

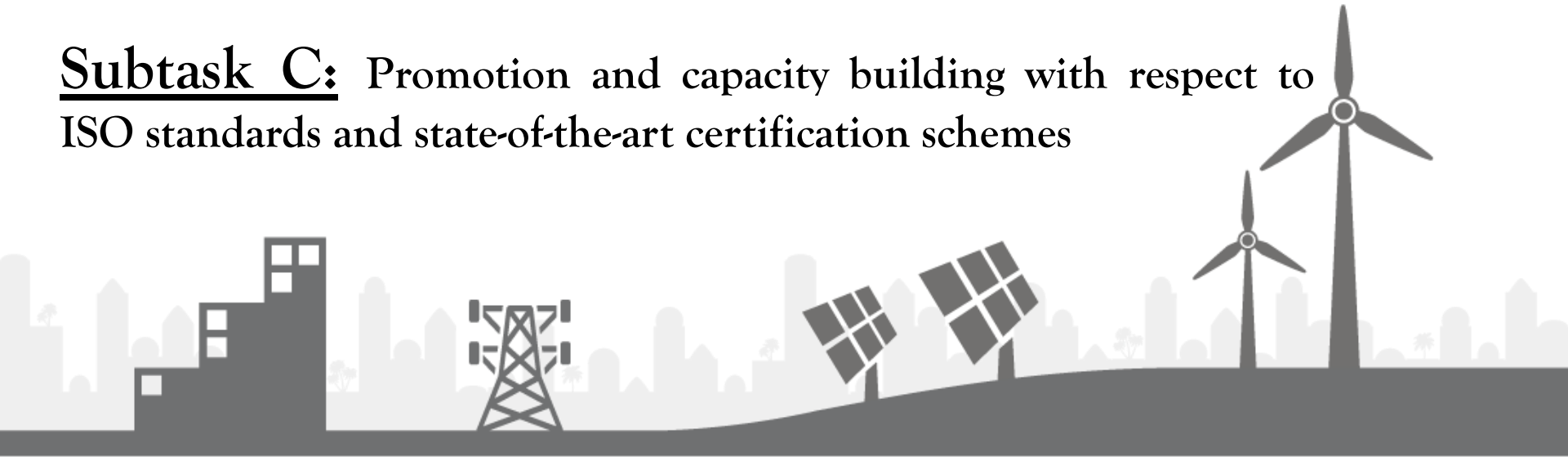
SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY



IEA SHC Task 57

Solar Standards and Certification

Subtask C: Promotion and capacity building with respect to ISO standards and state-of-the-art certification schemes



Khalid Salmi – SHAMCI Network Secretariat (RCREEE)

Standardization and Certification programs coordinator

On behalf of: Ashraf Kraidy, IEA SHC Task 57 - Subtask C leader

RCREEE

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

OBJECTIVES (1/2)

Objective 1

- ISO standards for solar thermal products are becoming **increasing popular throughout the globe**
- Convince stakeholders in such countries that the ISO standards are very **well proven** and **useful** – and give guidance for implementation.

Activities

- **Guidelines** how to understand & use ISO 9806
- Participation in national and international conferences promoting ISO 9806 standards

Deliverable

- **Guidelines on implementing solar certification schemes**
- Papers/presentations at **national** and **international events**
- **Questionnaire** with indication of interest in use of international standards.

Promotion: New emerging markets towards solar technology

GLOBAL SOLAR WATER HEATING MARKET TRANSFORMATION AND STRENGTHENING INITIATIVE

Guide on Standardisation and Quality Assurance for Solar Thermal

SHC

SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY

Task 57 Solar standards and certification
Version 1.1

Guideline for Implementing Certification Schemes for Solar Heating and Cooling Products

