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Assessing EU-Mediterranean Policies in the Fields of Industry and Energy from a Bottom-up Perspective

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Abstract

Work Package 6 (WP6) of MEDRESET project aims at evaluating the effectiveness and potential of EU policies and measures in industry and energy (including trade liberalization, broader energy policies, energy transition, renewable energy programmes and industrial cooperation initiatives) in light of the interests, needs and expectations of different bottom-up actors on both shores of the Mediterranean, with the purpose of identifying inclusive, responsive and flexible policy actions to reinvigorate EU–Mediterranean relations. Hence, the objective of this conceptual and methodological paper is twofold. First, it attempts to provide both an overview of the main characteristics of energy and industry on the Southern shore of the Mediterranean and a background analysis of major EU policies targeted to energy and industry. Second, it tries to inform research and fieldwork in line with the multi-actor, multi-layer and multi-sector analytical framework and multi-method approach of this project with a special lens on the gender dimension as men and women are impacted differently in both energy and industry.

Introduction

WP6 aims at evaluating the effectiveness and potential of EU policies and measures in industry and energy (including trade liberalization, energy policies, energy transition, renewable energy programmes and industrial cooperation initiatives) in light of the interests, needs and expectations of different bottom-up actors on both shores of the Mediterranean, with the purpose of identifying effective policy actions to reinvigorate EU–Mediterranean relations. In particular, this WP will investigate the perspectives of relevant local stakeholders in four target countries: Egypt, Lebanon, Morocco and Tunisia.

While the EU has implemented a number of policies in industry and energy, the outcome for Southern Mediterranean countries has been very limited at both the micro and macro levels. Indeed, for industry, competitiveness did not improve, which led to lower market shares for Mediterranean countries in EU markets, and industry continued to be concentrated in low-value-added products, thus failing to diversify. Moreover, these policies were unable to create good quality jobs in a region characterized by high levels of unemployment among young

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people and women, generally providing low-paid and precarious opportunities. For energy, while several renewable energy projects were launched, they faced various impediments (in terms of conception, implementation and maintenance), failing to become a sustainable source of energy for a region characterized by a high level of energy demand, and likewise failing to exploit the enormous potential for job creation.

The objective of this conceptual and methodological paper is twofold. First, it attempts to provide both an overview of the main characteristics of energy and industry in the Southern Mediterranean and a background analysis of EU policies targeted to these sectors. Second, it tries to inform research and fieldwork in line with the multi-actor, multi-layer and multi-sector analytical framework and multi-method approach of this project. While the analysis will start from the early 2000s, particular attention will be devoted to the post-uprisings phase (2011–today).

The structure of the paper is as follows. Sections 1 and 2 describe the main characteristics of energy and industry in the Southern Mediterranean region and show the main interventions of EU in these two sectors. Section 3 presents the main challenges facing energy and industry in the region, while section 4 is dedicated to the proposed methodology.

