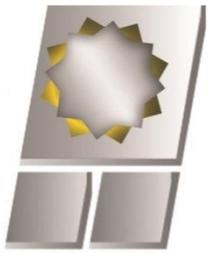


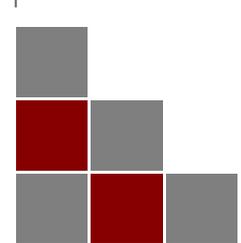
Solar Heaters Arab Mark and Certification Initiative

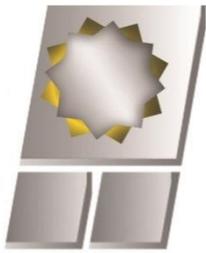
Prepared by:
Ashraf Kraidy, Eng. E, MSc
Program Manager, RCREEE
SHAMCI Network Coordinator

*Solar Thermal in the Mediterranean
Workshop and B2B Meetings
20-21 March, Tirana, Albania*

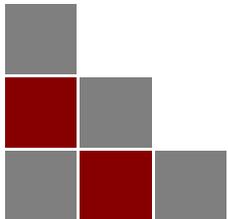


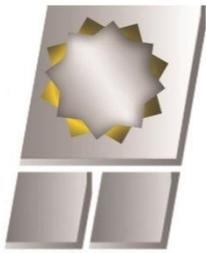
- About RCREEE
- Background
- SWHs Certification Scheme
- SHAMCI Project
- SHAMCI...SolarKeymark..and Global Certification
- Cooperation with UNEP





RCEE Member States





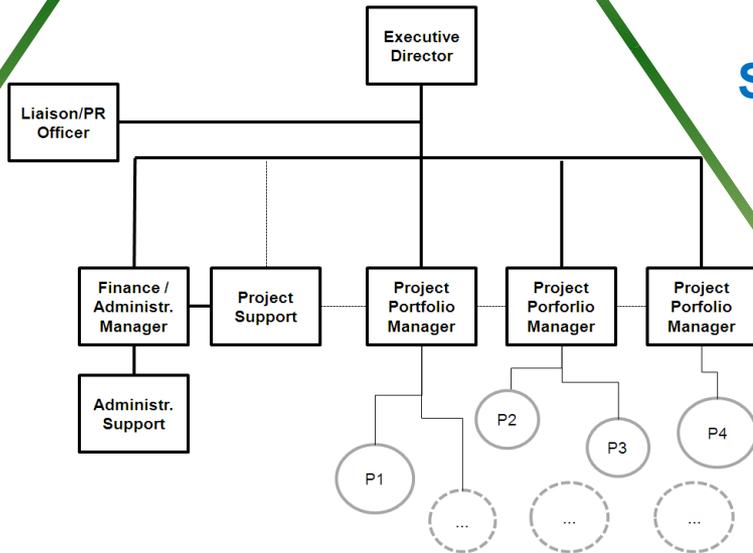
Vision and Mission

Vision

The energy systems in the Arab region are characterized by a significant share of renewable resources and a highly efficient use of energy.

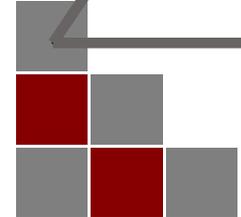
Mission

RCREEE initiates regional policy dialogues and promotes strategies and partnerships favourable to Renewably Energy and Energy Efficiency investments in the member states of the Arab Region.



Strategic Objectives

- ★ **Policy** Enhancement through regional dialogue
- ★ **Facts and Figures** Reliability through consistent methodologies
- ★ **Institutions** Effectiveness through regional cooperation
- ★ **People** Human Capacities through regional learning and innovation
- ★ **Finance** Accessibility to international and regional funds through inter-regional exchange



Solar Thermal in the Mediterranean
Workshop and B2B Meetings
20-21 March, Tirana, Albania



The Solar Heaters Arab Mark and Certification Initiative

WWW.SHAMCI.NET

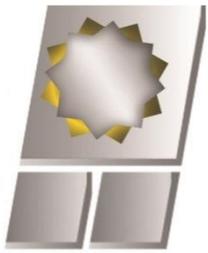


Prepared by:
Ashraf Kraidy, Eng. E, MSc
Program Manager, RCREEE
SHAMCI Network Coordinator



RCREEE
Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة



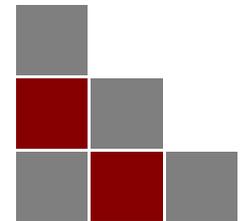


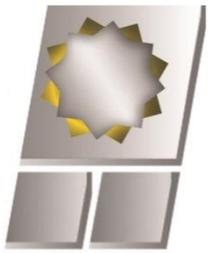
Energy Consumption in the Building Sector

Building in the Arab region consumes 1/3 of the total energy consumption.

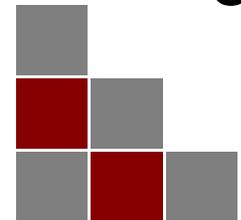
The building consumption developed from 27 mtoe in 2003 to 37 mtoe in 2007

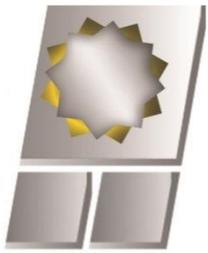
The annual growth rate is 5.4%





- Water heating consumes **4-12%** of the final energy consumption in building in the Arab region
- In Mediterranean Arab countries water heating consumes **8-12 %**
- SWHs can replace electric heaters, NG heaters or diesel heaters.





