

## SE4JOBS Training Workshop

### « Local Value and Employment through Renewable Energy and Energy Efficiency »

#### WORKSHOP REPORT

#### Overview

Title	National training workshop on the new SE4JOBS Toolbox: creating local value and employment through renewable energy and energy efficiency
Date	Monday 26 <sup>th</sup> and Tuesday 27 <sup>th</sup> of October 2015
Participants	Middle management/expert level from concerned state institutions in related policy fields; private sector representatives; scientific community
Organizers	RCREEE and GIZ/RE-ACTIVATE supported by adelphi and FFU Berlin
Venue	Sonesta Hotel, Cairo, Egypt

#### Background

The SE4JOBS (Sustainable Energy 4 Jobs) project is a major output of the regional GIZ project RE-ACTIVATE. It has been launched together with a number of GIZ sector projects working on key aspects of international socio-economic development promotion in the field of Renewable Energy (RE) and Energy Efficiency (EE). It is implemented with the support of adelphi, a Berlin based international think tank, in partnership with the Environmental Policy Research Centre (FFU) based at the Free University in Berlin. Its objective is to develop a SE4JOBS Toolbox that supports the managing of the nexus of greening energy use and production, while at the same time creating local value and employment. The Toolbox builds on a series of good practices identified from around the world. It will guide you through critical questions and provide you with tool that helps you in developing and implementing a strategy/ strategies that address both the expansion of RE and EE and the creation of domestic employment.

In this first phase, the SE4JOBS project targets three countries, namely Egypt, Tunisia and Morocco. The development of the Toolbox was supported by workshops in Rabat, Tunis, Eschborn/Germany, and Beirut in 2015. The workshop in Cairo is another milestone on this way.

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## **Objective**

The objectives of the training were to:

- Introduce to the SE4JOBS Toolbox: aim, structure and content
- Application of the toolbox to the case of Egypt: identification and assessment of key questions and challenges for a cost-effective and quality-based roll-out of sustainable energy
- Collection of insights and recommendations on how to harness Egypt's job and valuepotential in the field of sustainable energy
- Inform the development of an "option paper" that will offer possible pathways for strengthening the socio-economic benefits of sustainable energy in the country

## **Approach**

This training workshop followed a "learning by doing" approach. An initial session served to set the scene including a presentation on the SE4JOBS project and an overview on the relevance of the topic for Egypt. The "learning by doing" part was presented by a general introduction to the Toolbox and to the possibilities it offers. After this, all of the four modules were further explored through joint discussions and practical exercises.

## **First Day, 26.10.15**

### **Opening**

The workshop started by a welcoming speech led by Dr. Maged Mahmoud, the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) technical director and Kristin Meyer, GIZ representative from headquarter who gave an introduction on the SE4JOBS project. After the introduction and the opening, Dr. Ahmed Badr, the Executive Director of RCREEE, set the scene on the Egyptian situation of RE and EE, with a special focus on employment. The welcoming session ended by a round of introduction and discussion between participants about their institutional affiliations and their expectations from the workshop.

**Question to participants:** What are your expectations from this workshop?

**Answers:**

- To learn about the toolbox and how to use it
- To know about other countries experiences and to compare it with Egypt
- To know how much the toolbox can help create more renewable energy jobs

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- To know if the toolbox can help to create jobs as a future plan for example, how it can be used to create jobs until 2030
- To learn how to set strategies and policies in a scientific and efficient way

In the next session, Mr. Dennis Taenzler from adelphi consult divided the participants into 5 groups and asked them to shed light on the challenges and the opportunities that Egypt is actually facing in terms of RE. The answers were as follows:

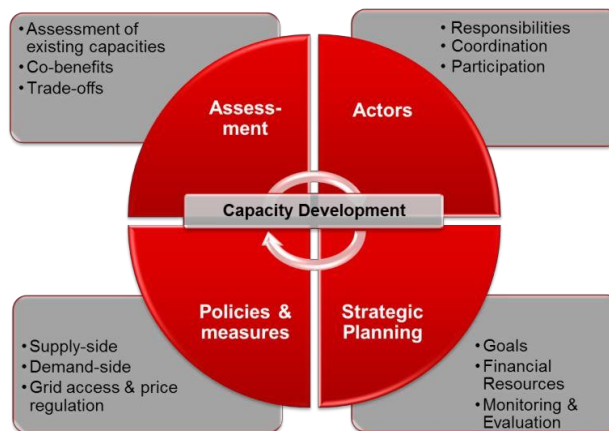
<b>Challenges</b>	<b>Opportunities</b>
Education system / Lack of trainings	Rich country in terms of sun, natural res.
Public awareness	Engaged Private Sector
Electrical infrastructure	Little (fossil) resources
Public-private cooperation	Projects already announced
Public private planning	Very large young dynamic force
Financial programs not sufficient	Fixed targets to expand RE
Decentralized job creation	Human resources available
Standards for certifications	International and national initiatives
Lack of quantitative studies of demand size	
Links between energy policies, industrial policies and development policies not existent	
Security for projects (long term planning)	
Motivation for engineers and qualified people	
Non Existence of regulations	