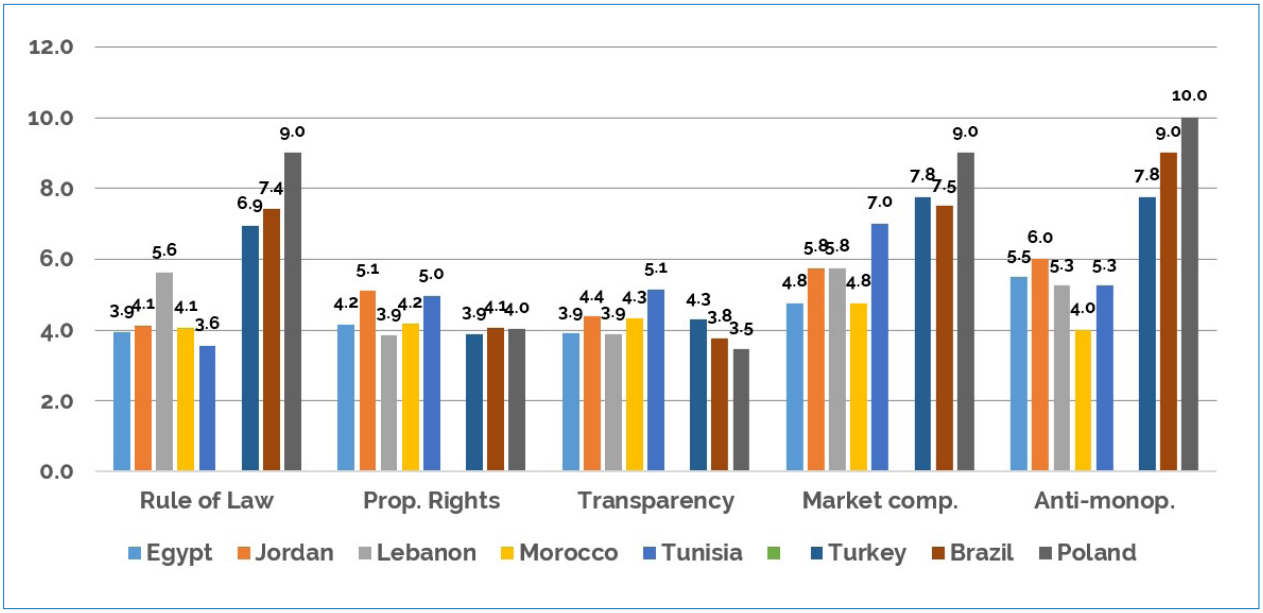
1. Industry

1.1 Overview of Industry in the Region

During the 1950s and 1960s, the strategy of import substitution was common practice to nurture "infant industries" in most of the Middle East and North African countries. Furthermore, a wide array of industrial and investment policies were utilized such as targeting and subsidizing credit to selected industries, protecting domestic import substitutes, subsidizing declining industries, and establishing and financially supporting government banks. Thus, countries in our sample went through phases of state-driven development and heavy-handed regulation of private business. Since the end of the 1970s and early 1980s, all of these countries have started feeling the limitations of centrally planned economies and, as a reaction, they have increasingly recognized the private sector as the main driver of growth and have adopted policy measures in favour of economic liberalization, including privatization of state enterprises. Yet, in light of the institutional constraints these countries still have (Figure 1), the industrial sector faces several problems. Indeed, Figure 1 shows that our countries of interest (compared to other comparator economies such as Brazil, Poland and Turkey) are suffering from a lack of rule of law, low protection of property rights, a lack of market competition and the relative absence of anti-monopoly practices and laws. In most of these measures, Southern Mediterranean countries are ranked lower than other comparator economies.

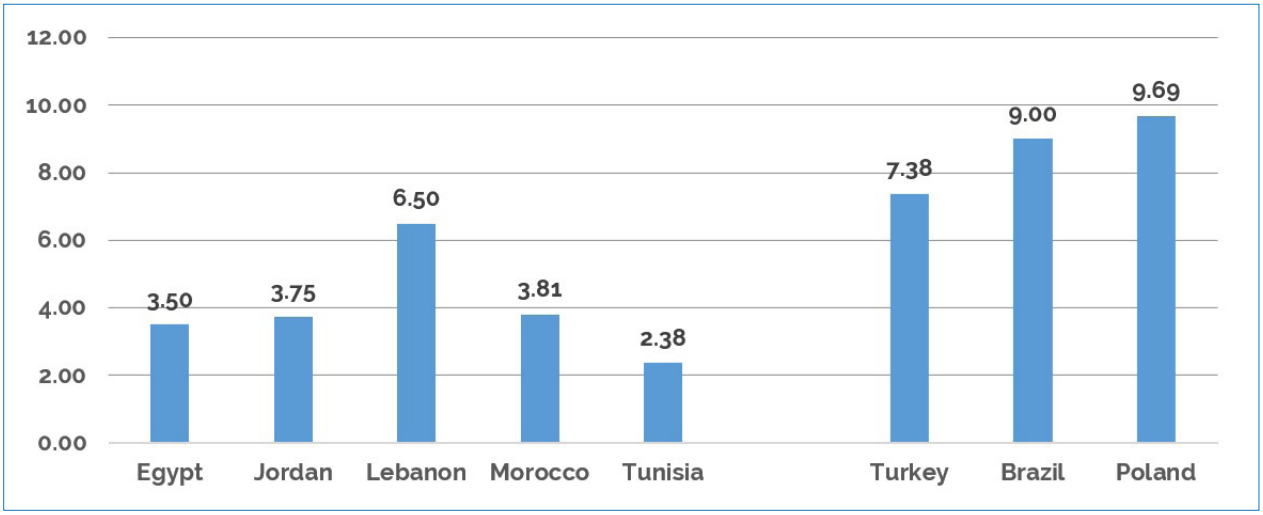
Moreover, their capacity of innovation is relatively low for three main reasons. First, the institutional setup is weak which hinders competition and thus innovation. Second, most of these countries are specialized in products that have low added value. This does not help Arab countries improve their status. Third, most of their trade with the EU is in traditional sectors which in turn affects their competitiveness (Figure 2) and increases their specialization in traditional exports. Indeed, Figure 3 shows that Southern Mediterranean countries and especially Egypt have a lower share of medium and high tech activities in their industrial sector.

Figure 1 | Institutions and industry (2014)



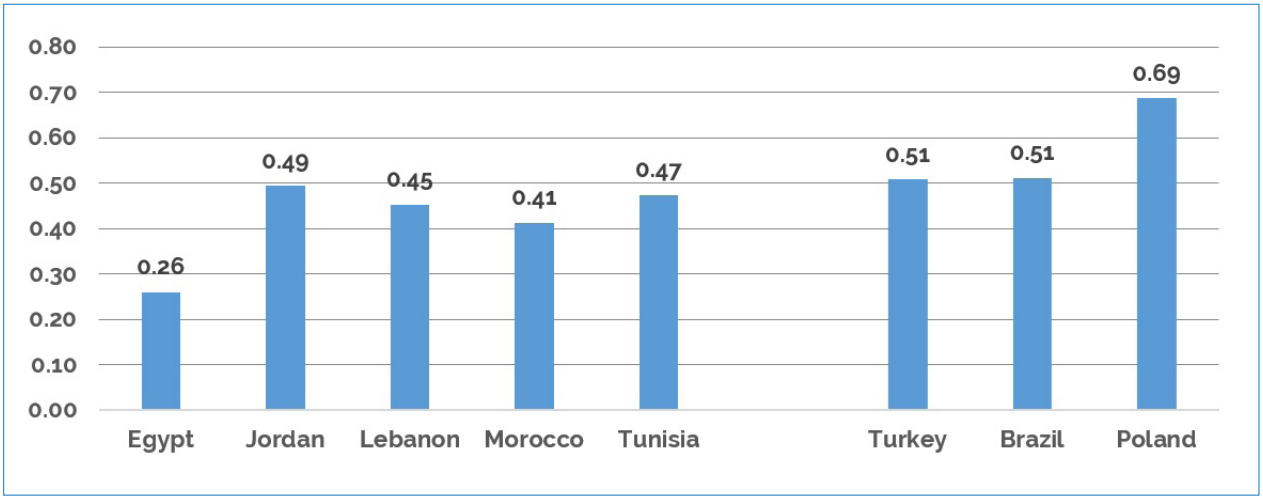
Source: Rule of law, market-based competition and anti-monopoly policy indices come from Bertelsmann Transformation Index. A greater value of the index shows a better performance of the country (from 1 to 10). Property rights and transparency of government policymaking come from the Global Competitiveness Index. A greater value of the index shows a better performance of the country (from 1 to 10).

