



Mapping EE and RES Market Potential Areas with Higher Impact on Local Economy and Job Creation

RCREEE

12th of November 2019

Semiramis Intercontinental Hotel

November 2019

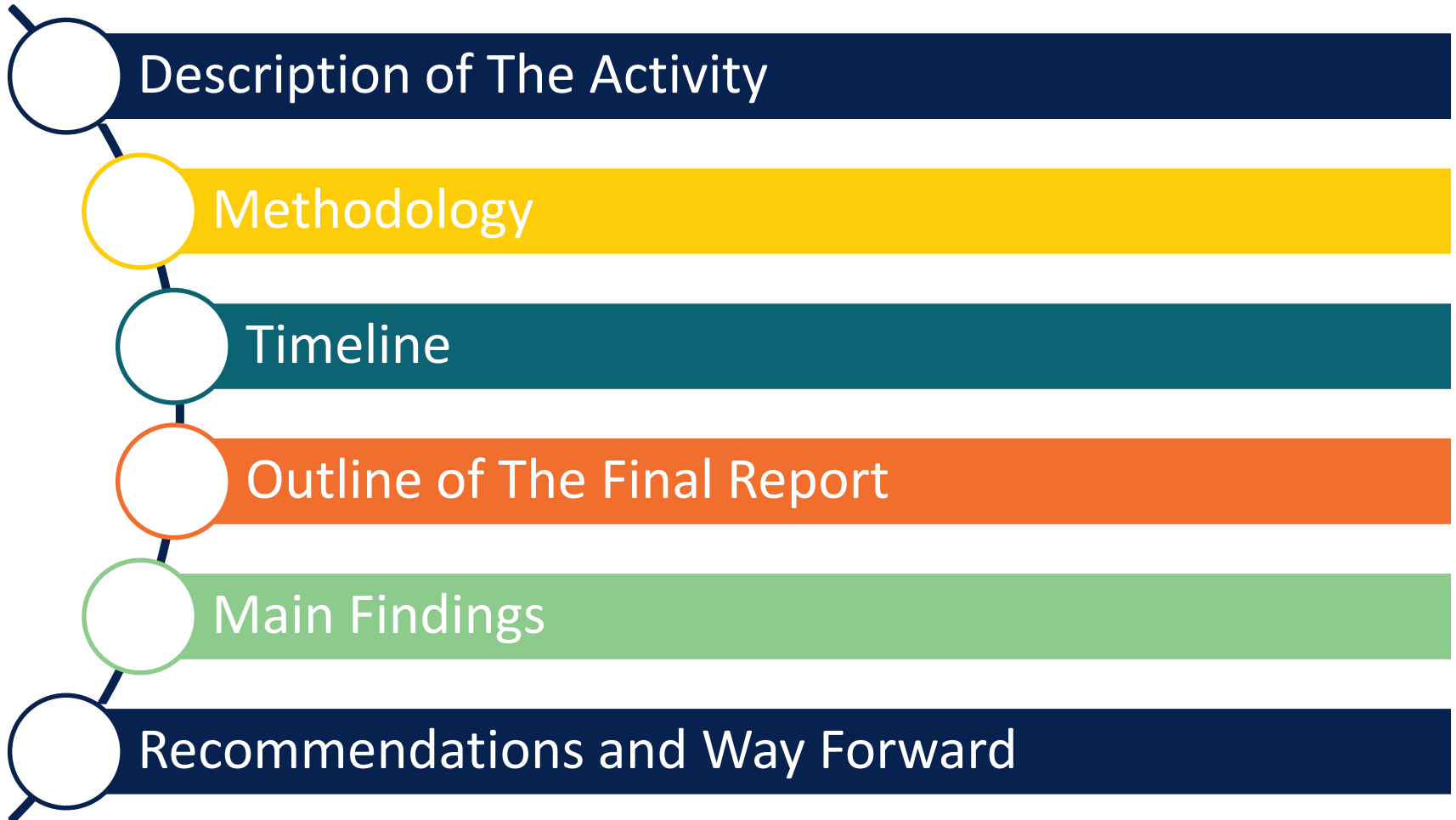
RCREEE

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



Funded by the
European Union

In this Presentation



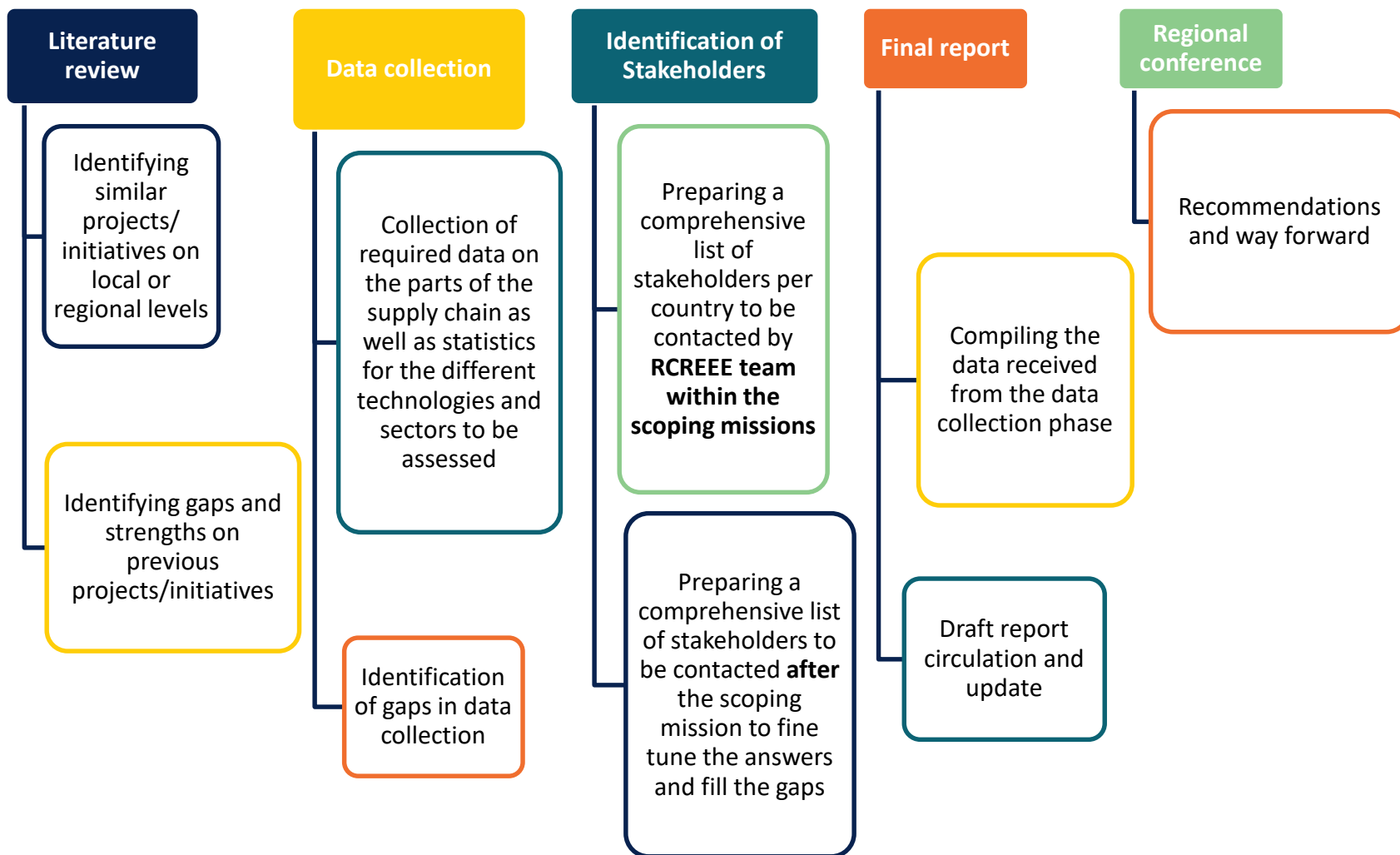
Description Of The Activity

- Different EE mechanisms together with distributed generation applications proved to have considerable potential in many SEMCs, especially with regard to the socio-economic impacts (creating jobs and local value)

This activity assesses and maps the current and potential markets for RE and EE products and services to identify which sectors are labor-intensive, and which parts of the relevant value chains are of high potential for creating local value