**Current status of SWHs market evolution
analysis 2009**



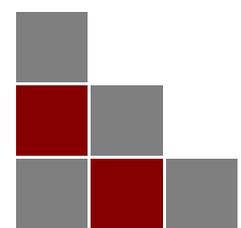
**Need for certification measures in the region
2010**

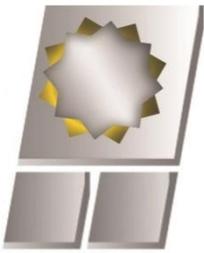


**Study for the analysis of the C&S potentials in
the MS 2011**



**SWHs Certification program (SHAMCI)
2012**

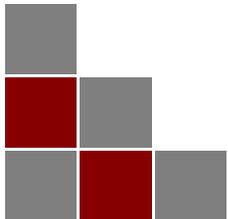


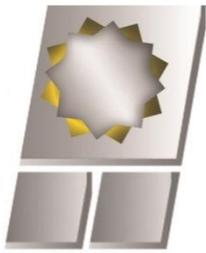


Current Status of SWHs Market Evolution Analysis

Market Indicators

	Egypt	Jordan	Lebanon	Palestinian Territories	Syria	Algeria	Libya	Yemen	Morocco	Tunisia
Availability of SWH systems in the market	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Affordability (consumer purchasing power)	N	N	N	N	N	N	N	N	N	N
Competitiveness in prices	N	N	Y	Y	Y	N	N	N	N	N
Incentives for consumers	N	N	Y	N	N	N	N	N	Y	Y
Incentives for suppliers	N	N	Y	N	N	N	N	N	N	Y



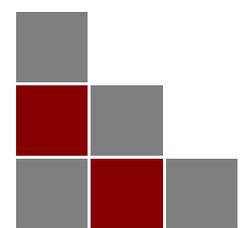


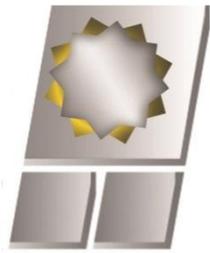
Policy Indicators

	Egypt	Jordan	Lebanon	Palestinian Territories	Syria	Algeria	Libya	Yemen	Morocco	Tunisia
Standardization	✓	✓	✓	✓	✓	✓	x	x	✓	✓
Testing	✓	✓	✓	✓	✓	x	✓	x	✓	✓
Certification	x	x	✓	x	x	x	x	x	x	✓
Quality control regulations and rules	x	x	✓	x	x	x	x	x	✓	✓
R&D Programs/Fund	x	x	x	x	x	x	x	x	x	x
Policies and Regulation	x	✓	x	x	x	✓	x	x	✓	✓
Governmental initiatives	✓	✓	✓	x	✓	x	x	x	✓	✓
Trade movements & export regulations	x	✓	x	x	x	x	x	x	x	✓
Taxes	x	x	x	x	x	x	x	x	x	✓
Law enforcement (to install SWH)	x	x	x	x	x	x	x	x	x	✓

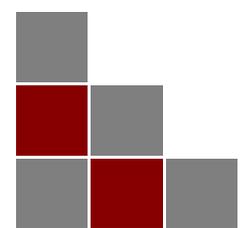
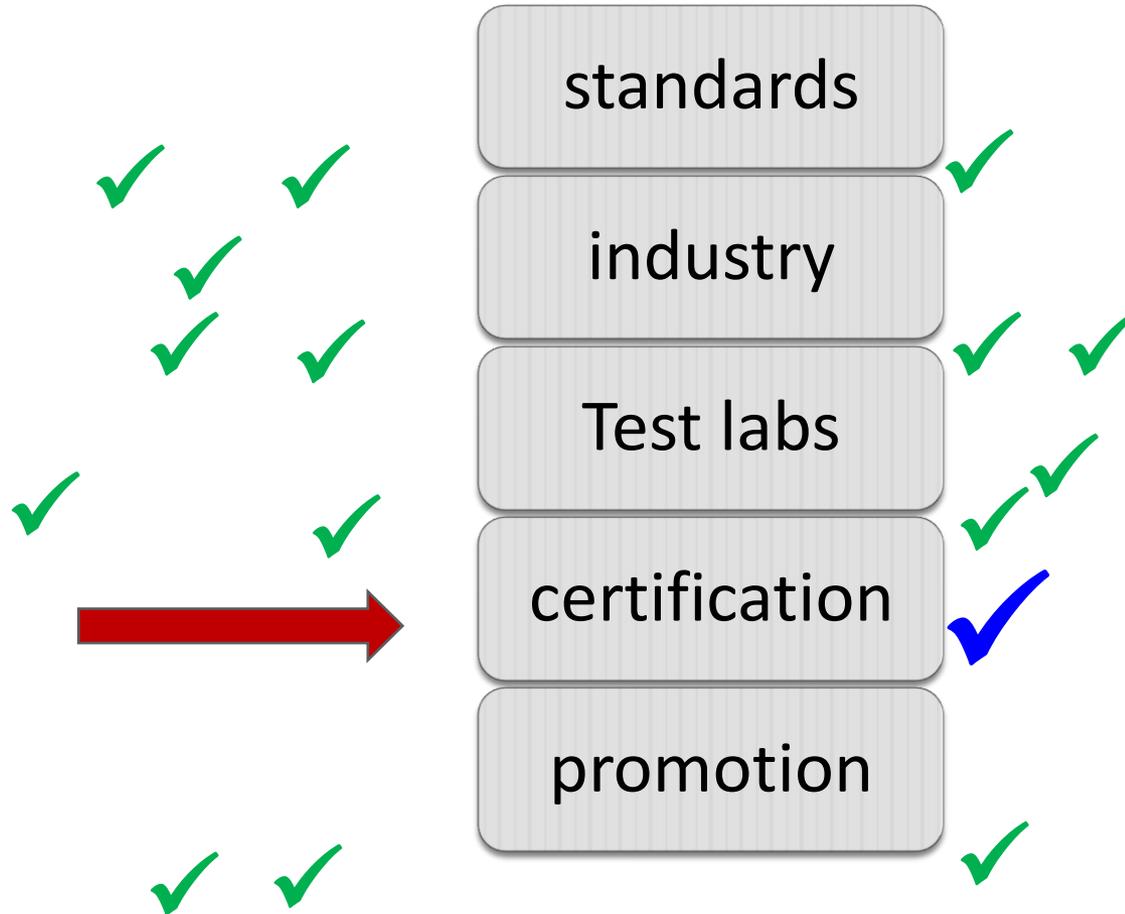
x: missing/problematic

