



UNEP ENERGY

United Nations Environment Programme
Division of Technology, Industry and Economics

UNEP's mission



UNEP is the voice of the environment within the United Nations System

Our mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.



Our main roles



- Monitoring the state of the world environment
- Supporting development of solutions to global environmental challenges:
 - International agreements
 - Voluntary initiatives and partnerships
- Providing expertise to implement solutions with a focus on developing countries



What UNEP does



- Assesses global, regional and national environmental conditions and trends.
- Strengthens institutions for the wise management of the environment.
- Helps the transfer of knowledge and technology for sustainable development.
- Fosters development of international agreements and national environmental instruments.
- Promotes integration economic development and environmental protection.
- Encourages new partnerships and mind-sets within civil society and the private sector.

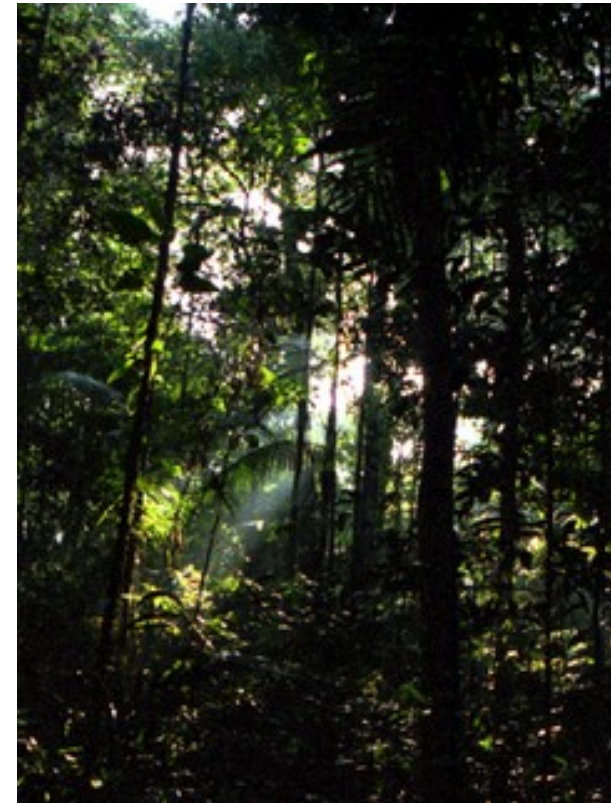


Our partners and stakeholders



UNEP works with:

- National governments
- NGOs
- The private sector
- Financial institutions
- Academic and scientific institutions
- Other international organizations

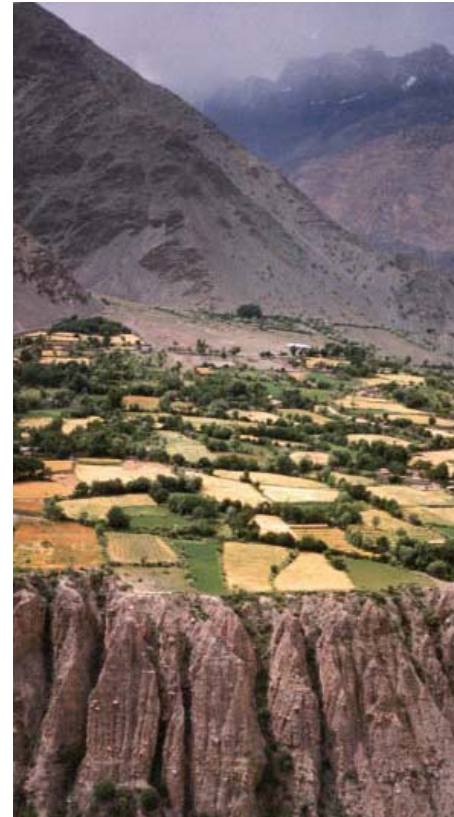


How we're organized



UNEP has eight divisions:

- Early Warning and Assessment
- Policy Development and Law
- Environmental Policy Implementation
- Technology, Industry and Economics
- Regional Cooperation
- Environmental Conventions
- Communications and Public Information
- Global Environment Facility (GEF)
Coordination



Our Medium Term Strategy



Six cross-cutting thematic priorities

- Climate change
- Disasters and conflicts
- Ecosystem and management
- Resource efficiency – sustainable consumption and production
- Harmful substances and hazardous waste
- Environmental governance