Figure 2 | Capacity for innovation (2014)



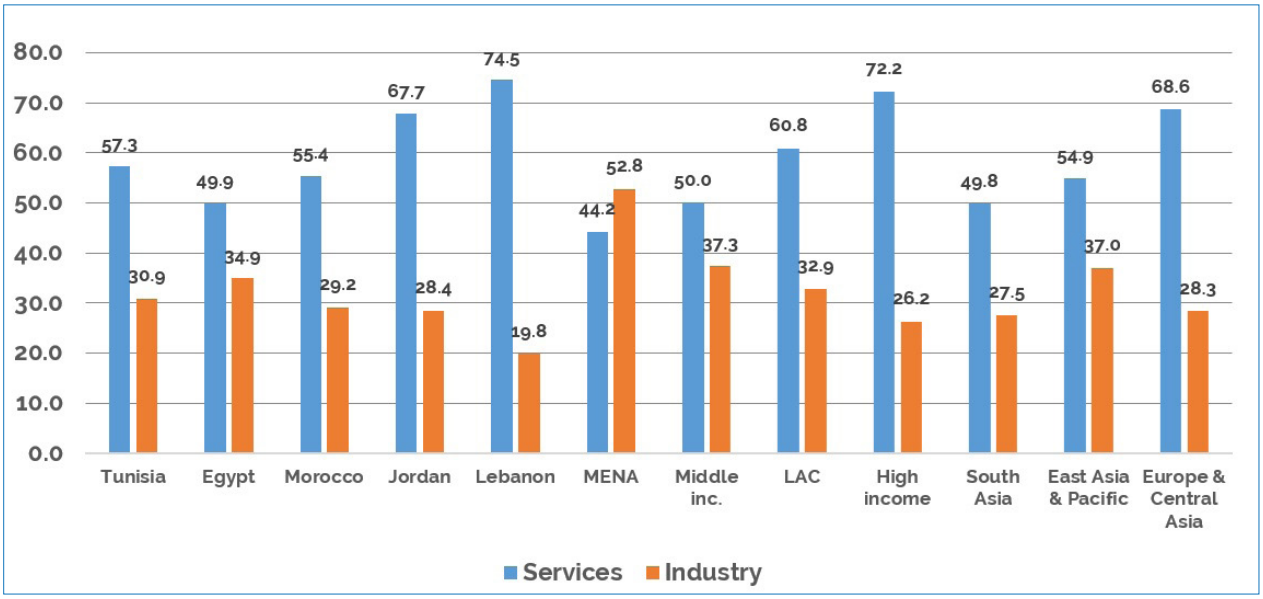
Source: Global Competitiveness Index. A greater value of the index shows a better performance of the country (from 1 to 10).

Figure 3 | Share of medium and high tech activities (2014)



Note: Competitive industrial performance composed of 8 indicators assessing industrial performance based on an economy's ability to competitively produce and export manufactured goods. Each indicator is weighted on a scale of 0 to 1. This is an objective index of the current competitiveness and manufacturing potential.

Figure 4 | Share of industry and service in GDP (2014)



Source: World Development Indicators online dataset.

A list of other problems also affect the industrial sector in Southern Mediterranean countries (Altenburg 2011). First, there are strong rent-seeking activities which are not constrained by effective mechanisms of checks and balances. This leads to misallocation of funds, political capture and the creation of perverse incentives for investors and bureaucrats. Second, few countries have policy think tanks that are likely to review policy experiments and inform policy making. This indicates that certain industrial strategies might not be evidence-based, voices of different stakeholders might be overlooked and strategies may be representative of certain interests only. Third, industrial policies are generally not well coordinated with other related policies, such as Small and Medium Enterprise (SME) policies (where in general large firms

control the markets and in particular SMEs owned by women face several impediments), investment promotion, trade policies, or science and technology policies. Fourth, the business community is highly fragmented. Production systems in all of the countries in our sample are fractured along different lines (micro/small vs. large firms; state-owned, state-related (military or party-affiliated) vs. private enterprises; national vs. foreign-invested; ethnic minority-owned vs. other domestic firms). Such fragmentation decreases inter-firm specialization and obstructs factor mobility between groups of firms as well as knowledge spillovers from efficient to less efficient firms. All of these problems have led to the industrial sector's small share in the GDP (Figure 4), with low-value-added and non-labour-intensive products, especially in extractive industries and refineries.