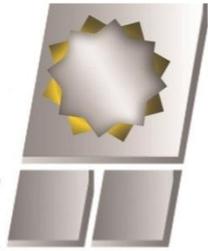
✓: existing/non-problematic



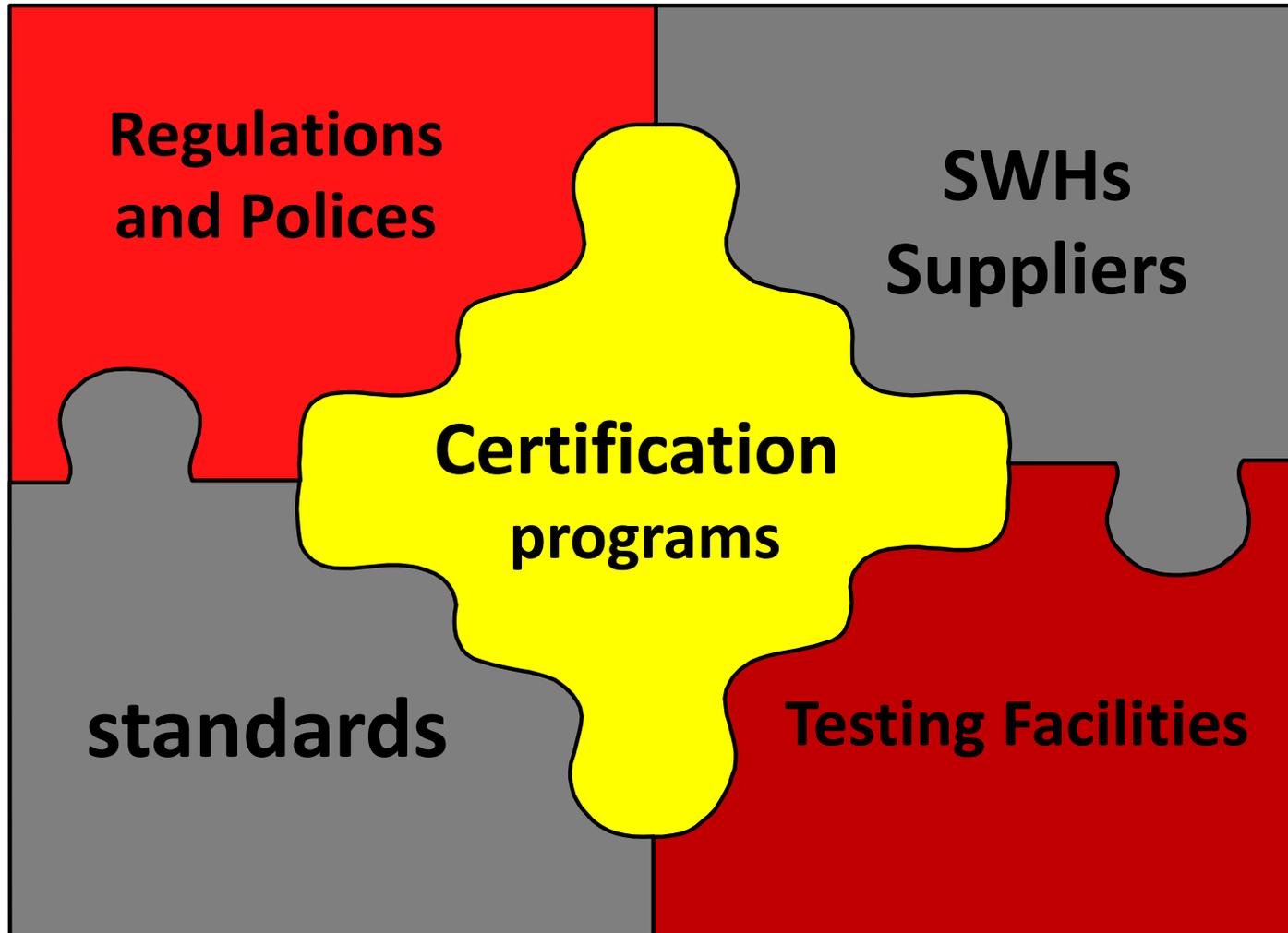


Key Elements required for the development of a sustainable solar thermal market





How a certification program coordinate the Key Elements for sustainable solar thermal market



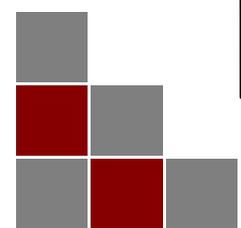
**Regulations
and Polices**

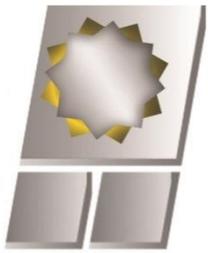
**SWHs
Suppliers**

**Certification
programs**

standards

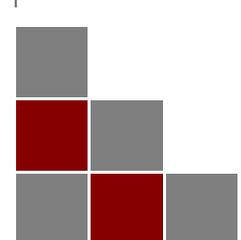
Testing Facilities

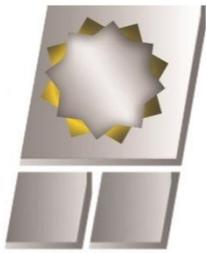




The certification is a process to engage the market of SWHs to a quality system that is regularly bringing changes in the:

- Institutional framework,
- Regulatory framework
- Procedures
- Standards





Characteristics to be considered

The characteristics of the products can be grouped in characteristics related to:

Safety

- Fire
- Structural load
- Maximum pressure
- Toxicity
- Surface temperature

Performance

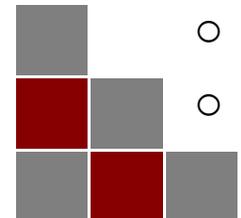
- Efficiency
- Power capacity
- Energy production (energy use)
- Heat capacity
- Pressure loss