Methodology



Timeline



Outline - Final Report

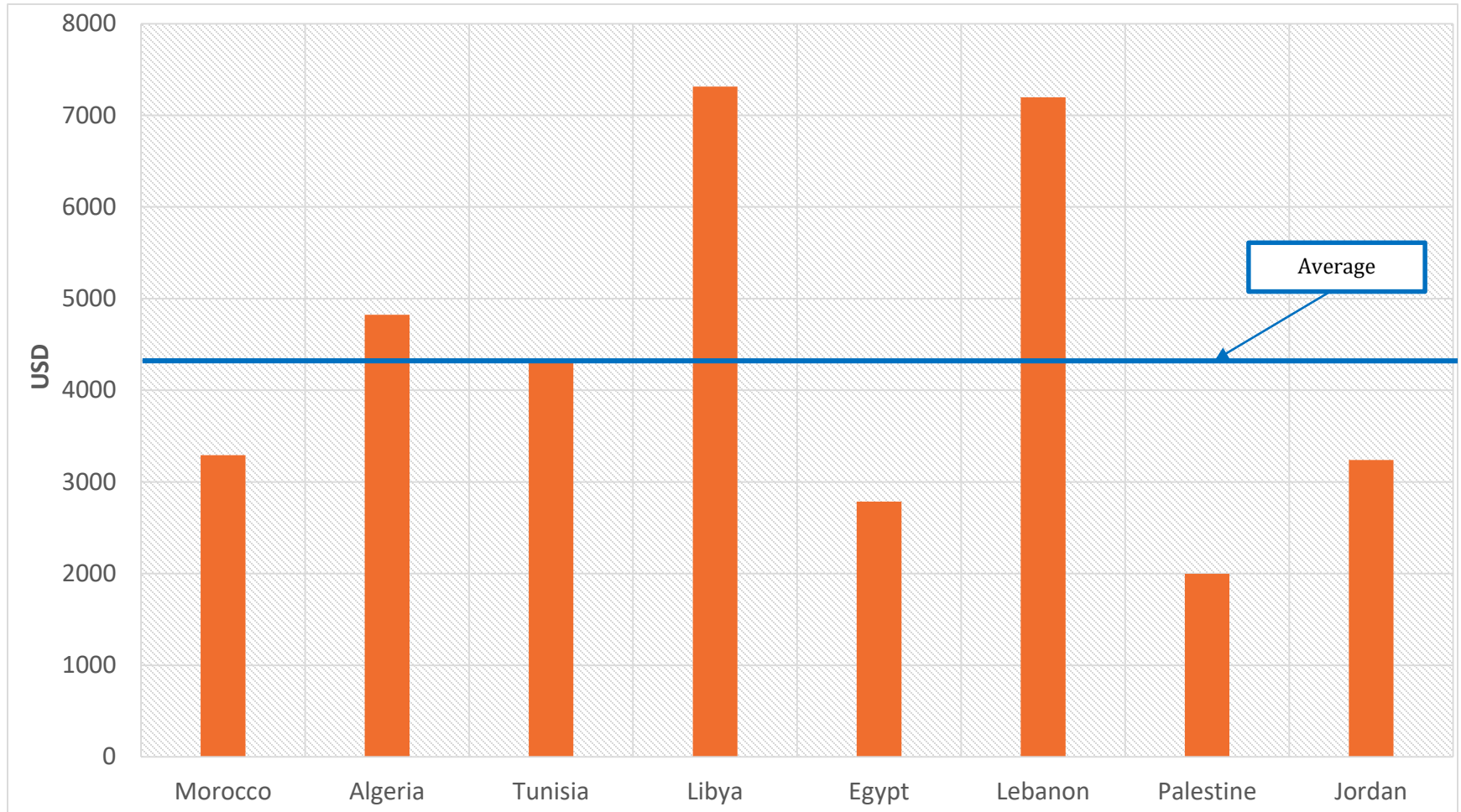
General Overview Of The Impact On The Local Economy

- Impact of Renewable Energy and Energy Efficiency technologies on :
 - **The Gross Domestic production (GDP)**
 - ✓ Unidirectional, bidirectional or neutral relationship
 - **The trade balance**
 - ✓ Exporters of fuel vs. importers
 - **The value creation**
 - ✓ Directly or indirectly contributing to the final product
 - **The job creation and employment**
 - ✓ The RE sector created 11 million direct and indirect jobs in 2018 compared to 9.8 million in 2016 (IRENA, 2019)
 - ✓ Gender and youth distribution on the international scale