CERTIFIED

Jan Erik Nielsen
SolarKey int.
November 2018

UNEP

SHAMCI

Readiness criteria for SHAMCI

Certification bodies - Test labs - Inspectors

Annex 1 of SHAMCI certification scheme rules

UNEP ENVIRONMENTAL PROGRAMME

UNDP

RCREEE

Cu

gef

MENA: First Online Training Program on Solar Water Heaters Certification

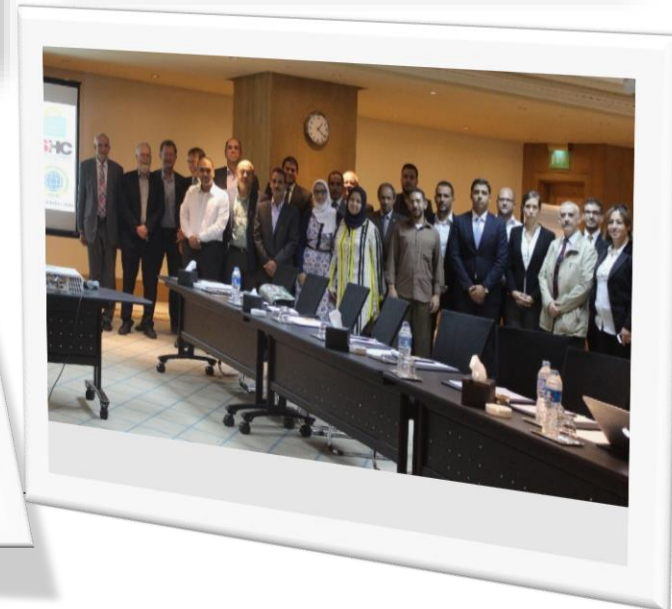
Submitted by **Baerbel Epp** on June 21, 2015

Online Training

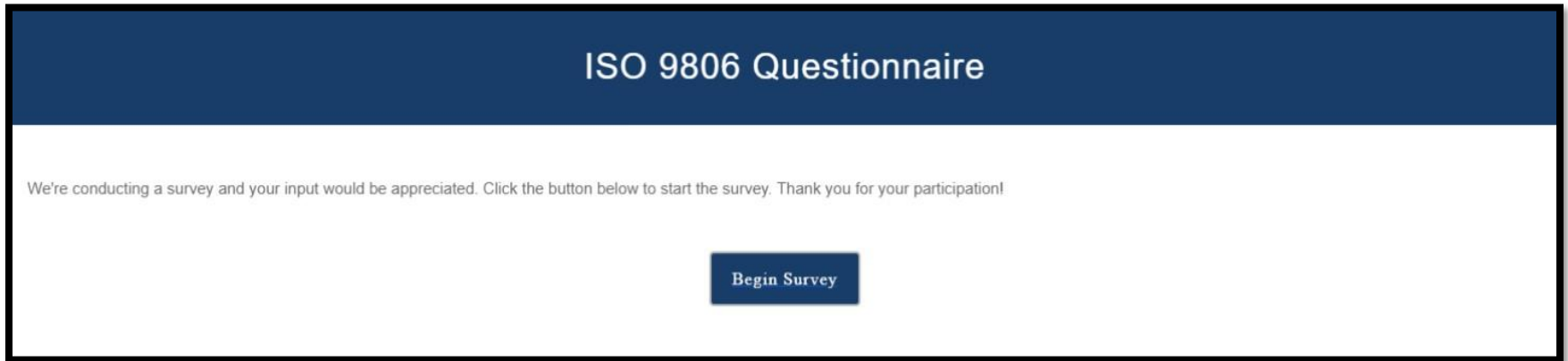
In March, the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) launched an online training program on the Solar Water Heaters (SWHs) Quality Assurance and Certification Scheme in the Arab region. The training course aims to provide participants with sufficient knowledge on SWH quality and certification schemes, such as the Solar Heating Arab Mark and Certification Initiative (SHAMCI). Participants can register for the training course online. According to the RCREEE, it is the first online training in the Middle East and North Africa region. The implementation of the course was supported by the United Nations Environment Programme (UNEP).
Source: SHAMCI.net

Solar thermal certification schemes have proved to remove trade barriers and promote industrial quality standards in order to offer reliable and long-lasting products to end consumers. To support the implementation of the SHAMCI scheme, the RCREEE launched an online training program on standards and certification processes of solar water heaters for the MENA region.