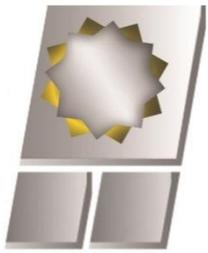
Durability

- High temperature resistance
- Rain tightness
- Impact resistance
- UV-degradation
- Other degradations / corrosion

Physical characteristics

- Dimensions
- Weight
- Volume content





Ensure the quality of:

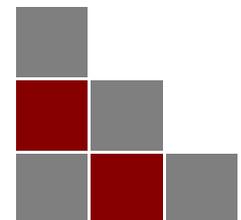
- **Products and Equipment**
- **The qualification of installers**

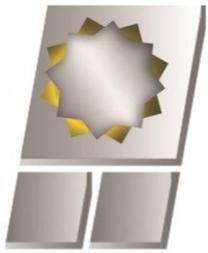


**Certified
products**



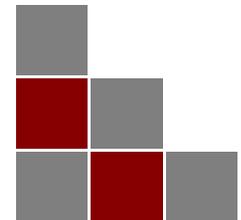
**Certified
Installer**

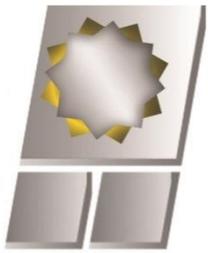




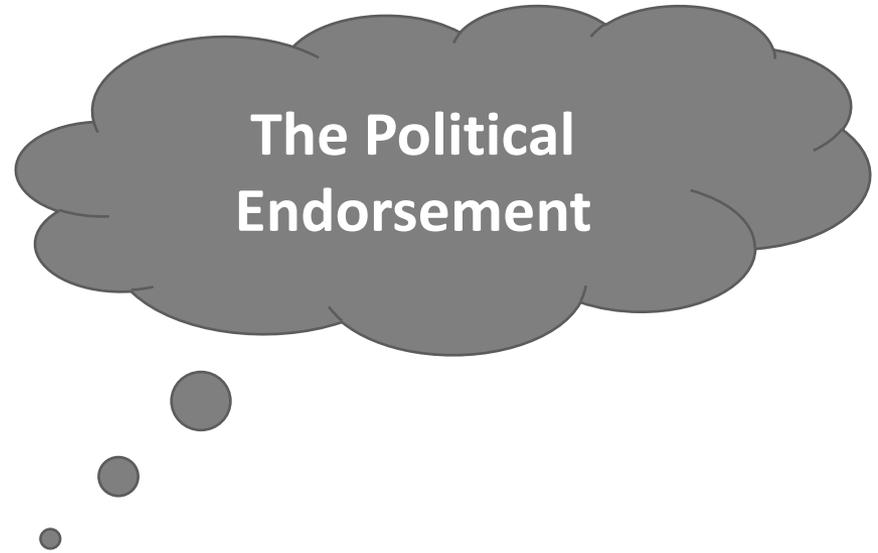
What we NEED in our countries.....

- 1. Bigger and Sustainable Market***
- 2. Suitable Products***
- 3. Enhanced User Confidence***
- 4. Increased sales***
- 5. More Rational Production***
- 6. Lower prices***

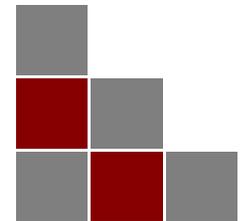




How to start.....????



**The Political
Endorsement**



New Strategy for Solar Thermal Promotion in the Arab Region

The Executive office of the electricity Arab ministerial council raised a request to RCREEE and AIDMO (Arabian Industrial Development and Mining Organization) to coordinate with the council secretariat to work on standardization and certification program for SWHs aiming to achieve a quality certificate for the Arab region.



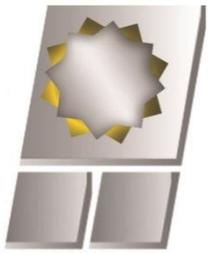
RCREEE

Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة



المشروع العربي لشهادات الأنظمة الشمسية الحرارية
SOLAR HEATERS ARAB MARK AND CERTIFICATION INITIATIVE



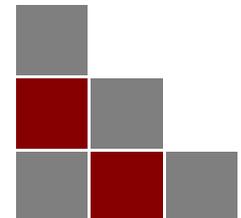


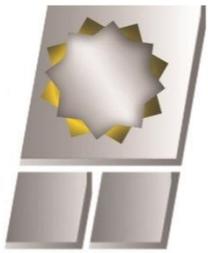
SHAMCI is regional certification model (such as solar keymark, SRCC..etc) supported by a national certification model (such as DIN, CSTBat...etc) and for SWHs in the Arab region.

This certification model should enable the states to establish their national certification structure according to regional scheme.

It is the second regional certification scheme for SWHs in the World based on Solar Keymark but..

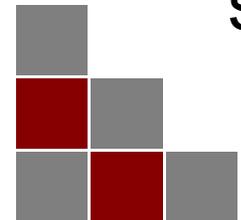
taking into consideration
the conditions of developing countries

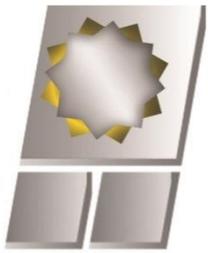




Mission of the SHAMCI Network

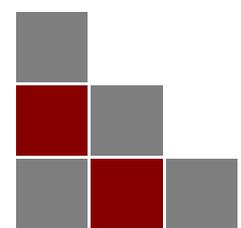
The mission of the SHAMCI Network is to support solar energy markets by establishing and maintaining a certification programme that ensures a specific quality for solar thermal products and services in the Arab region.