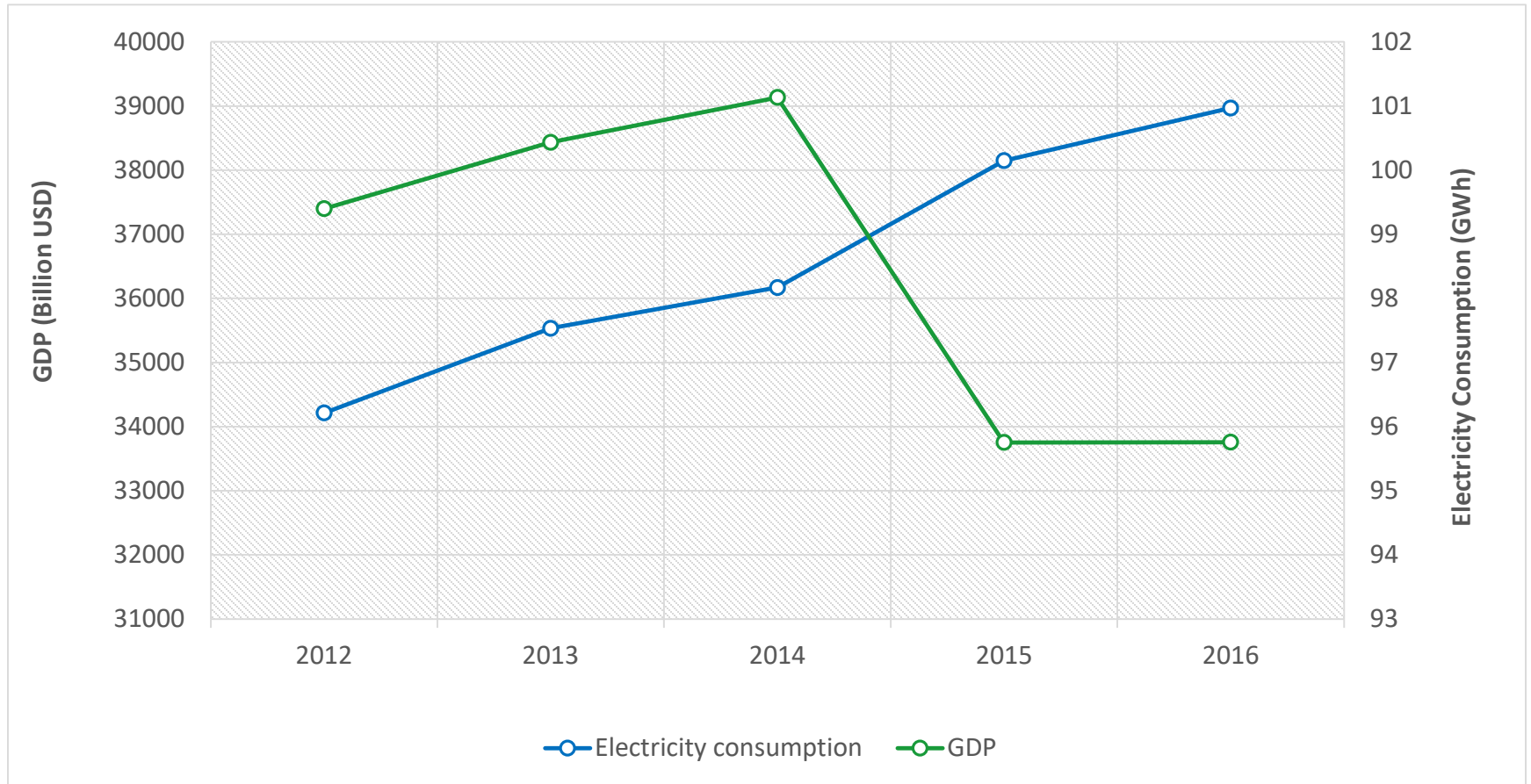
Regional Context



