framework of the 11th development plan, the Tunisian Government set an ambitious target: **540,000 m²** installed in the period 2007-2011
- **If the government target is met**
 - Over its life, **373 000 toe will be saved**
 - ✓ Each m² installed saves 0,046 toe/year
- **In financial terms, the Government's gains:**
 - The international purchase price for LPG is USD 800/toe
 - The Government will save approx. USD 300 million,
 - **Improves the balance of payment of the state**

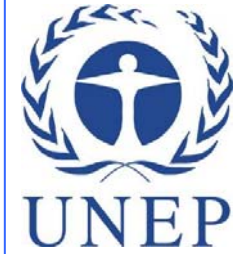
Carbon mitigation



- Over its life, each SWH in Tunisia avoids:
 - **7.5 tonnes of CO₂**
 - about **5** years of a typical car emissions
- If government target of **540,00 m²** by 2011 is met:
 - **136,000 tons of CO₂** will be displaced every year
 - Worth USD 2 million at market prices



Results



- **Energy savings**
 - Financial gain for individuals and government
 - Tons of CO2
- **Market creation and Industry development**
 - Growth of SWH market: no subsidies needed later
 - Technology transfer
 - Export of Tunisian equipments
 - Jobs creation
- **Financial investment**
 - Banks provide financing for investment





Thank you very much