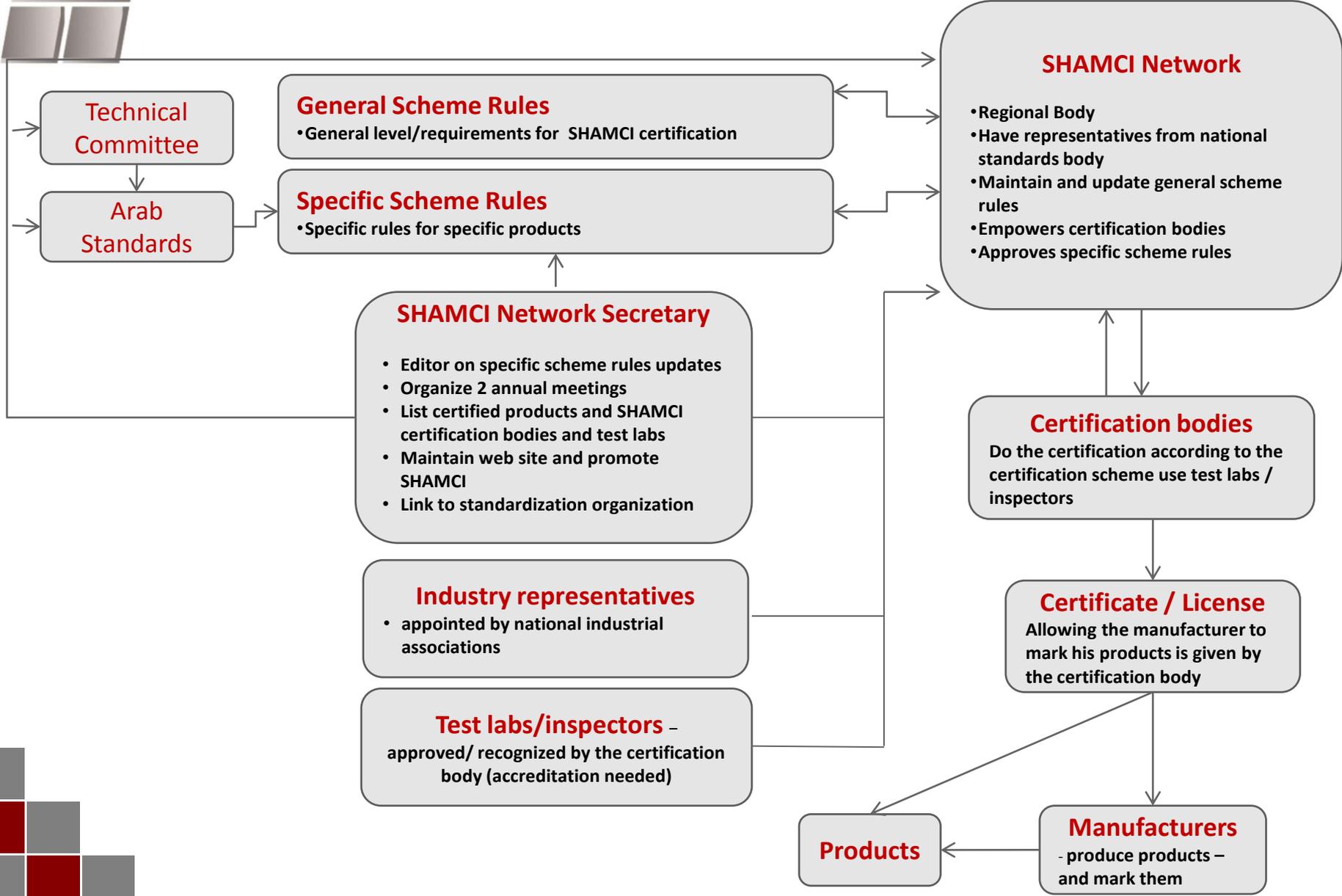
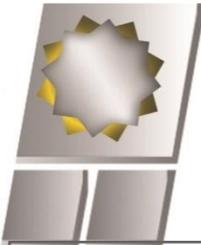


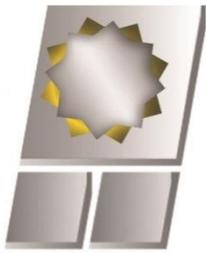
34 registered members.... Out of 17 countries

- 18 official representatives
- 6 private sector and consultants
- 11 regional organizations



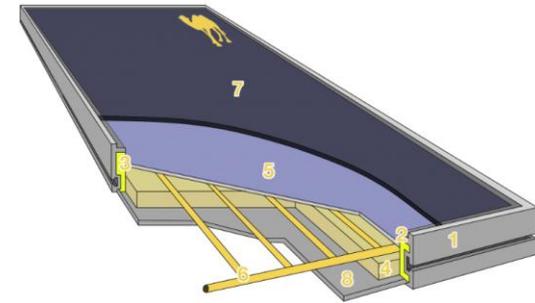
SHAMCI Project Implementation



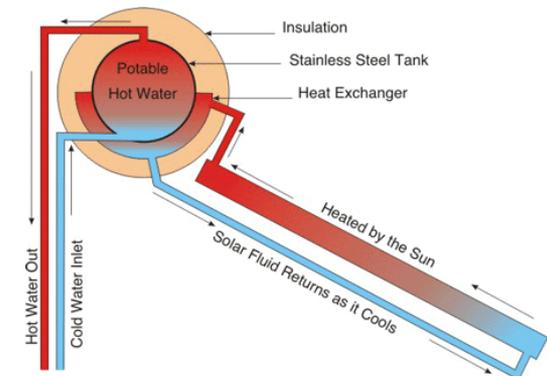
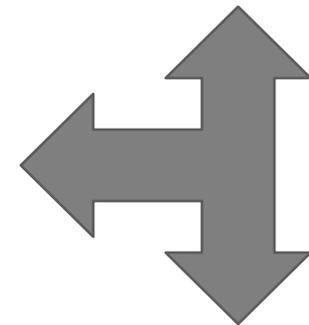