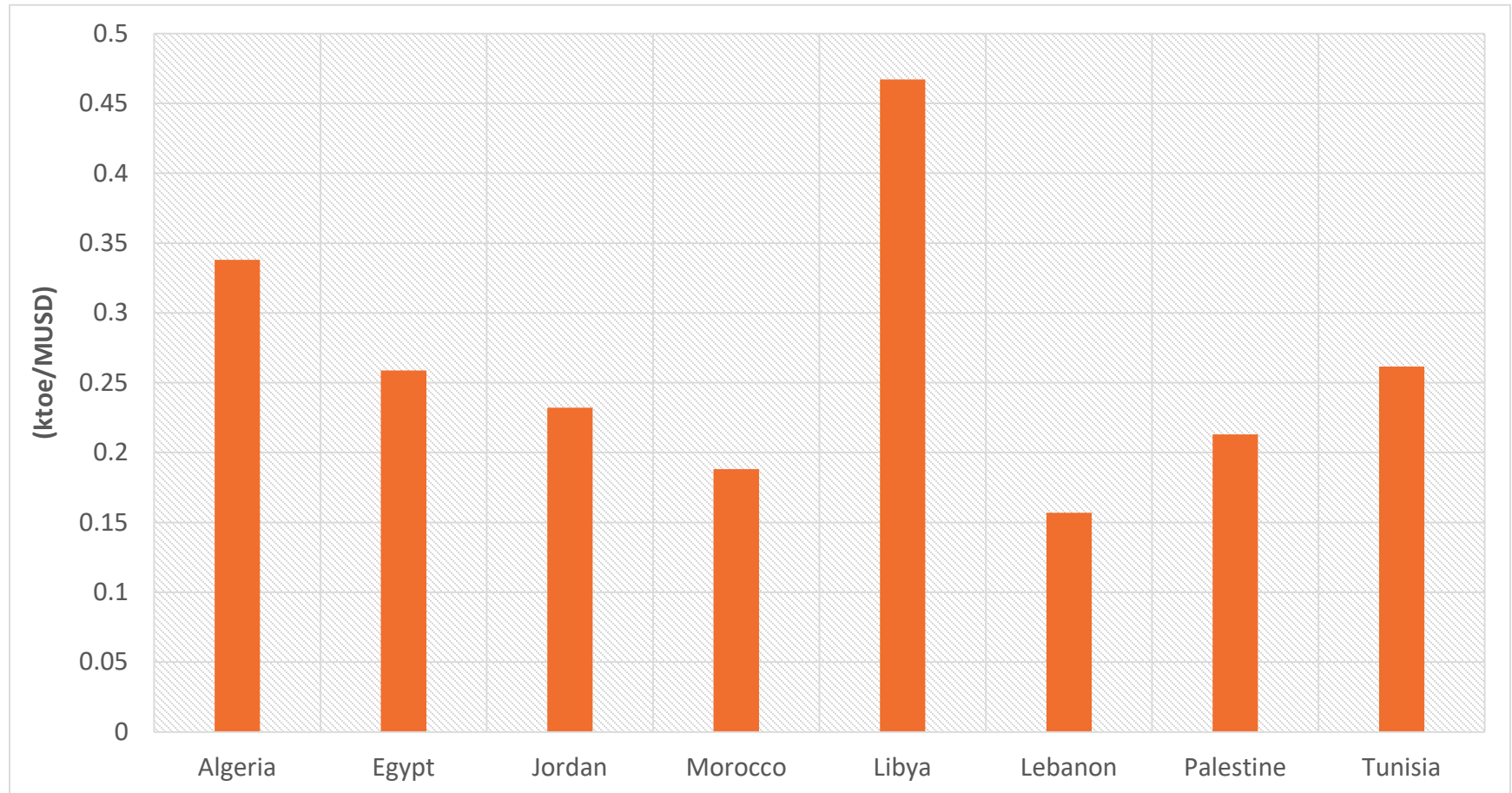
Regional Context – GDP Per Capita