UNEP's Climate Change Strategy



Mitigation: facilitating a transition to low carbon societies, including promotion of renewable energy, energy efficiency, and support for expanded access to cleaner energy

Adaptation: helping developing countries incorporate the impacts of climate change into planning and addressing climate change impacts to natural resources

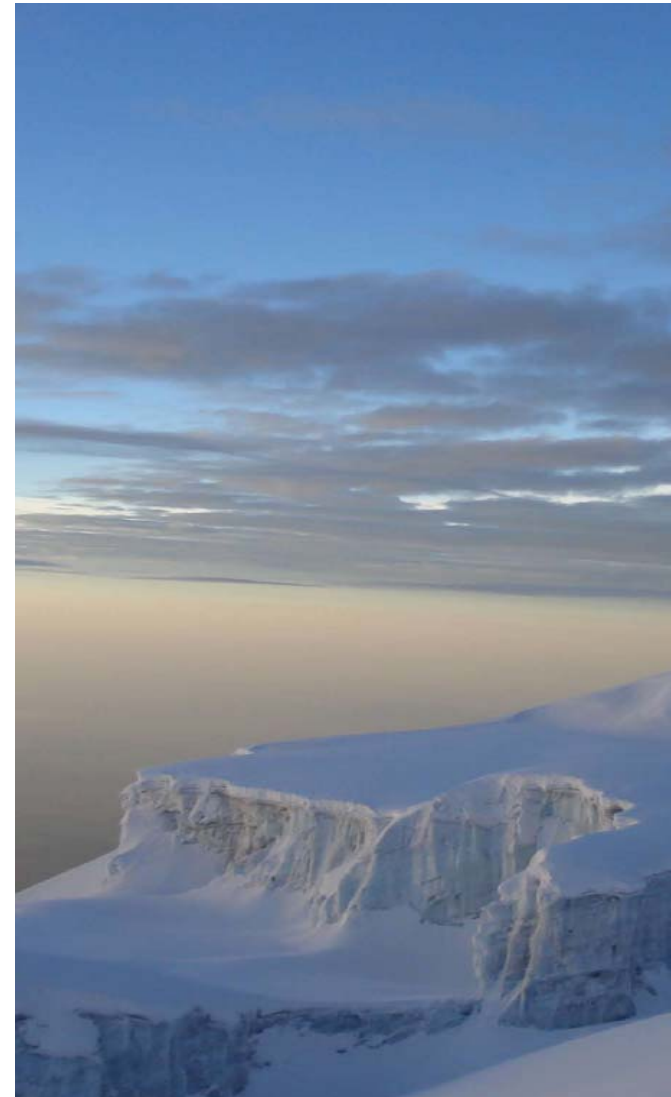


UNEP's Climate Change Strategy



Science: providing information relevant to decision-makers in developing countries

Outreach: raising awareness among governments, NGOs, the private sector and other stakeholders.



The Energy Branch - who we are



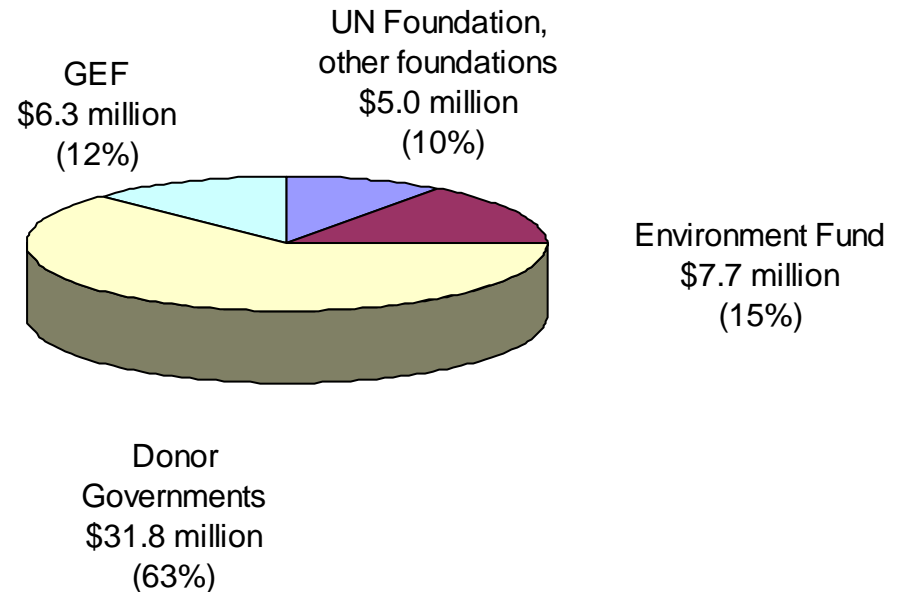
Staff:

- 18 in UNEP DTIE
- UNEP regional offices
- 26 at UNEP Risø Centre

Major supporters:

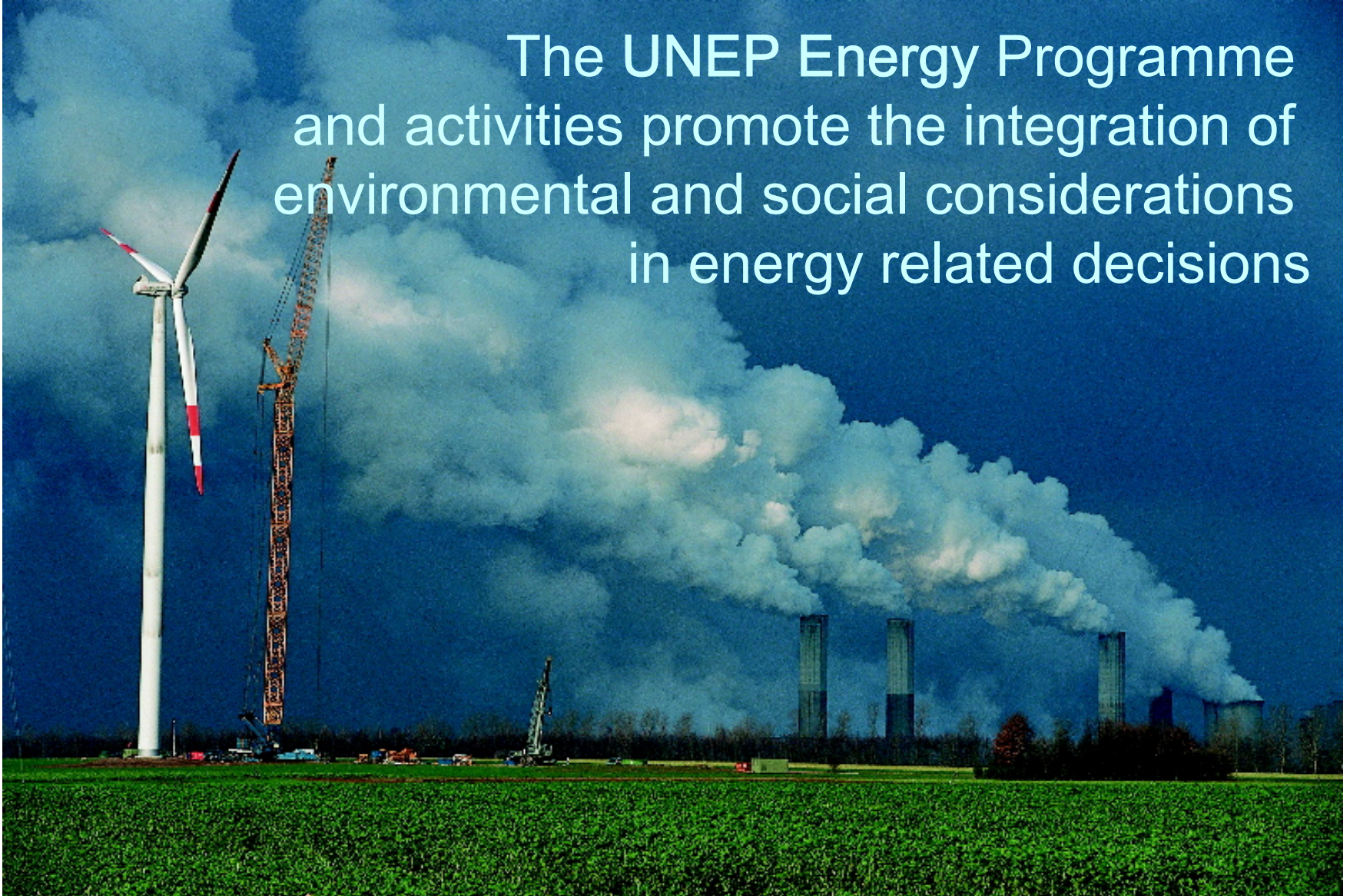
- Bilateral donors
Denmark, Germany, Italy, the Netherlands, Sweden
- Foundations
- Global Environment Facility
- UNEP's Environment Fund