SHAMCI Certification Scheme Rules

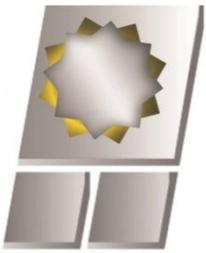
- DEFINITION OF SCOPE
- Products covered by the scheme
- List of standards concerned
- ATTESTATION OF CONFORMITY
- REQUIREMENTS FOR INVOLVED BODIES
- REQUIREMENTS FOR PRODUCTS
- SELECTION OF TYPE TEST SAMPLES
- FACTORY PRODUCTION CONTROL AND INITIAL INSPECTION OF MANUFACTURING SITE
- SURVEILLANCE
- COLLECTOR FAMILIES
- CHANGES IN PRODUCTS – RE-TESTING
- COMPLAINTS
- OWNER OF THE SHAMCI MARK



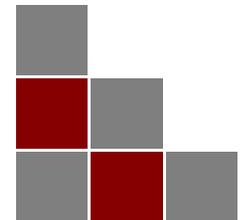
1 | Aluminum Frame 2 | Silicone Seal 3 | Thermal Sidewall Insulation 4 | Back Thermal Insulation 5 | Copper Tubes 7 | Glass 8 | Aluminum Back

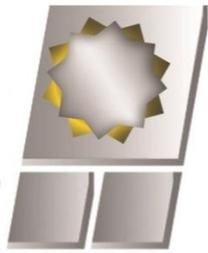


Recent Developments at the political level

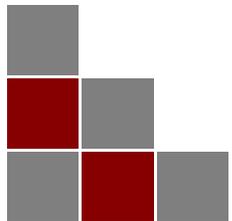
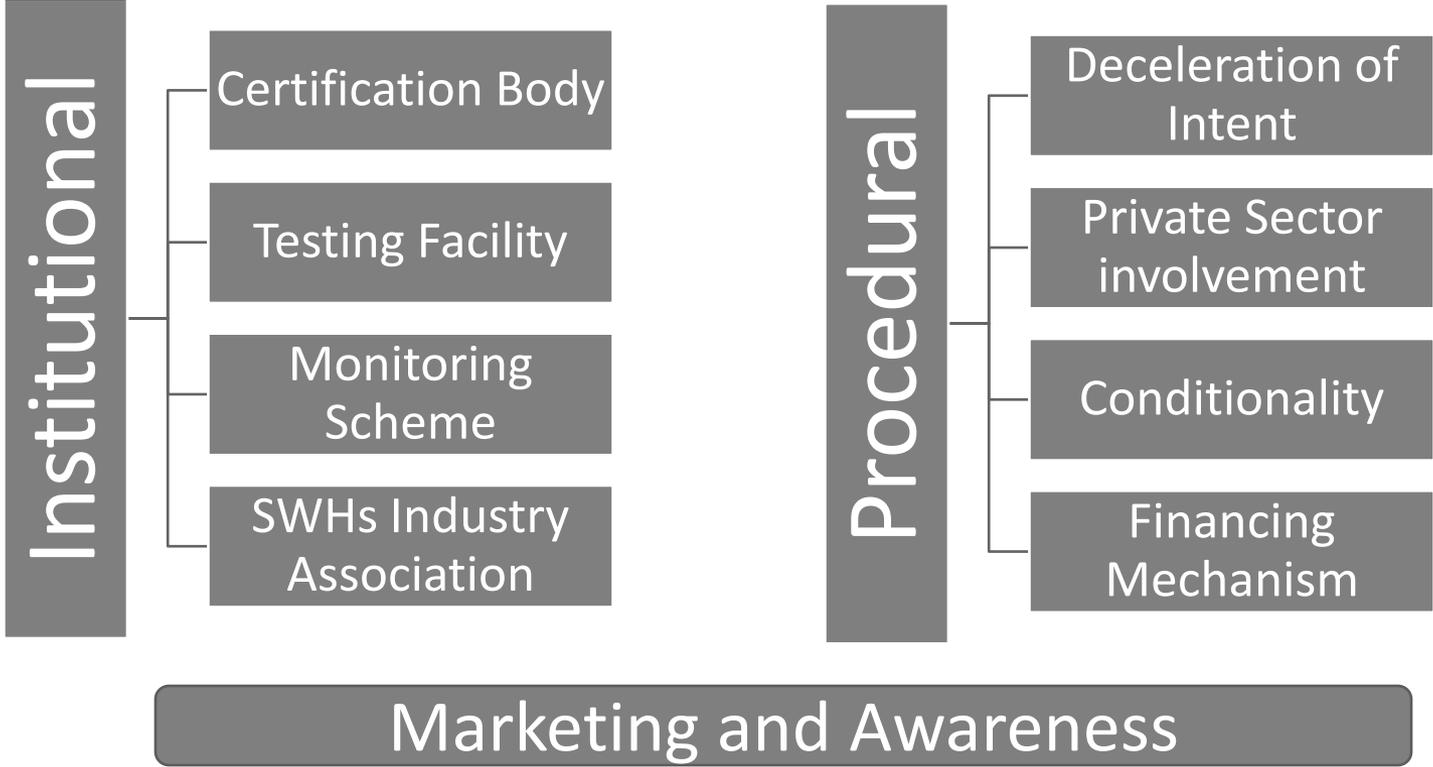


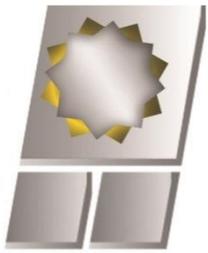
- AMCE Blessed the network establishment under its umbrella
- The certification rules submitted to the RE&EE experts committee
- Official request from