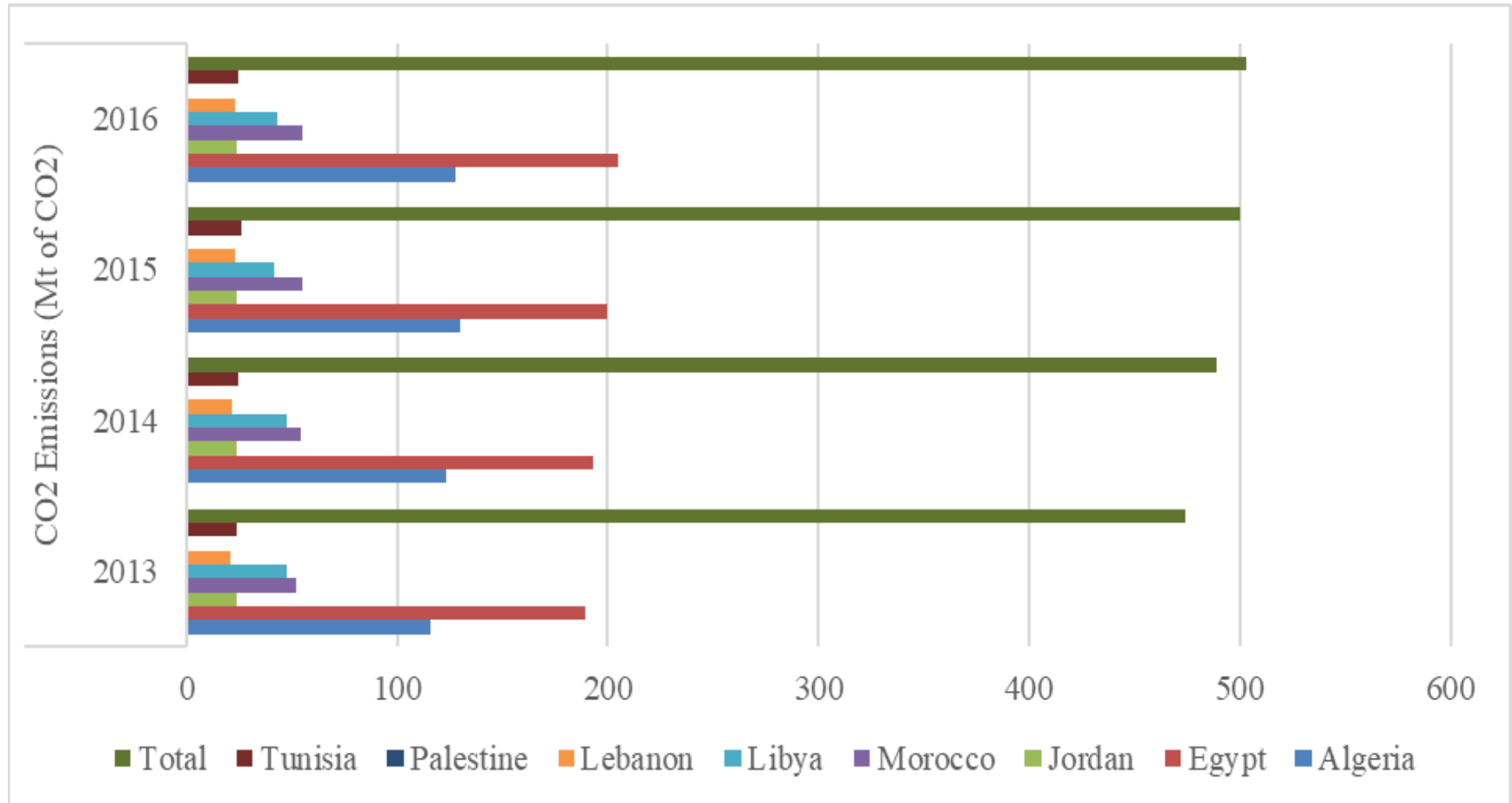
Regional Context – GDP Vs. Electricity Consumption