These industrial developments are reflected in the trade performance of these countries. Indeed, most of these exports are services, low-value-added manufactured products or agricultural products. By contrast, the exports from the EU to these countries are chiefly concentrated in machinery and equipment. It is important to note that from a gender perspective, women are likely to take advantage of trade if countries start to export goods or services using intensively female labour (such as processed food, textiles and garments). Furthermore, Becker (1971) argues that women should be expected to gain from trade independently of the resulting export structure, since trade leads to more competition and therefore urges firms to reduce their cost of discrimination by hiring more women (Zaki 2016).

The following section presents how this sector has been targeted through EU trade policy in the Southern Mediterranean.

1.2 EU Policies

For most South Mediterranean Countries (SMC), the EU is the main trading partner. This has encouraged the initiation and development of trade negotiations and the establishment of the Free Trade Area (FTA) between the EU and SMCs (see Table 1).

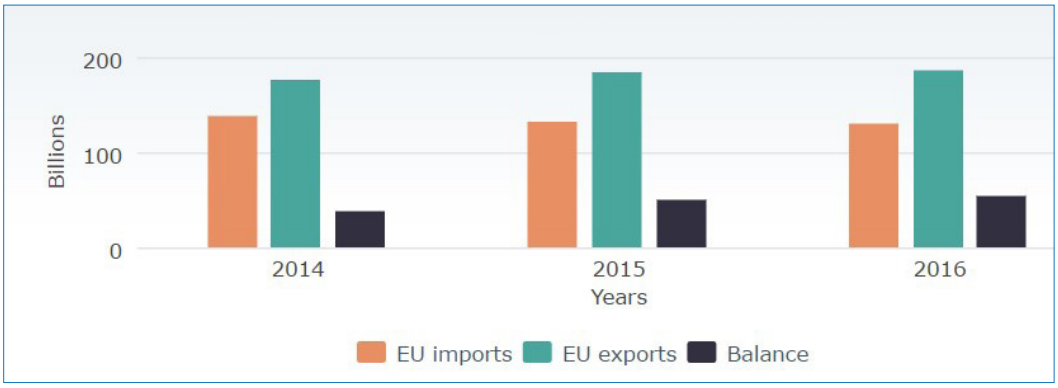
Table 1 | EU trade agreements

Country	Status	Date signed	Entry into force
Algeria	Signed	Apr 2002	Sep 2005
Egypt	Signed	Jun 2001	Jun 2004
Israel	Signed	Nov 1995	Jun 2000
Jordan	Signed	Nov 1997	May 2002
Lebanon	Signed	Jun 2002	Apr 2006
Morocco	Signed	Feb 1996	Mar 2000
Palestine	Signed	Feb 1997	Interim Agreement (Jul 1997)
Syria	Initiated (Dec 2008)		
Tunisia	Signed	Jul 1995	Mar 1998
Turkey	Customs Union (Jan 1996)	Customs Union	Dec 1995

Source: European Commission DG Trade website: *Euro-Mediterranean partnership*, http://europa.eu/!Rc93PF.

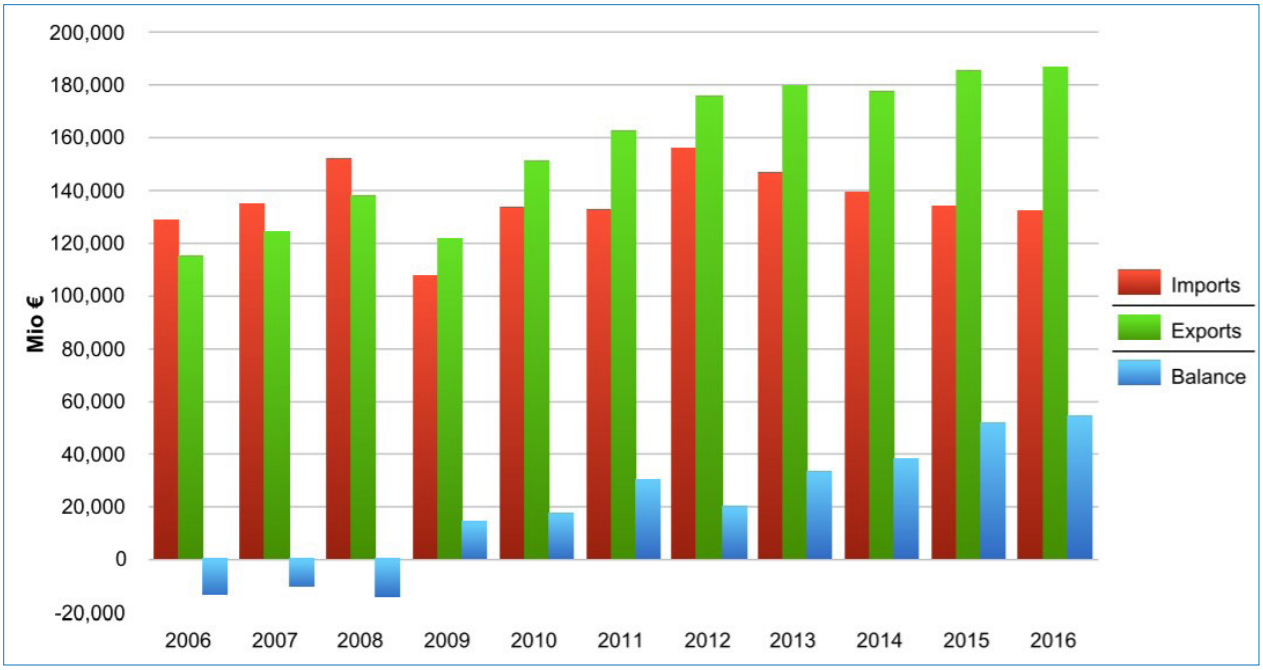
Together the region represents 8.6 percent of total EU external trade (see Figure 5). Yet, it is important to note that between 2005 and 2016, the EuroMed region[2] was always in deficit compared to the EU, as shown in Figure 6.