National Case Study





Regional Future Activities

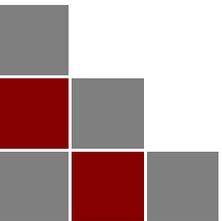
Regional Requirements

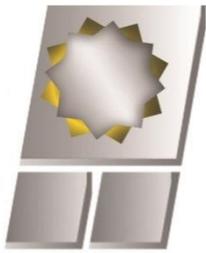
Empowered Regional Certification Body

Reference Standards

Testing Scheme

Industry Federation



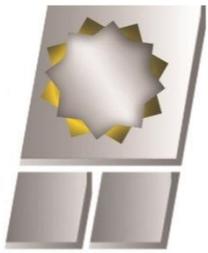


Overview about SHAMCI and Solarkeymark

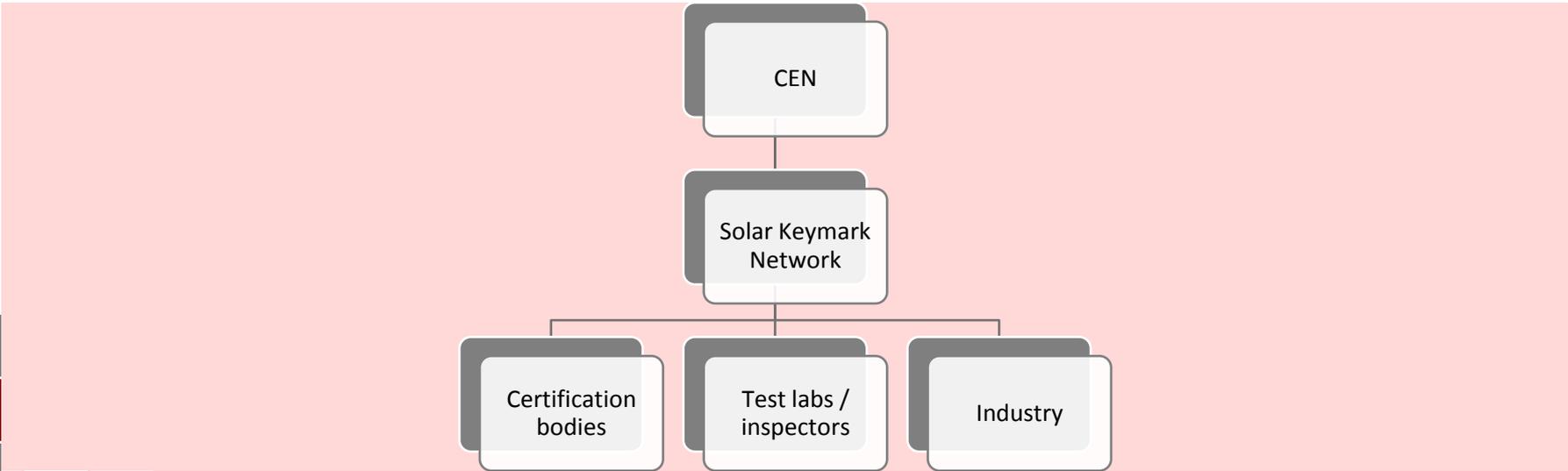
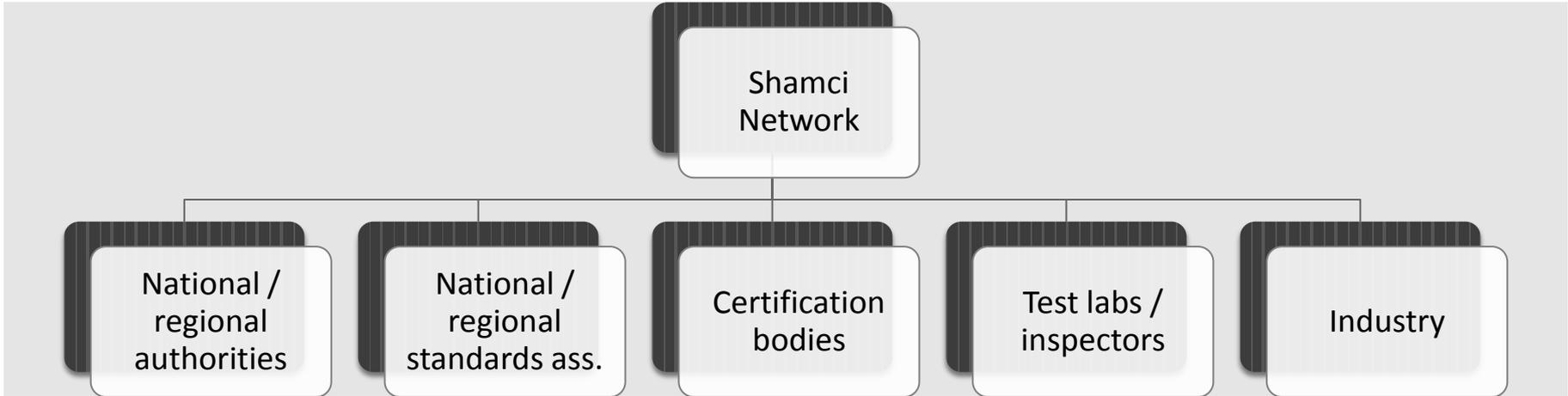
Scope	OK for Collectors and Solar Water Heaters
Standards	OK for Collectors and Solar Water Heaters
Product requirements	OK* for Collectors and Solar Water Heaters
Requirements for involved bodies ..	Close to be ** OK for certification bodies OK for test labs from 2017 Close to be ** OK for inspection bodies
Attestation of conformity	OK
Product families	OK for collectors

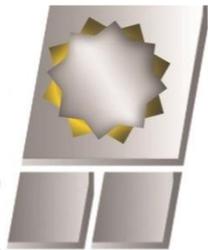
SHAMCI and Keymark are very close for solar collectors and solar water heaters. Other certification schemes are close too e.g. SRCC (US)





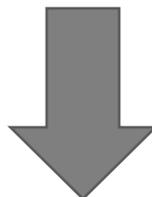
Overview about SHAMCI and Solarkeymark



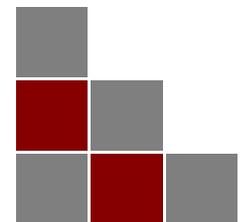


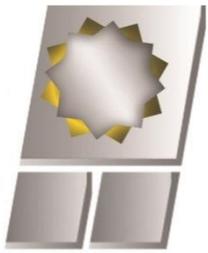
Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