Seven modules about all key aspects of installation and certification
From 1 March 2015 on, the SHAMCI course has been offered as a self-paced online course for a three-week learning experience. Subjects have been structured in seven modules covering the main aspects on solar thermal installation and certification. At the end of each module, participants will receive a set of 15 to 20 questions to test their knowledge. Completion of all modules will automatically generate a certificate. The online training course initiative was developed in joint collaboration with the League of Arab States, the United Nations Environment Programme and the RCREEE. To date, no information has been released by SHAMCI on the number of course participants. The course is currently offered in English. Development of the course content to Arabic can be considered as a future improvement, informed the SHAMCI network.



Survey on International adoption of ISO 9806:2017



- **ISO 9806:2017** “Solar energy – Solar thermal collectors test methods” → Revision of 2013 version as a result of a collaboration between **ISO TC/180** and **CEN/TC 312**
- In 2018, a **worldwide survey** was undertaken to see if the countries were:
 - ✓ satisfied with the revised standard
 - ✓ planned to adopt it nationally
 - ✓ had any suggestions for improvement

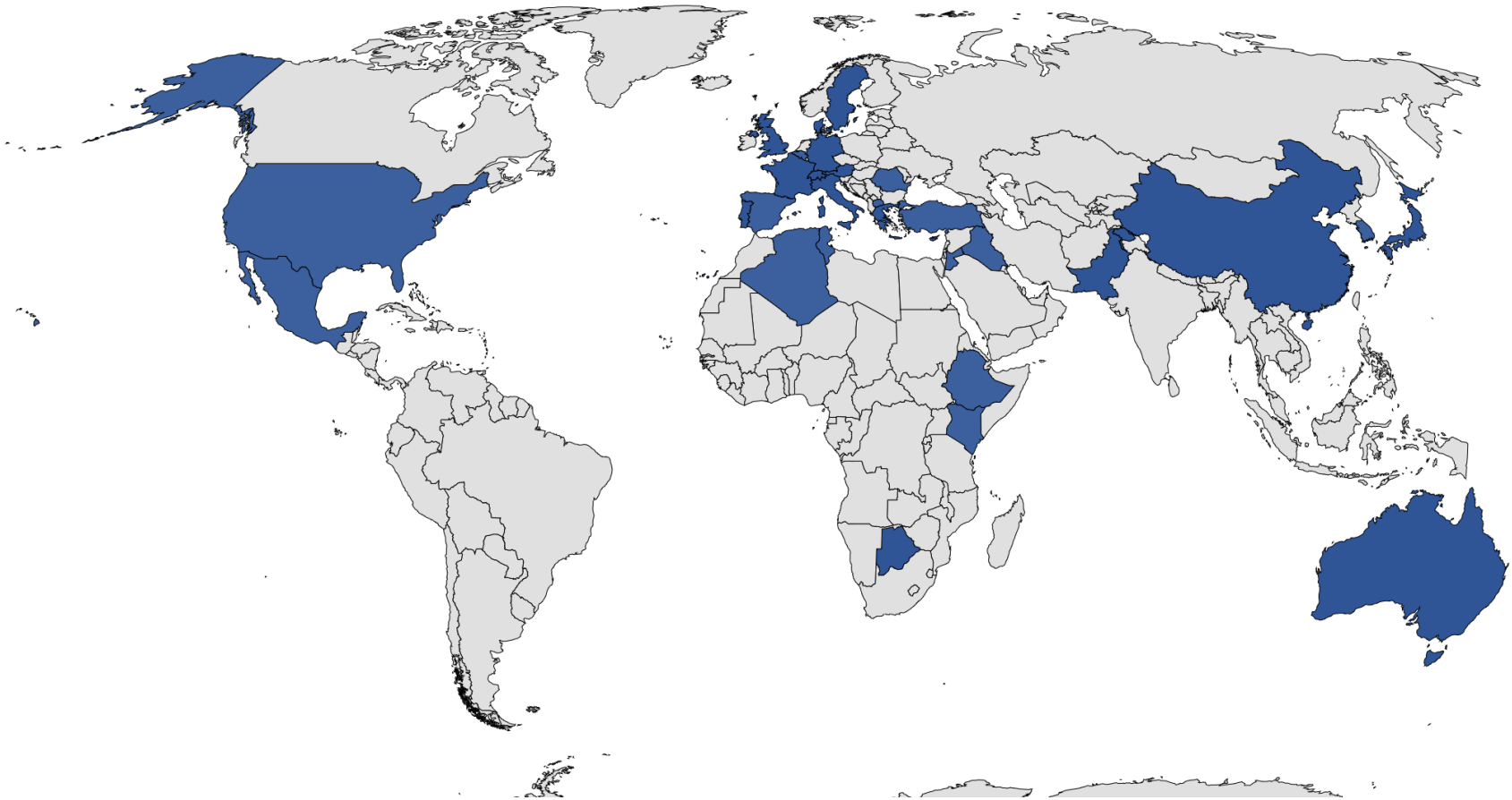
Survey on International adoption of ISO 9806:2017