Figure 5 | EU-EuroMed trade in goods statistics (2014, 2015, 2016)



Source: European Commission DG Trade website: *Euro-Mediterranean partnership*, http://europa.eu/!Rc93PF.

Figure 6 | EU-EuroMed 11 trade flows and balance, annual data 2006–2016



Source: European Commission (2017b).

Another important characteristic of trade between the Northern and the Southern shores of the Mediterranean is that trade is chiefly concentrated in minerals, machinery and transport equipment. In general, the share of other manufacturing products is very low, as is presented in Table 2.

2 The EuroMed region includes: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Occupied Palestinian Territory, Syria, Tunisia and Turkey.

Table 2 | Exports and imports of the EU with EuroMed region, 2016

HS Sections	Imports		Exports	
	Value Mio €	% Total	Value Mio €	% Total
Total	131,942	100.0	186,244	100.0
I Live animals; animal products	1,562	1.2	3,303	1.8
II Vegetable products	5,853	4.4	5,274	2.8
III Animal or vegetable fats and oils	426	0.3	707	0.4
IV Foodstuffs, beverages, tobacco	3,087	2.3	5,423	2.9
V Mineral products	25,715	19.5	12,453	6.7
VI Products of the chemical or allied industries	8,321	6.3	21,187	11.4
VII Plastics, rubber and articles thereof	5,256	4.0	10,624	5.7
VIII Raw hides and skins, and saddlery	679	0.5	721	0.4
IX Wood, charcoal and cork and articles thereof	152	0.1	2,217	1.2
X Pulp of wood, paper and paperboard	777	0.6	4,036	2.2
XI Textiles and textile articles	20,612	15.6	6,928	3.7
XII Footwear, hats and other headgear	913	0.7	747	0.4
XIII Articles of stone, glass and ceramics	1,375	1.0	2,281	1.2
XIV Pearls, precious metals and articles thereof	4,760	3.6	2,706	1.5
XV Base metals and articles thereof	7,390	5.6	16,204	8.7
XVI Machinery and appliances	21,223	16.1	48,968	26.3
XVII Transport equipment	19,195	14.5	29,570	15.9
XVIII Optical and photographic instruments, etc.	1,662	1.3	5,978	3.2
XIX Arms and ammunition	83	0.1	99	0.1
XX Miscellaneous manufactured articles	1,790	1.4	2,407	1.3
XXI Works of art and antiques	33	0.0	90	0.0
XXII Not classified	1,081	0.8	4,320	2.3

Source: European Commission (2017b).

According to the European Commission in 2016, on a bilateral front, it is worth noting that:

- The EU's imports from Tunisia are mostly made up of machinery and transport equipment (41.8 percent), textiles and clothing (24.3 percent) and agricultural products (6.6 percent). Moreover, the EU's exports to Tunisia are concentrated in machinery and transport equipment (37 percent), textiles and clothing (12 percent), chemicals (11.9 percent), and fuels and mining products (11.2 percent) (European Commission 2017f).
- For Egypt, EU imports of goods in 2016 are dominated by fuel and mining products (43.2 percent), chemicals (13.2 percent) and textiles and clothing (12.3 percent). By contrast, EU exports to Egypt consist chiefly of machinery and transport equipment (37.9 percent), chemicals (15.7 percent), fuels and mining products (12.6 percent) and agricultural products (12 percent) (European Commission 2017a).
- Jordan's exports to the EU are made up of chemicals (31 percent) and machinery and transport equipment (20.8 percent). The EU's exports to Jordan are dominated also by machinery and transport equipment (32.1 percent), agricultural products (17.4 percent) and chemicals (15.3 percent) (European Commission 2017c).

- As for Lebanon, EU imports from Lebanon consist chiefly of mineral products and metals (22.7 percent), agricultural products (24.3 percent) and chemicals (11.2 percent). Conversely, Lebanon's imports from the EU are mineral products (24.8 percent), machinery and transport equipment (21.3 percent) and chemicals (14.8 percent) (European Commission 2017d).
- Finally, the EU's imports from Morocco are composed of machinery and transport equipment (40.4 percent), agricultural products (23 percent), and textiles and clothing (20.3 percent). The EU's exports to Morocco are dominated by machinery and transport equipment (40.4 percent), followed by fuels, metals and minerals (12.4 percent), agricultural products (10 percent), and textiles and clothing (8.2 percent) (European Commission 2017e).