Funding Sources : 2006 - 2009 Total funding : \$51 million



What we try to do broadly

The UNEP Energy Programme and activities promote the integration of environmental and social considerations in energy related decisions



More specifically, we aim to:



- Influence the way various decisionmakers perceive energy as a driver of sustainable development
- Improve overall planning and management of energy systems
- Deploy and use renewable and ‘low carbon’ energy technologies
- Help finance renewable energy and energy efficiency activities
- Increase the efficiency of energy transformation and use
- Develop alternatives to energy-intensive products and services, and shift consumer preferences to these alternatives.



Features of our approach



- Technology neutral, opportunistic and focused on innovation
- Targets decision makers in governments and industry
- Emphasizes collaborative efforts undertaken with a variety of partners
- Includes both:
 - o fixed duration projects that pilot new sustainable energy instrument approaches
 - o ongoing knowledge and industry platforms

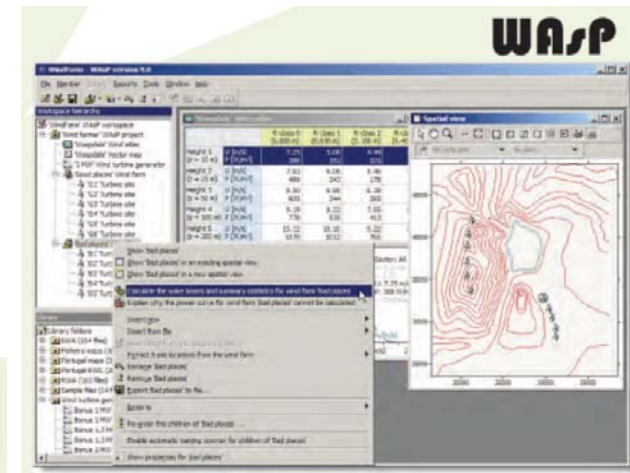
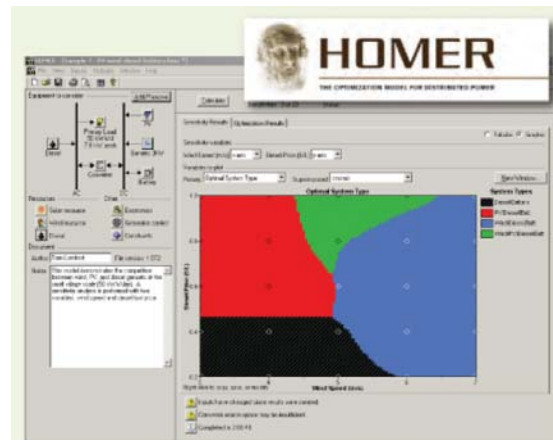
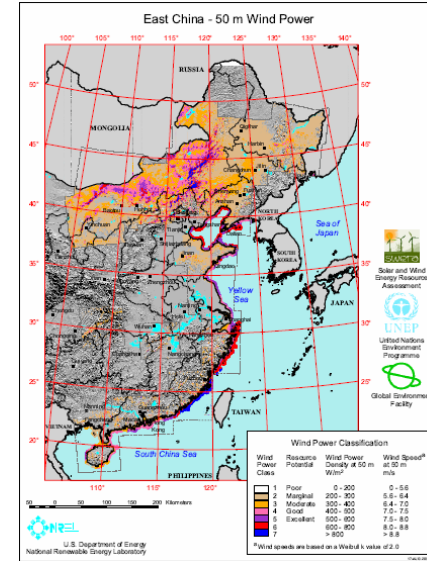