Small Scale Funding Agreement

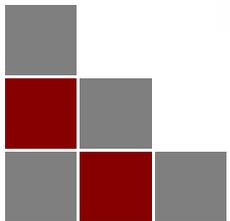


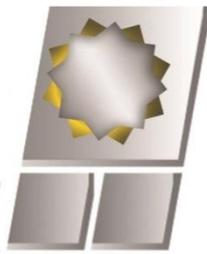
Project Identification Form



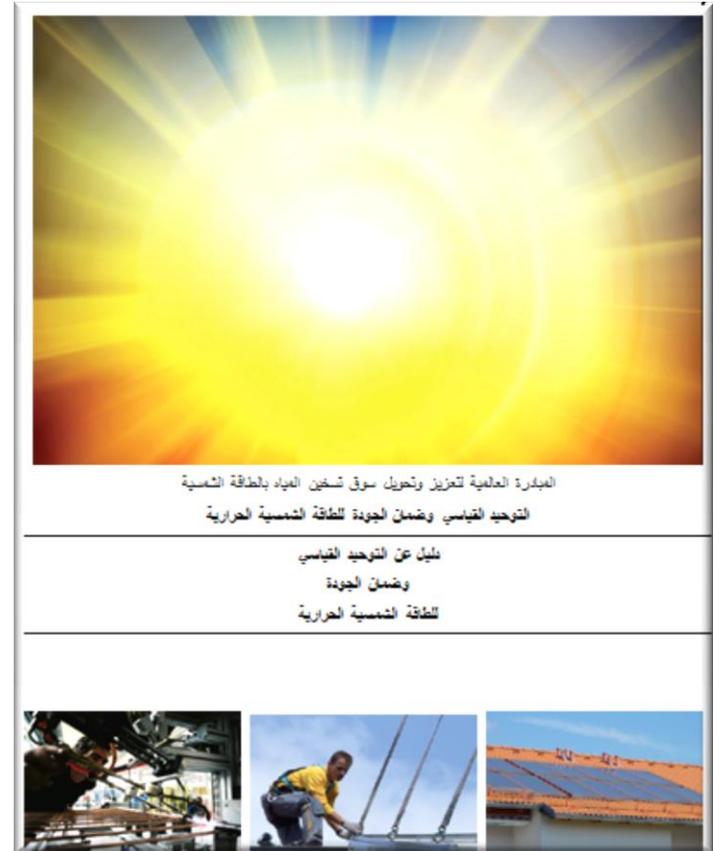
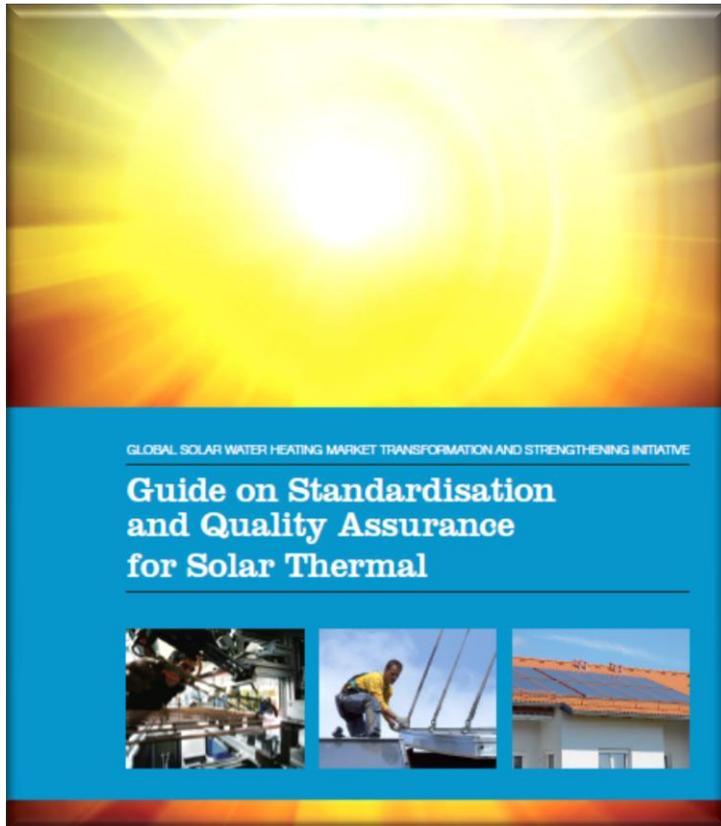


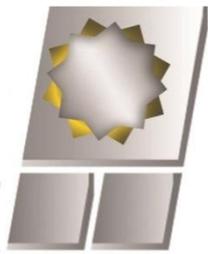
Certification and Fund Raising





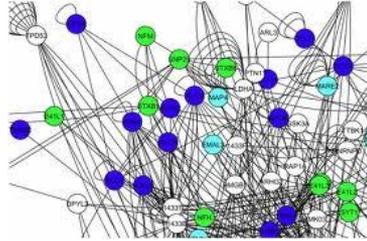
Cooperation with UNEP





المشروع العربي لشهادات الأنظمة الشمسية الحرارية
SOLAR HEATERS ARAB MARK AND CERTIFICATION INITIATIVE

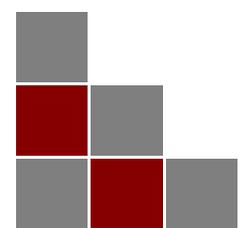
.....Market

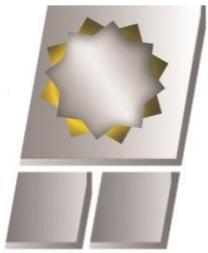


.....Industry



.....Customers





Thank you

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