Questions:

1. *Are you able to comment on behalf of your country about the possible adoption of ISO 9806-2017 Solar thermal collectors test methods?*
2. *Does your country have a Mirror Committee for ISO Standards Committee TC180 and/or a National Standards committee that provides Solar Heating testing Standards?*
3. *Are you a member of that committee?*
4. *Does your country currently have any National standard for a solar heating collector test methodology?*
5. *Does it incorporate the same methods as international standards such as EN 12975 or ISO 9806?*
6. *Does your country currently recognise other solar heating collector test methodologies such as EN 12975 or ISO 9806?*
7. *How likely is it that your country will take up ISO 9806:2017 as a National Standard or recognise it for purposes such as Regulations and/or Certification?*
8. *What changes would need to be made in order for your country to adopt ISO 9806-2017 as its standard solar heating collector test methodology?*
9. *Do you have additional national requirements for testing due to national regulation, insurance, financing, etc.?*
10. *Can you provide details of the additional national requirements?*
11. *Have you provided feedback on a previous survey on ISO 9806-2017?*
12. *Has the revision addressed all of your previous concerns?*
13. *Are there any changes to ISO 9806 that you consider would improve that Standard?*
14. *What changes to ISO 9806 that you consider would improve that Standard?*
15. *Does your Country have a certification system for solar collectors?*
16. *How is the certification scheme used?*
17. *Please provide a contact or a website for further information on the certification system*
18. *Please add any other comments*
19. *Please provide contact information of relevant person in your country who can comment on possible adoption of ISO 9806-2017 Solar thermal collectors test methods below*