Solar and Wind Energy Resource Assessment

A programme started in 2002 involving 27
different institutions

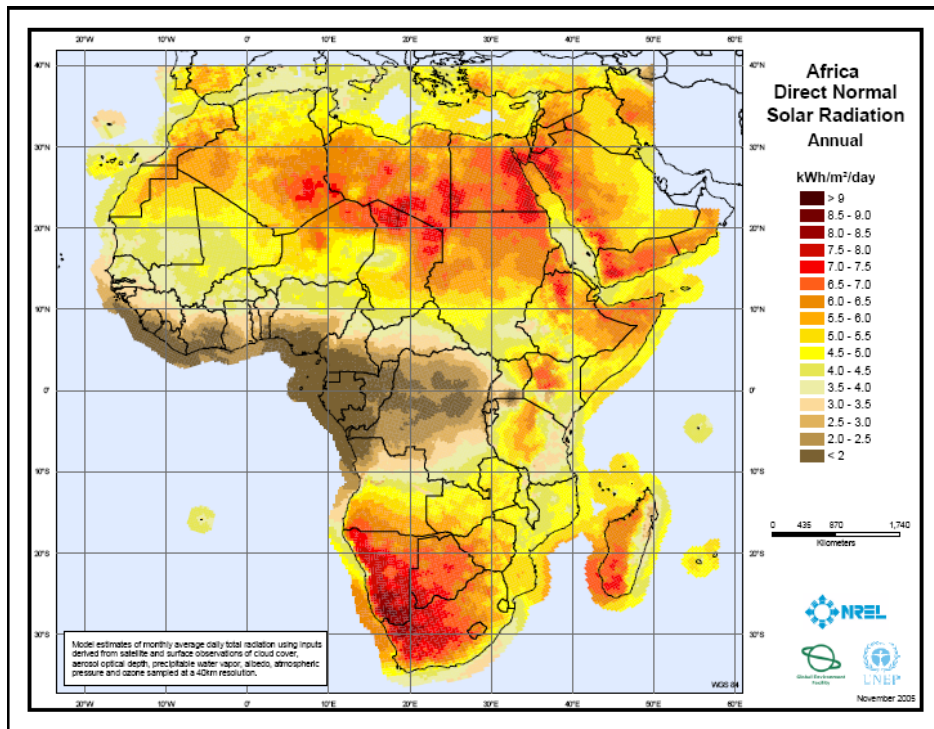
SWERA

- ➔ Publishes resource data:
<http://swera.unep.net/>
- ➔ Develops national assessments
- ➔ Assists policy-makers
- ➔ Serves investors and developers
- ➔ Trains developing country users

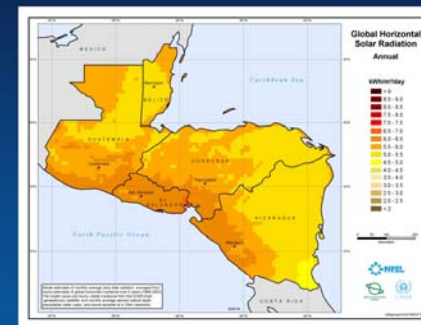
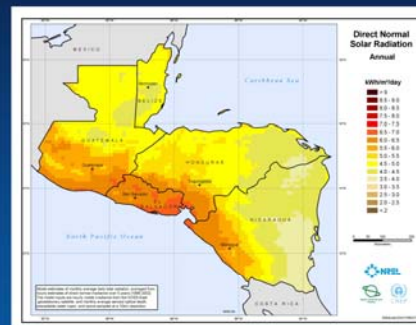
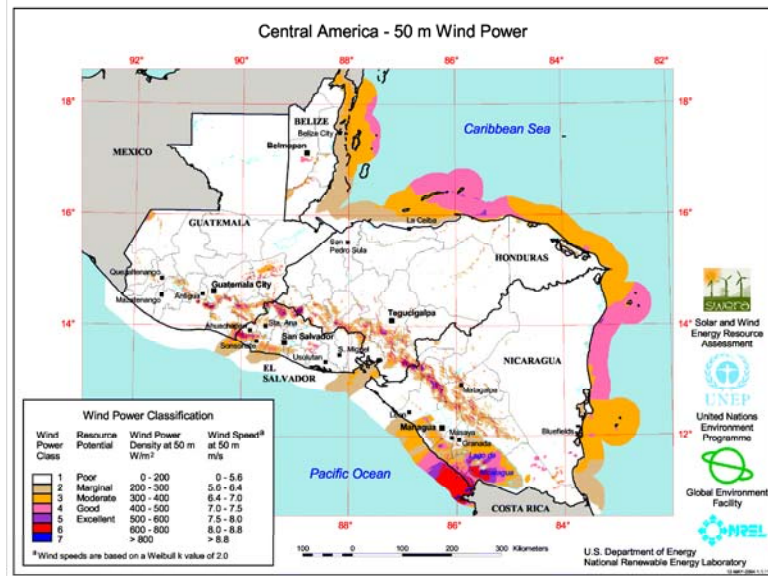