Regional Context – Energy Intensity



Regional Context – CO₂ Emissions

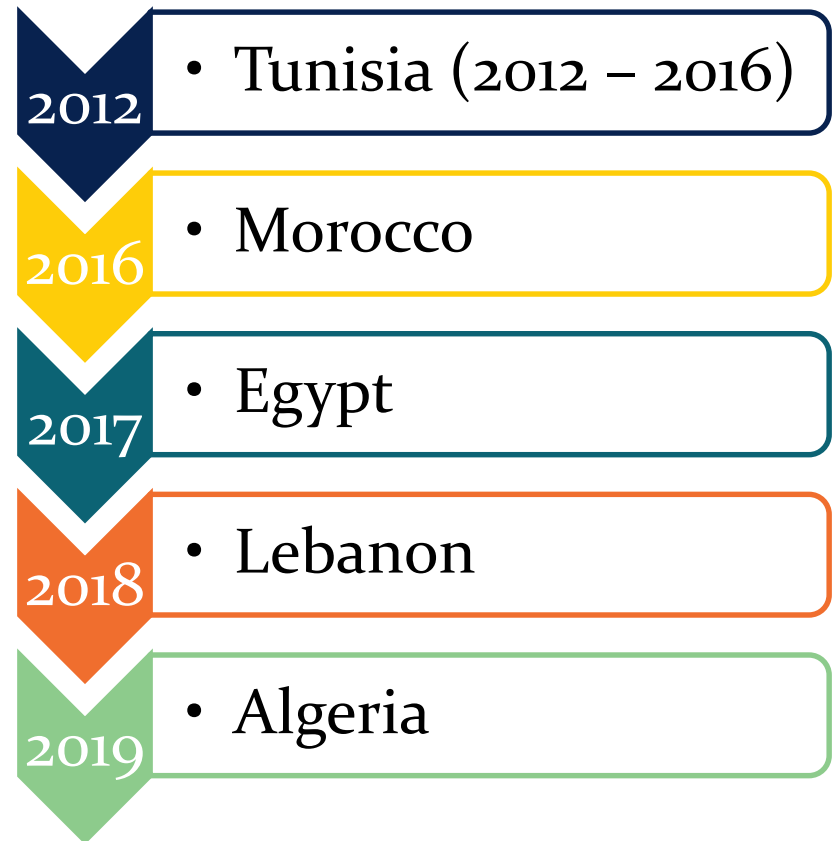


Regional Context – Employment

Until 2012

- No clear and concrete numbers regarding employment in the SEM region except for some countries such as Tunisia and Egypt
- International and regional numbers were mainly provided by IRENA annual reports on employment and REN21 reports
- National numbers were always based on personal estimations with no clear methodologies