**I) Toolbox Introduction**

This section was presented by Dr. Klaus Jacob from FFU Berlin, Mr. Dennis Taenzler and Ms Karolin Blattmann. The history of development, objectives, structure, content and user options were explained and discussed. At the core of the concept is a strategic cycle to support the promotion of jobs and value creation through sustainable energies (see diagram below). The cycle comprises of the four distinct modules (assessment, strategic planning, policies & measures and actors). By outlining different key issues that are likely to come up during the strategic cycle (like responsibilities, coordination and participation for the module actors) the users of the Toolbox are in position to identify most important questions and how to answer them based on “Good Practice” examples and available tools and methods. The Toolbox will be available by the end of the year online via the online platform energypedia.

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Diagram: Toolbox four Modules and 12 issues



**Questions & Answers**

**Q:** The number of Employers you are using in the presentation is taking into account direct and indirect jobs?

**A:** This numbers are for direct jobs, the indirect are not calculated because there is a problem to find accurate data.

**Q:** You are talking about jobs created in RE can you specify which technologies exactly and how it was calculated?

**A:** The calculation is by capacity, for example 1GW produced create X jobs, direct jobs. Here we were talking about quantitative studies and it is a tool to compare countries between each other.

**Q:** After having the data base of jobs and another data base for candidates, can people find jobs directly? Is it part of the toolbox?

**A:** What you find in the Toolbox are tools and figures to find out how much jobs will be created after installing X capacities, and how many technologies do you have in your country etc. However, you have to take into account that technologies have an effect (example of IRENA statics figures shows that solar has the highest number of created job). In another word, the Toolbox can help you to dress models that will support you in your country, but it is not a single figure.

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**Q:** Does the toolbox designs the profile of jobs?

**A:** The toolbox identify the number of jobs but not the competences needed and the performance needed to be enhanced.

**Q:** Can it be used as an example to compare with other countries?

**A:** The toolbox contains examples from other countries that can serve as an inspiration. The tools are applicable in different ways and in different countries.

**II) Module Assessment**

A strategy and policies on RE and EE should be based on a systematic analysis of the evidence on a country’s capacities to develop markets and employment in these sectors. The session deals with the Module Assessment that raises key questions and provides tools to conduct a profound assessment.

A) Employment capacities along the value chain

This section was presented by Mr. Dennis Tanzler, Ms. Karolin Blattmann, Ms. Johanna Jagnow and Ms. Kristin Meyer. The session focused on the assessment of employment capacities. It started with a brief exercise on current capacities and gaps along the PV and wind value chain. Participants contributed their own views which yielded the following results:

Value chain PV (simplified)	Existing Capacities	Capacity Gaps
Materials / manufacturing	Engineering education at > 26 universities but modification to RE needed	Technical education not sufficient
Planning		Project Managers
EPC		Engineers Training of Trainer courses
Operations and maintenance		Maintenance needed
Finance	Limited amount of sizable programs available	
R&D	Government research centers and universities	Not demand-driven but centrally organized Market research capacities

While generally higher education (engineering) is a widely taught subject at Egyptian universities technical education is lagging behind, in particular, for new sectors such as RE. While this is partly

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– as in the case of R&D - the result of government instead of private sector driven approaches the RE market has yet to reach a critical size to justify broader programmes. It was noted that, besides technical capabilities also project management and training of trainers should appear on the curricula for RE.