SWERA products



Example: High-Resolution Solar SUNY/Albany (USA)



Clean energy finance



- ➔ Assess gaps the help develop and support public interventions that allow markets for renewable energy and energy efficiency to get started and grow
- ➔ Test new avenues for making public and private sector investment happen

Two thrusts:

- Partner one-on-one with “first mover” financial institutions to develop and implement new products, commercial strategies or investment approaches that demonstrate industry leadership
- Bring together many actors to develop and share information and build awareness/capacities, helping accelerate the mainstreaming of investment into the sustainable energy sector

Example programme: end-user finance to scale up markets



PROSOL: a Tunisian Success Story

Two-year project launched in Tunisia in 2005 with:

- National Agency for Energy Conservation – ANME
- National electricity utility (STEG)
- State-owned bank and commercial banks
- Solar water heater suppliers

Aim: create a long-term market for solar thermal systems

Different components:

- Finance
- Capacity building
- Awareness raising
- Carbon finance



Background analysis - Tunisia



Favourable conditions

High irradiation rates

Scant fossil reserves

Technical expertise & infrastructure

- GEF programme (1997-2001)

Energy conservation is a national priority

Challenges

Conventional sources subsidised:

- LPG heaters dominate the market (78%)

SWH heavily dependent on incentives

Incentives intermittent

Cash-based market

Key issues:

- Develop a self-sustaining market
- Need to engage the financial sector



Multi-stakeholder approach

Main features of the financial scheme



A loan mechanism over a 5-year term with repayments made through utility bills

A capital cost subsidy for each SWH provided by the Tunisian Government (56 euro/m²)

Discounted interest rates on the loans

- Interest rates lowered from 13% to 7% due to state utility involvement
- Interest rate subsidy progressively phased out



SWH Loan Facility - what it does



Customer Can Buy CHEAP and Pay SLOWLY

SWH Size	200 liters	300 liters
Cost of SWH	USD 825	USD 1075
Monthly payment (5 yrs)	USD 9	USD 11.5