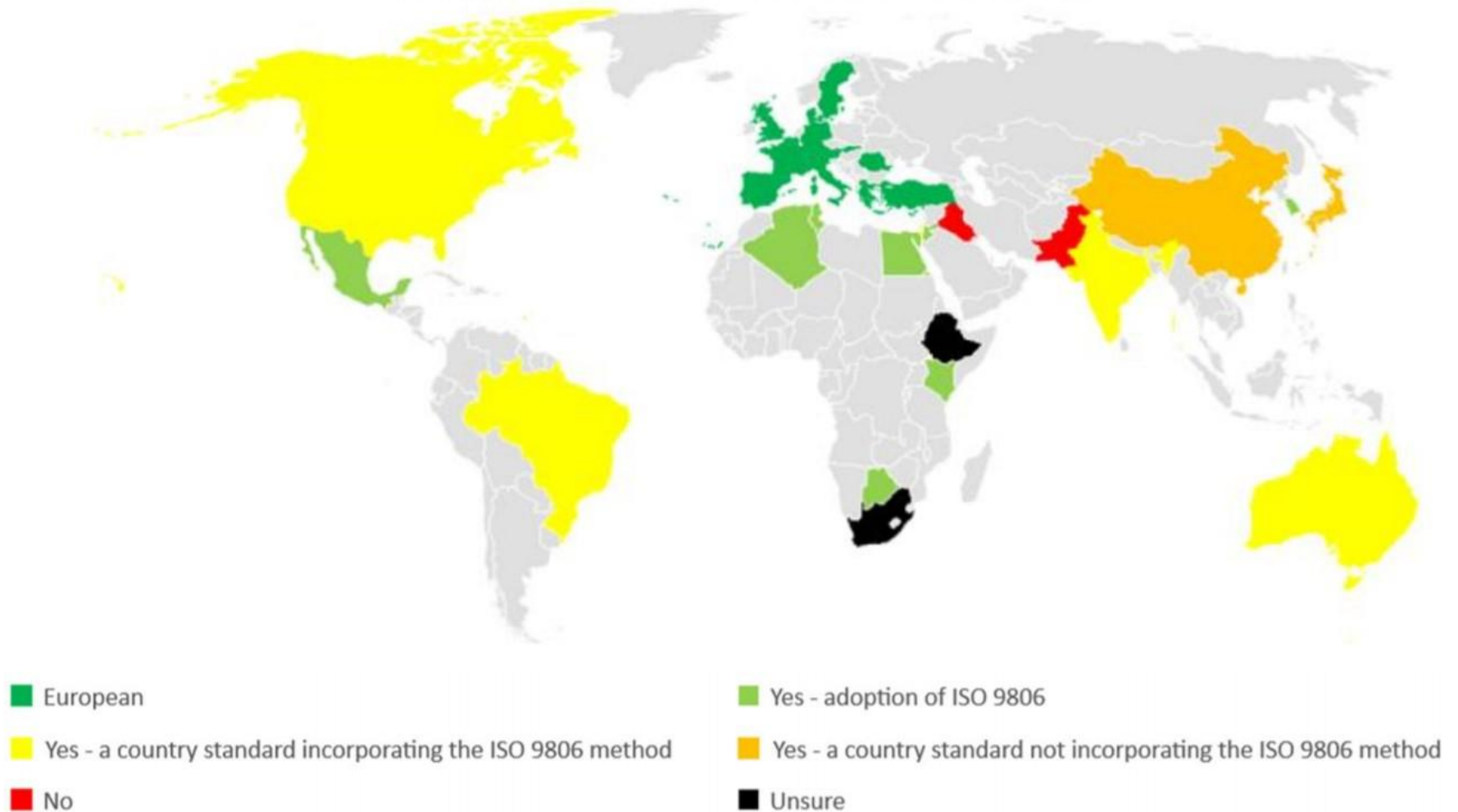
Survey on International adoption of ISO 9806:2017

Responses: 73 responses from 33 countries



Initial Analysis of the Survey

standards for solar testing methodologies Categorization



OBJECTIVES (2/2)

Objective 2

- Developing **two levels of certification** that fits the developed and the developing countries.

Activities