Some SMCs are ahead of others in terms of negotiations of Deep and Comprehensive Free Trade Areas (DCFTAs) including not only free circulation of goods, but also of agricultural products and services, free movement of capital and payments, harmonization of standards and sanitary and phyto-sanitary measures, industrial and intellectual property rights, harmonization of competition policy, and enforcing consumer protection. Yet, it is crucial to note that these agreements do not explicitly deal with gender equality and human rights on the labour market. This is why, in the qualitative analysis, all interviews must have a gender lens while evaluating EU policies in the region.

In the case of Tunisia, negotiations for a DCFTA began in April 2016, covering agriculture, services and sustainable development. These negotiations built on the existing EU–Tunisia Association Agreement, concluded in 1995 and entered into force in 1998 to create an FTA between both parties. The EU is Tunisia's largest trading partner, accounting for 62.8 percent of its trade in 2015. As stated above, the EU's imports from Tunisia consist of machinery and transport equipment, textiles and clothing, and agricultural products, whereas the EU's exports to Tunisia are dominated by machinery and transport equipment, textiles and clothing, fuels and mining products and chemicals.

In the case of Morocco, the Association Agreement was signed in 1996 and came into force in 2000. The Free Trade Zone between both parties came into effect in 2012. In addition to trade, cooperation between both parties covers technical issues, and legislative and regulatory convergence, which will be further negotiated in the framework of the DCFTA (launched on 1 March 2013). The EU is Morocco's leading trade partner. In 2012, the total share of Moroccan exports to the EU was 56 percent, and its share of imports was 47.3 percent. As for Lebanon, the Association Agreement with the EU entered into force in April 2006. The Agreement requires the Lebanese government to carry out financial, economic and administrative reforms to be in line with European and international standards, and to pave the way for the negotiation of an FTA. The European Union is Lebanon's most important trading partner, making up about a third of Lebanese trade.

Last, the EU–Egypt Association Agreement was signed in 2001 and entered into force in 2004. Negotiations were resumed after a temporarily halt in the wake of the January 2011 revolution. Exploratory discussions on the DCFTA began in 2012, followed by a dialogue that was launched in June 2013. However, these negotiations are currently on hold. As for Lebanon, DCFTA negotiations have not yet started.

In this context it is important to note that the DCFTA has been largely contested as some sectors will be negatively affected such as the traditional leather goods sector in Morocco,

while machinery and transport equipment might profit, causing an employment reallocation between sectors which might increase inequality not only in terms of employment opportunities but also at the gender level. If the traditional sector is more intensive in women than men, female workers are consequently more exposed to the negative impact of trade openness compared to their male counterparts.

To promote deeper integration, the EU has initiated policy dialogue and cooperation under the EuroMed industrial work programmes in 2006. Four phases of this programme took place, with the participation of nine SMCs: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, Syria and Tunisia. After the 2007–2008, 2009–2010 and 2011–2012 programmes, the fourth phase took place between 2014 and 2016 and includes elements that were supposed to be covered by the 2012–2013 work programme. Areas of work reflect the will to establish parallels between the policies of the SMCs and the European Union in the fields of manufacturing industry and services, in accordance with the Euro-Mediterranean Enterprise Charter. Subject to the available funds and in line with priorities of the European Neighbourhood Instrument (ENI), the European Commission could support these work programmes.

Furthermore, the EU attempted to increase South–South cooperation through the Agadir Agreement between the Arabic Mediterranean Nations, which was signed in Rabat, Morocco on 25 February 2004. This agreement aimed at establishing a free trade area between Egypt, Jordan, Tunisia and Morocco. Indeed, the rationale for the endeavour was the creation of an FTA aimed at increasing competition, boosting economic activity, supporting employment, increasing productivity and improving living standards.

Yet, the 2014–2016 work programme comprises four main objectives that are rather vague:

1. Improving the business climate, promoting entrepreneurship and SMEs based on the Small Business Act for Europe: The Enhancement of the Business Environment in the Southern Mediterranean (EBESM) programme is supported by the EU to assist SMCs in the implementation of recommendations formulated in their individual assessment. Another objective included in this pillar is to encourage SMEs to innovate and integrate in international trade by promoting several agreements on Conformity Assessment and Acceptance of Industrial Products (already started in Egypt and Jordan). The EU also provides support to business and investment partnerships in the South Mediterranean. The EuroMed Invest project was launched in 2014 with the objective of boosting business and private investments within the Euro-Mediterranean area, with special attention to the international development of micro, small and medium-sized enterprises (MSMEs) in the most promising sectors for job creation and economic spillovers, such as in the agri-food, transport and logistics, cultural and creative industries, water and green energies, and tourism sectors. Yet, it is important to note that, as it was mentioned above, gender issues were not explicitly addressed in most of those initiatives. This will be crucial in future interventions as most of the MSMEs in the Arab countries are either managed or owned by women. Such a policy tool will be central in reducing unemployment among youth and women, which are the segments that are highly affected by unemployment.
2. Establishing a major pan-Euro-Mediterranean market for industrial products through the Agreements of Conformity Assessment and Acceptance (ACAA) instrument and the elimination of technical barriers to trade: The European Commission is currently preparing for ACAAs with SMC neighbour countries though cooperation with relevant institutions in partner countries to carry out necessary institutional and regulatory reform, enhanced

harmonization, and recognition of accreditation and conformity assessment authorities. While not directly taken into account, labour rights and gender equality as part of the institutional reforms, must be addressed.