**B) EQUiP Tool to assess industrial capacities**

Johanna Jagnow presented two modules from the Enhancing the Quality of Industrial Policies (EQUiP) Toolbox developed by UNIDO and GIZ (<http://www.equip-project.org>) which is an integrated methodological toolbox and a capacity-building package for industrial diagnosis. The toolbox aims to support policymakers in developing countries to formulate and design evidence-based strategies for inclusive and sustainable industrial development. Johanna Jagnow presented comparing manufacturing figures for Tunisia, Egypt and Morocco for Tool 5 Industrial Employment and Poverty Alleviation and Tool 6.1 Energy Efficiency of the EQUiP Toolbox. It became clear that Egypt shows high employment in manufacturing sector in comparison to Morocco and Tunisia, a high increase in labour productivity and wages but at the same time low employment generation in the last years. Next to that, the food and beverages as well as textiles are sectors with highest manufacturing employment. In comparison to Tunisia and Morocco, Egypt's economy seems rather diversified. Nonetheless, Energy consumption in Egypt is very high and even increased between 2000 and 2012. It was also noted that figures for the Egyptian context were only partly available due to lack of data availability in international databases.

**Questions & Answers EQUiP**

**Q:** How is manufacturing value added defined from your perspective?

**A:** The manufacturing value added measures how much value the manufacturing process creates or adds to a product, e.g. If a country exports a raw product there is no value added but if it is processing the raw product (e.g. beneficiation of minerals) there is a value added to the product in the economy. In other terms, manufacturing value added is the net output of the manufacturing sector after adding up all outputs and subtracting intermediate inputs.

**Remark on the labor productivity:** The labor productivity in Egypt is low compared to Tunisia and Morocco. One reason for that is the over employment in the public sector which causes low salaries and at the same time leads to lower labor productivity. In certain cases, a comparison of several countries might give a wrong impression, since the indicators are not taking account of specific country criteria. In order to have the correct indicators for Egypt, it might be helpful to differentiate between the private and the public sector.

**Q:** How do you define elasticity of employment?

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**A:** Employment elasticity is defined as the percentage change in the number of persons employed in manufacturing resulting from a one-percentage change in manufacturing value added. Hence, an employment elasticity of one would mean that a 1% increase in MVA is associated with a 1% increase in employment.

**Remark:** It will be more reliable to compare energy consumption between types of manufactures not comparing the sum between countries.

**C) ELMA Tool to assess employment and labor markets**

Ms. Kristin Meyer presented the tool ELMA developed by GIZ. ELMA provides a methodological tool for a comprehensive analysis of the labor market and employment situation and its respective underlying causes. It is based on the logic of the integrated approach for employment promotion and can be applied for analyzing the employment situation nationwide, regional or sector-wise. ELMA helps to provide answers to: What kind of labor market and employment constraints and underlying causes are there? What recommendations can you draw from it for country/sector-specific employment strategies? The problems of unemployment are manifold. Reason can be related to the labor market itself, for example poor matching because of information problems. Causes can also be with regard to the labor demand side, for example, an unfavorable business environment, or supply side of labor, e.g. low employability of parts of the labor force leading to un- or underemployment. Kristin Meyer explained the approach and raised key questions that needs to be answered to analyze the labor and employment situation in the RE sector in Egypt.

**III) Module Actors**

The next session is dedicated to the Module Actors. It is important to identify stakeholders and different actors for defined areas and different responsibility to develop a strategy for RE that create local value and employment.

**A) Group Work: Stakeholder Mapping - The Onion Model**

Adelphi briefly presented the stakeholder map (from GIZ's Capacity Works Toolbox) as a tool to identify stakeholder and the relationships between them. Participants were divided into two working groups to draw stakeholders' maps of different institutions and organizations working in training and building capacities in RE in Egypt. In addition to listing the stakeholders their relationships were to be analyzed and included in the stakeholders' maps. As a result, the members of the groups have learned about new institutions and it became clear that there should be more coordination taken place between the different institutions which all tackle different aspects of the complex issue.

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**First Group: Stakeholders identified**

- International regional associations
- Solar energy development association (SEDA)
- New and renewable energy agency (NREA)
- Online course (training online )
- Donors (GIZ, UNDP, ESCWA, USAID, .. etc)
- RENAC
- RE Consultant
- Federation of industries

**Second Group: Stakeholder identified**

- Industrial Modernization Center (IMC)
- Energy Research Center-Cairo University (ERC)
- Oil and Gas Skills (OGS)
- Technical Vocational Education and Training (TVET)
- International Academy RE&EE (IAREEE)
- Social Development Fund (SDF)
- Tebbin Metallurgic Institute (TMI)
- Renewable Energy Academy-Berlin (REA)
- Renewable Academy (DGS)
- World Bank Group

**Second Day, 27.10.15**

In the second day, the workshop started by a recap of day one and a participants' discussion moderated by Mr. Dennis Taenzler. After the recap, the Module "Strategic Planning" was presented along with an exercise on mapping the needed capacities to implement monitoring systems.