- Elaborate at least 2 model certification schemes:
1.level required for participation in the **GSCN**
2.lower level of requirements for countries without a very sophisticated quality infrastructure

Deliverable

- Model certification schemes
“High level” & “Medium level”

Introduction of 2 levels of Solar Certification

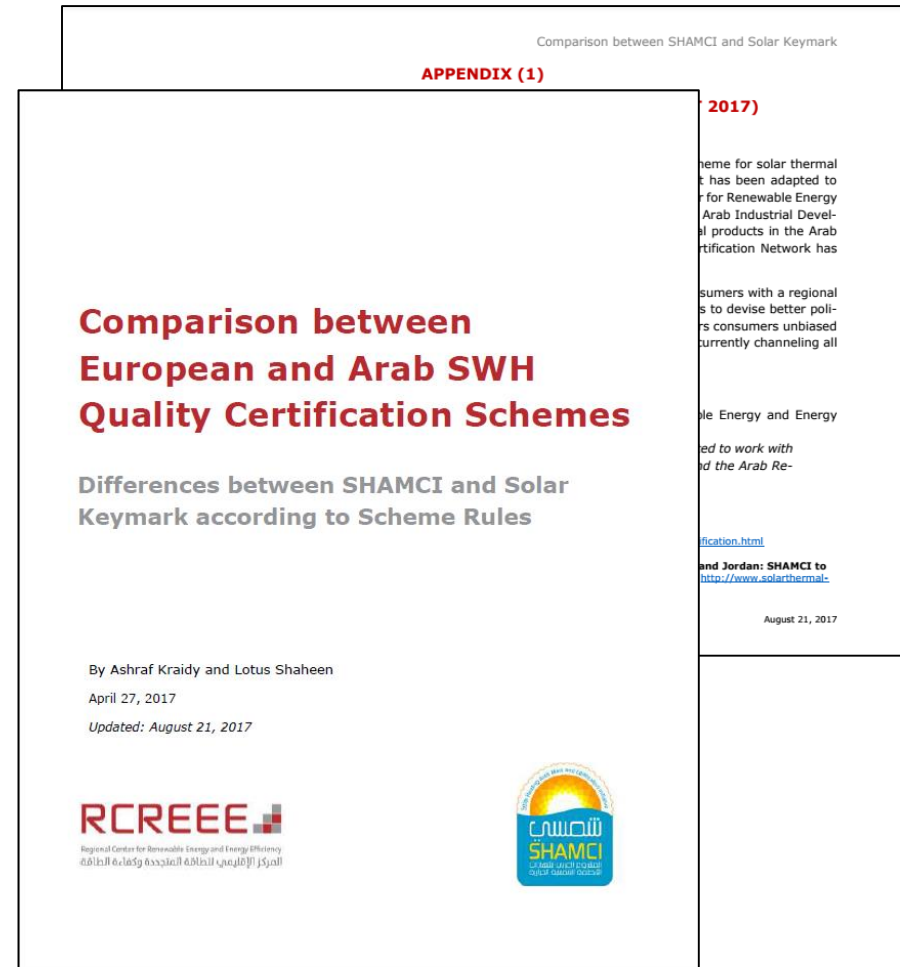
March 2017, 22nd SKN meeting – Freiburg, Germany