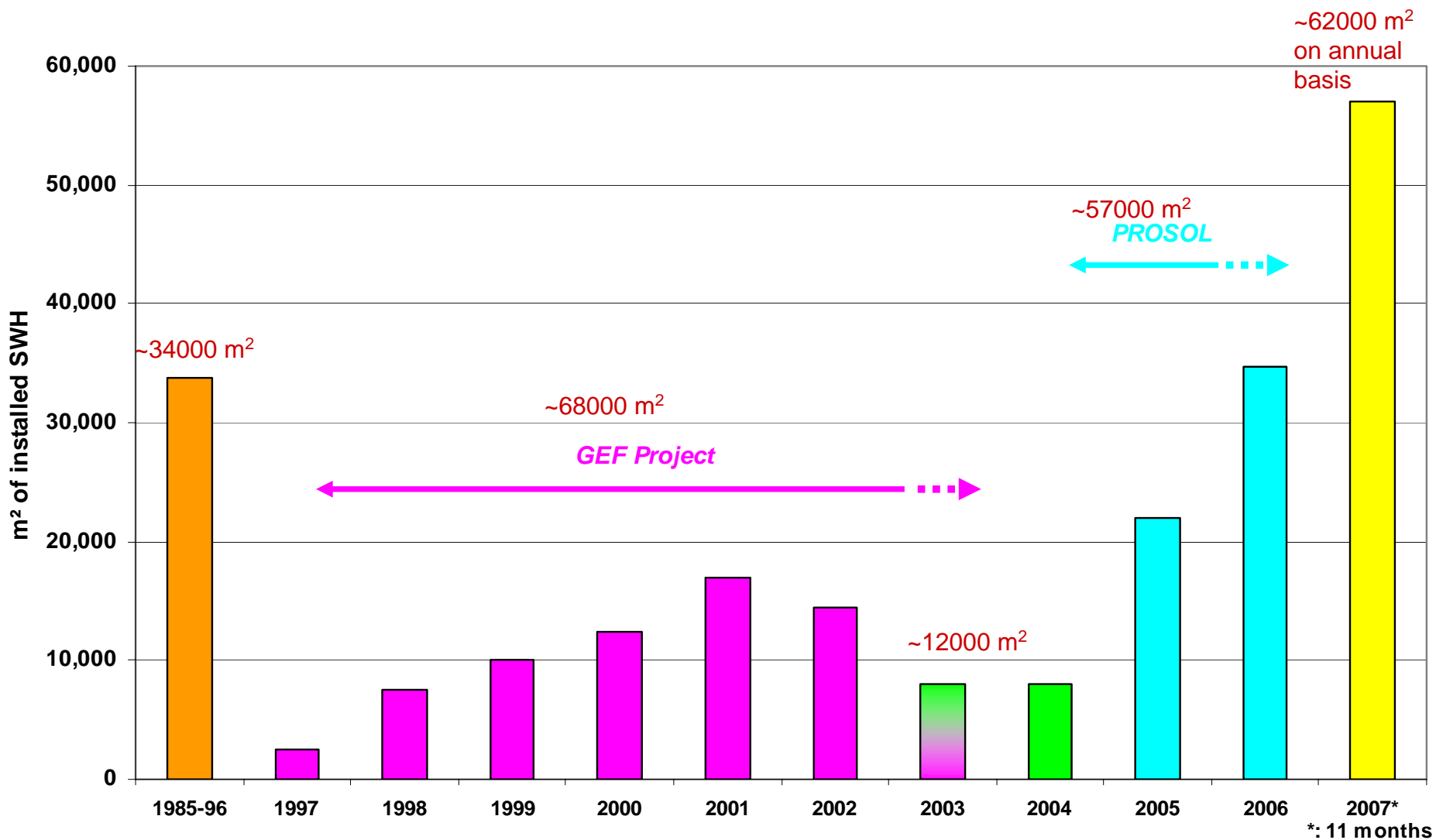
A Quick and Simplified Procedure

- Customer contacts the SWH supplier
- Customer fills out the application form at the SWH supplier office, presents his latest STEG bill and ID
- The installation is immediate once the application form and engagement form are signed

PROSOL results: surface installed



Solar Water Heaters Market Growth in Tunisia
1985-2006 and Jan-Nov 2007



Key success factors in PROSOL



Involvement of the Energy State Utility
STEG offered security to banks

A comprehensive communication and
awareness raising campaign

UNEP-MEDREP interest rate subsidy

- Interest rate down to 0% using
UNEP-MEDREP funds
- Phased out in 2006 with no impact
on sales



The UNEP Sustainable Energy Finance Initiative



Foster a sustainable energy finance community that brings together financiers, engages them to do jointly what they may have been reluctant or unable to do individually, and catalyses public-private alliances that share costs and lower barriers to investment.

Provide Information

Facilitate Networks

Develop Partnerships

Providing information



Example SEFI Tool:

Sustainable Energy Finance Directory listing active lenders and investors in the clean energy sectors.

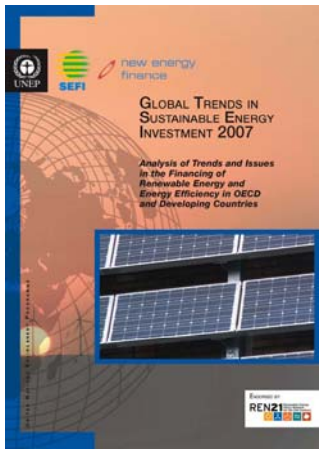
Directory managed through a regional partnership approach
Includes debt capital, private/public equities, funds-of-funds, carbon, etc.

Available on-line at www.sef-directory.net



Example SEFI Study:

Global Trends in Sustainable Energy Investment 2007



- » Analysis of trends and issues in the financing of renewable energy and energy efficiency in OECD and developing countries.
- » Prepared with New Energy Finance, Ltd.