3. The new Pan-Euro-Med (PEM) convention and rules of origin are intended to replace the rules of origin protocols of all the existing free trade agreements of the region with one single instrument.
4. Dialogues on the textiles and clothing, and creative industries: These dialogues began in 2004 and provide a platform for the exchange of experience and information on available instruments and initiatives to improve the competitiveness of the textile and clothing industry across the Euro-Mediterranean area. National administrations, industrial associations, chambers of commerce, enterprises, trade unions and relevant research and educational centres are involved in this dialogue. Additionally, the United Nations Industrial Development Organization (UNIDO) and the Commission have launched a project on the Development of Clusters in Cultural and Creative Industries in the Southern Mediterranean in 2014.

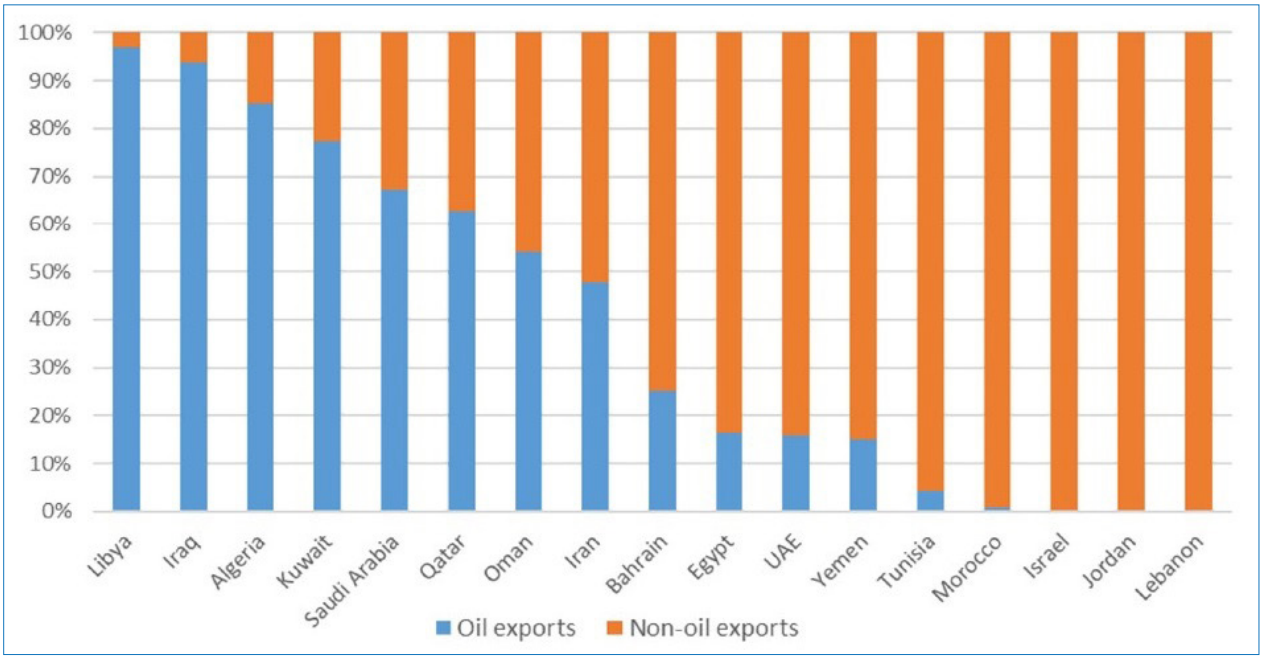
2. Energy

2.1 Overview of Energy in the Region

2.1.1 Overview of demand for energy

Figure 7 shows that most of the Southern Mediterranean countries have a very small share of oil exports when compared to Gulf Cooperation Council countries, Libya and Algeria. These countries face notable energy constraints, with some of them having become net importers of oil.