*“The SKN highly appreciates the activities performed by SHAMCI [...]. Furthermore, the SKN would be in favor of a **harmonization of the testing, inspection and certification procedures** of SHAMCI and Solar Keymark under the umbrella provided by the GSCN. A working group composed of members of SHAMCI and SKN will study the impact of a collaboration between both parties [...]. If these conclusions are positive, it may be possible to enter a project related to the elaboration of the cooperation between SKN and SCHAMCI **as a priority issue in the 9th SCF call**, as well as it will be eligible for similar projects to submit future proposals according to specific criteria proposed by the SCF Steering Group and the SKN”*

Comparison of SHAMCI and Solar Keymark

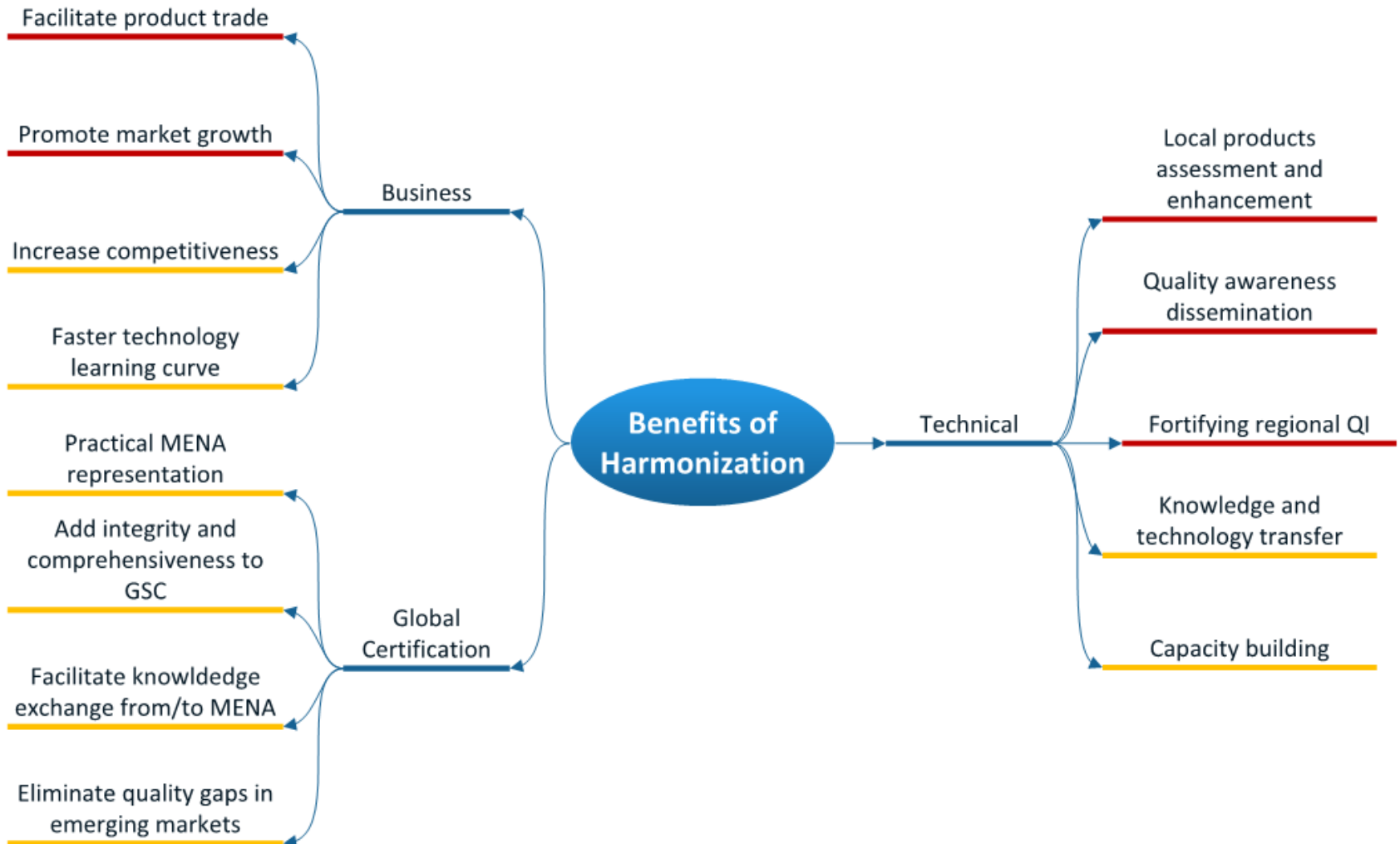
Objectives:

1. Presenting possible benefits from the harmonization of SHAMCI and Solar Keymark
2. Comparing differences between SHAMCI and Solar Keymark (referred to scheme rules)
3. Discussing main differences



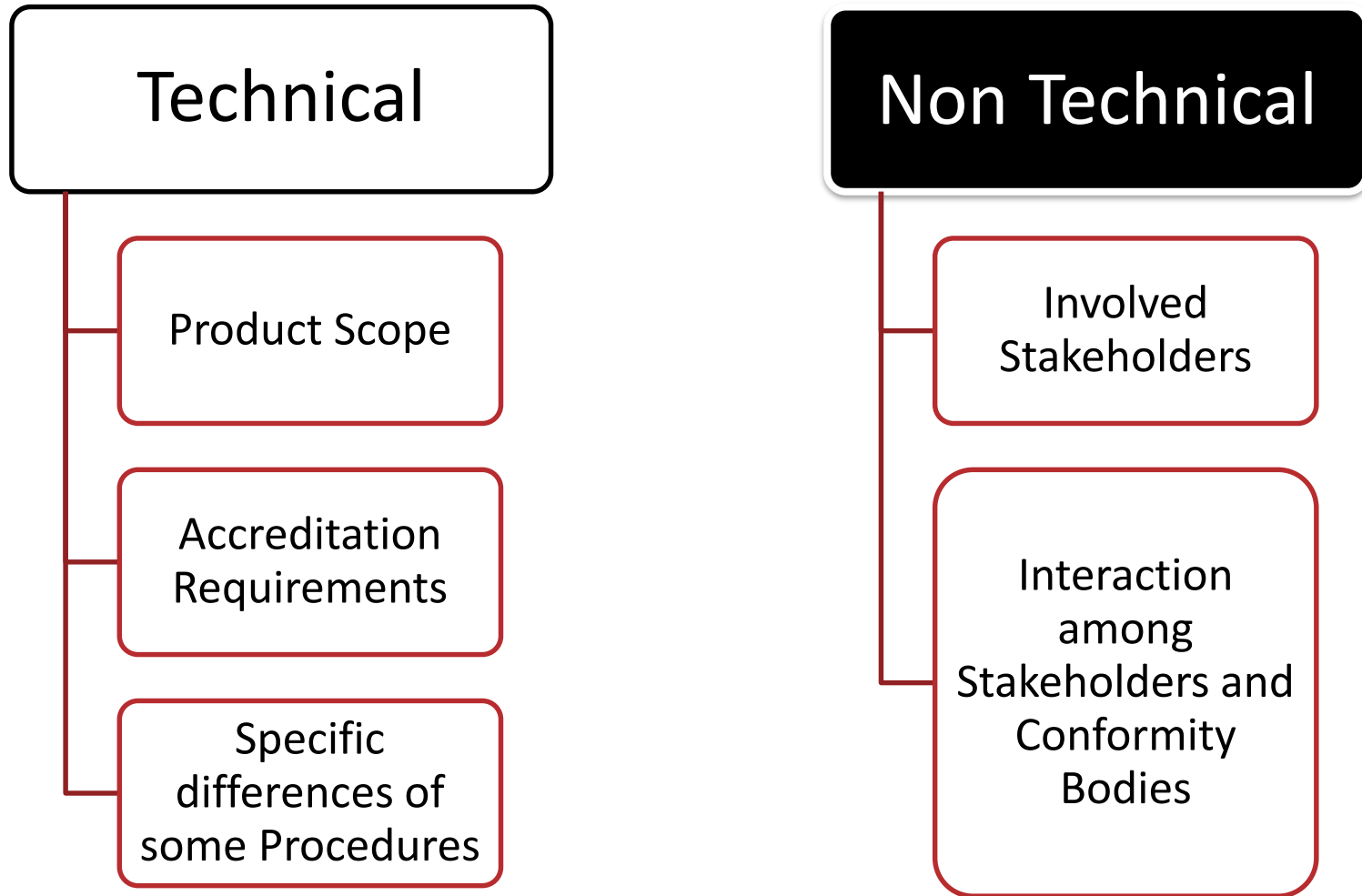
Comparison of SHAMCI and Solar Keymark

Expected Benefits from the Harmonization



Comparison of SHAMCI and Solar Keymark

Main Differences between SHAMCI and Solar Keymark



Comparison of SHAMCI and Solar Keymark

Highlights on Main Differences

(I) Product Scope

SHAMCI

Currently:

- Solar Collectors (as defined in ISO 9806)
- SWH Systems (as defined in ISO 9459-2 and -5)

Solar Keymark

- Solar Collectors (ISO 9806)
- Factory-made Systems (EN 12796)
- Custom-built Systems (EN 12977-1 and -2)
- SWH Stores (EN 12977-3)
- Solar Combistores (EN 12977-4)
- Control Equipment (EN 12977-5)

Comparison of SHAMCI and Solar Keymark

Highlights on Main Differences

(II) Accreditation Requirements

SHAMCI

- During the **interim period** (until 31st Dec 2020):
 - > No accreditation required
- Starting **1st Jan 2021**:
 - > Accreditation required

Solar Keymark

- Accreditation required

Comparison of SHAMCI and Solar Keymark

Highlights on Main Differences

(III) Interaction among Stakeholders

SHAMCI

- Main stakeholders: SHAMCI Network, RCREEE, SHAMCI certification bodies
- National-based scheme
- AIDMO as a regional sponsor

Solar Keymark

- Main stakeholders: CEN/CENELEC, ESTIF, SKN
- Industry-based scheme
- Stronger interrelation among all stakeholders due to active participation

Comparison of SHAMCI and Solar Keymark

Highlights on Main Differences

(IV) Specific Differences on some Procedures

- Selection by Remote Random Testing
- Additional Requirements for large Solar Collectors
- Specifications of Surveillance
- Related procedure Annexes
- Frequency of Complete Retesting
- Frequency of Updating Database and Scheme Rules

CONCLUSION

- Harmonization can bring various technical and economical benefits
- Harmonization can contribute to current international dynamic in the field
- Core differences between SHAMCI and Solar Keymark:
 - Current Product Scope
 - Accreditation Requirements
 - Involved Stakeholders
 - Interrelation among Stakeholders

Thank You for your Attention

Khalid Salmi: khalid.salmi@rcreee.org

Standardization and Certification programs coordinator

Regional Center for Renewable Energy and Energy Efficiency (RCREEE)