**A) Module Strategic Planning – Monitoring and Evaluation**

Monitoring and evaluation entails continuous feedback on the progress in achieving the goals of a strategy RE strategy. It, hence, enables an on-going learning process in the course of policy making. Monitoring and evaluation may be based on indicators and benchmarks, on regular reporting of progress and activities and various approaches for ex-ante and ex-post impact evaluation. This session was dedicate to Monitoring and Evaluation by highlighting key issues, such as a) who should be involved in M&E, b) what data and methodology is appropriate and c) how to monitor different impacts. This discussion was enriched by presenting IRENA's Evaluating RE Policies Study.



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**B) Module Policies and Instruments**

Then Module “Policies and Instruments” was discussed to learn more about how to develop suitable approaches to promote employment in Egypt based on existing structures.

This session included a presentation by Ms. Rana Yacoub from KFW about instruments and Egyptian activities for qualification, competence building and training in the RE sector.

**Questions & Answers**

**Q:** How is the integration of the technicians happening?

**A:** Bachelor of Technology degree is being accredited in ITech Fayoum and Ameriya, 30% of the students are allowed to move between different levels. To integrate all the students we have to discuss it with companies, because the majority of them are small to medium companies and they cannot integrate more than one student, given that the students have to be four days in a week in the industry we have to make sure of the quality of the internship.

**Q:** Are you using new curriculum?

**A:** KFW is funding the Assiut center, not all of the centers. The curriculum was developed after discussion and taking into account the industry needs, as it is certified by the ministry of education and it goes ahead with the German level.

**Q:** Is there a cooperation between centers and private sector?

**A:** There was a form circulated by us in order to raise awareness of the private sector in 2013. After the project implementation and discussion with Assiut business association we updated our labor market, 90% of them are small enterprises. It will be waste if we continue our project without involving the private sector.

Finally, the presentations sessions ended by a presentation by Dr. Sayed Kasseb from Cairo University and Mr. Abdelrhman Fatoum from TU Berlin-German Science. They presented respectively REMENA master’s program (Renewable Energy and Energy efficiency for MENA region) which is the result of the cooperation between Cairo and Kassel University and the Energy Engineering master between TU Berlin and Campus el Gouna. These two programs are international programs which aim to educate future leaders for Egypt and the region with a special focus on the sustainable energy.

**Group Work**

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At the end of the second day, participants were divided into two working groups in order to draw a road map on how to achieve by 2030 the target of a) having available quality data and b) how to improve the building capacities in RE and EE.

The first group (**Quality Data**) drew a road map about how to reach 2030 with good quality national data. They started by identifying the different national institutes working on statistics. The goal is to have accurate, available and verified set of national data. In order to achieve that, they thought about an independent coordinator which will be able to coordinate different actors and can collaborate with universities to develop studies and statistical research. They also discussed about the funding that may be needed by the coordinator to conduct an awareness campaign toward governmental side. This can be led by an independent organization to highlight the necessity of reliable data to set strategies and to achieve goals.

The second group (**Building Capacities**) worked on building competences. Their goal is to have qualified workers on different levels (technicians and engineers) by 2030. To accomplish this objective, they thought about the necessity of cooperation's between Industry and Universities as well as Industry and Technical Centers. The group also agreed that technical skills are not the only skills needed, language and management skills are also required. To put these changes into reality, they said that regulations reform and support from government are needed.

**Next Steps: RCREEE and GIZ/RE-ACTIVATE**

- RCREEE and GIZ/RE-ACTIVATE thanked the participants and emphasized that the topic of linking RE/EE with local value and employment has become an important topic on the political agenda
- This training workshop in Cairo has been the first of its kind and can be seen as the starting point for follow-up regional workshops and discussion on the topic of Local Value and Employment through Renewable Energy and Energy Efficiency
- The regular meetings and workshops will address specific sub-topics and key questions to be found in the SE4JOBS Toolbox and how to assess the jobs of existing policies
- The SE4JOBS Toolbox will be launched by the end of this year, accessible on: [www.energypedia.info](http://www.energypedia.info)
- Once the SE4JOBS Toolbox is launched, specific launching events and trainings may be available
- The workshop has proved once again that bringing different stakeholders on the same table is a key issue to tackle this complex issue
- Next events where RCREEE and RE-ACTIVATE will be presenting the SE4JOBS Toolbox are MENAREC6 in Kuwait and Arab Forum for RE

**SE4JOBS Training Workshop**  
**26-27 October 2015, Cairo**



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Thanks again to all organizers and participants for making the workshop a successful and fruitful event!