After 2012



Regional context – Employment

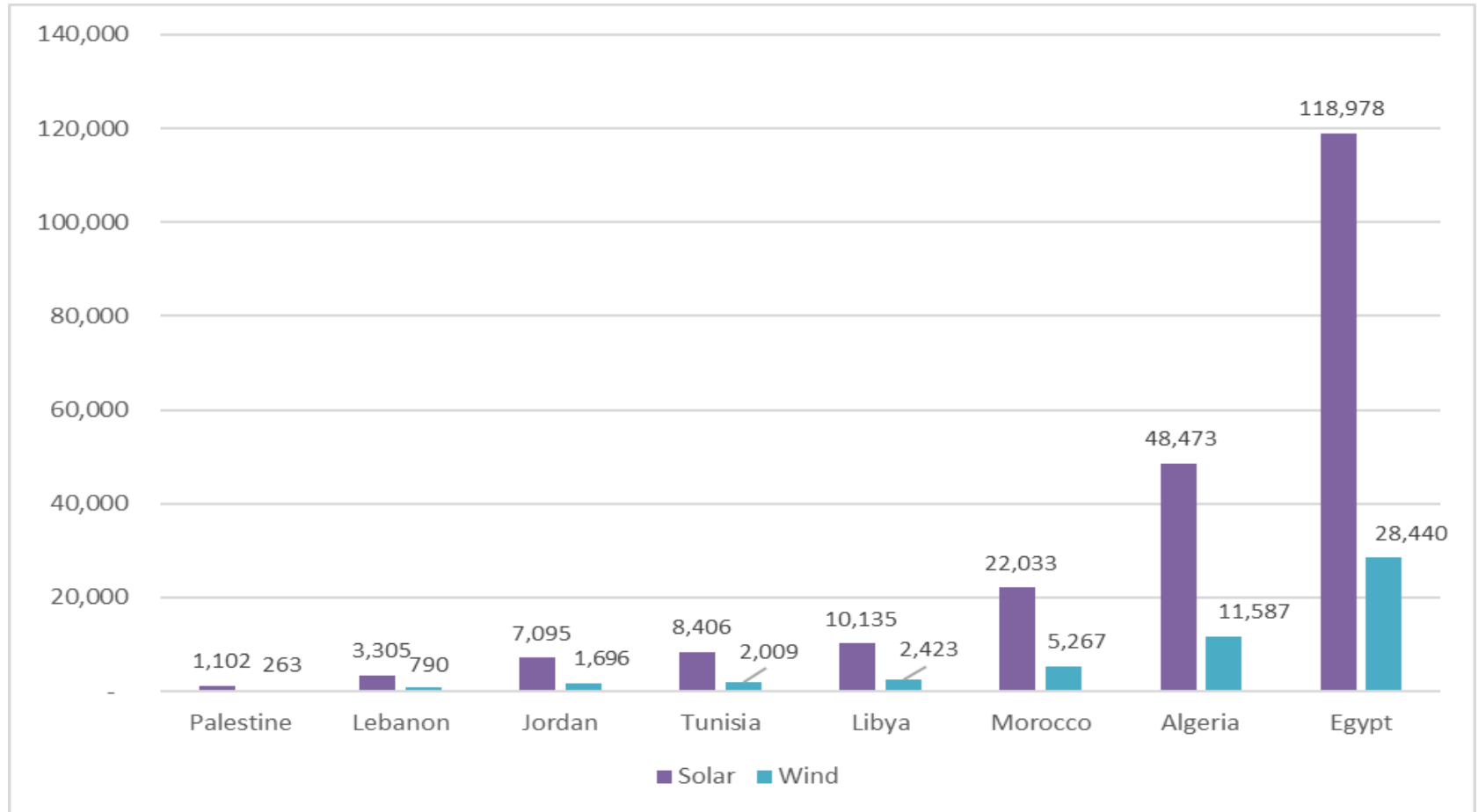
Country	Targets (MW)	Capacity (MW)		Potential Jobs created by 2030	
		Solar	Wind	Solar	Wind
Palestine	500	300	200	1,102	263
Lebanon	1,500	900	600	3,305	790
Jordan*	3,220	1,932	1,288	7,095	1,696
Tunisia	3,815	2,289	1,526	8,406	2,009
Libya	4,600	2,760	1,840	10,135	2,423
Morocco	10,000	6,000	4,000	22,033	5,267
Algeria	22,000	13,200	8,800	48,473	11,587
Egypt**	54,000	32,400	21,600	118,978	28,440

* The target for Jordan is for 2025

** The target for Egypt is for 2035

Source: RCREEE (2019) based on data from (GIZ, 2016) (RCREEE, 2017) (Mahmoud, 2019)

Regional Context – Employment



Country Profiles

Country Profiles

Lebanon

Scoping Mission
(25 – 28
September 18)

Tunisia

Scoping Mission
(10 – 12 April 19)

Egypt

Scoping Mission
(01 – 03 July 19)

Jad **ELBABA**

Sami **MARROUKI**
Moncef **NJEIMI**

Anhar **HEGAZI**

Main Findings

Main Findings - Egypt

- In Egypt, **wind energy** is the major contributor to job creation, compared to other RE technologies
- During the next ten decades, the **wind energy** will create the majority of jobs
- It has been found that the **wind energy industry** creates the majority of **direct jobs**, during **construction** phase
- With regards to the **solar** energy, the **construction** phase generates the majority of **direct jobs**, while the **O&M** stage creates most of the **indirect** jobs
- While **LED production** had created the majority of **direct jobs**, **motor technology** was taking over the majority of **EE indirect** jobs, since 2016

Main Findings - Lebanon

- In Lebanon, **SWH technology** will be the most labor intensive one, by creating over **20,000** jobs, in **2020**
- The **construction and installation** phase is representing the most labor intensive stage in all renewable energy projects in the country
- **Solar PV** as well as **wind energy** are more labor intensive during the **installation phase**
- The most labor-intensive EE measure is the **generalization of efficient envelopes for new buildings**, which includes the manufacturing of materials and intermediate products, design and installation as well as distribution and trading.

Main Findings - Tunisia

- In Tunisia, **SWH** are the most labor intensive technology, mainly generated by the **PROSOL** project
- The most labor intensive part of the value chain is the **installation phase**
- **EE in buildings** is the technology, which generates most of the jobs in the EE technologies, especially in **the installation phase**

Recommendations And Way Forward

Thank you!

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