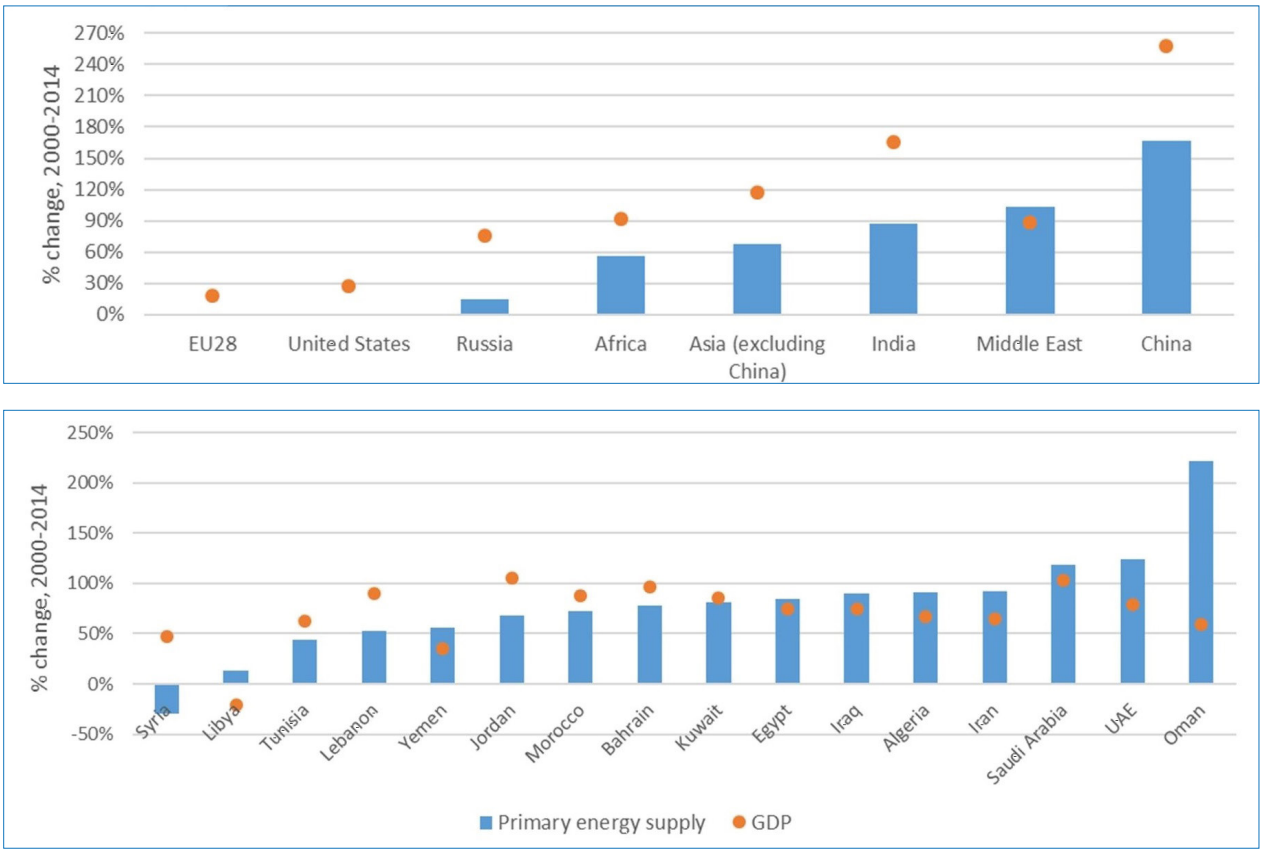
Figure 7 | Oil and non-oil exports (2014)



Source: Authors' elaboration using the World Development indicators online dataset.

Indeed, Figure 8 shows that the Middle East and North Africa region is the least energy efficient in the larger area, as energy consumption has outpaced GDP growth. Yet, disparities can be observed as some countries have managed to expand their economies while consuming less energy (Morocco, Jordan, Lebanon, Tunisia and Syria). By contrast, Egypt and GCC countries have been consuming more energy than reflected in their GDP growth rate highlighting the energy constraints faced especially in Egypt (Figure 8). At the gender level, it is important to note that energy strategies (or lack of) usually affect the lives of men and women who either have to manage high costs of such energy or accommodate their lives to cope with disrupted services and subsidies removal in some of the EuroMed countries (especially Egypt for instance). At the level of individual people, there is little data on the way that energy subsidy policy may affect women and men differently. Yet, the literature has proven that energy subsidies are not targeted and suffer from several problems. This is why poorly performing subsidies are not beneficial for impoverished women. At a national level, the removal of subsidies related to daily uses such as lighting and cooking fuels can negatively affect women's lives, especially in rural areas. Therefore, governments must adopt precautionary measures, ensuring that reform plans are designed to protect women's access to clean household energy sources.

Figure 8 | Percentage change in primary energy supply and GDP (2014)



Source: Tagliapietra (2017: 8).

2.1.2 A long-term increase in demand for energy

Between 2009 and 2030, the population of SMCs will increase by 78 million inhabitants while GDP will double. Hence, GDP per capita is expected to increase by only 41 percent (OME 2011). At the same time urbanization will continue, especially in countries like Morocco. Thus, the emergence of a middle class seeking better life standards is expected to create new demand and a higher level of individual energy consumption. Consequently, consumption of electric equipment goods (fridge, TV, washing-machine, air conditioner, etc.) is likely to grow faster. As a result, the southern shore of the Mediterranean will have to meet a huge growth of demand.

It is worth noting that consumption of primary energy by SMCs will increase by 50 percent in 2020 compared with 2010, from 328 to 495 Mtep[3] (OME 2011). The trend will persist in the following years. From 2013 to 2040 the demand for energy will double in SMCs. Demand for electricity will grow at an average rate of 5 percent per year, leading to a huge pressure to respond to energy demand (OME 2011).

To face such needs, the response will be different among countries that produce oil or gas (Tunisia, Egypt) and the non-producers (Morocco, Lebanon). It is worth noting that fossil resources represent 90 percent of the production of electricity in SMCs (compared with only 45 percent in European countries). Renewable energy still accounts only for 1 percent of this production. This means that even if voluntary policies to go green are on the agenda, the level of demand will be satisfied mainly by fossil energy. This long-term constraint will limit the effectiveness of an actual energy transition as additional production of energy will mainly rely on fossil fuel. The OME scenarios suggest that in 2040, renewable energy except nuclear will account for less than one sixth (50 Mtoe or RE to 320 Mtoe of the total) (OME 2011).

Another important solution is to improve energy efficiency, the potential for which is tremendous in the North and also in the South. A better efficiency will reduce both demand and CO2 emissions. Thus, the South may gain a lot if smart policies are launched for transportation and building. This is for example the case for Morocco which has a long and ongoing tradition of clay building.

2.2 EU Policy

Mediterranean policy of the EU in the energy sector has been strongly driven by bilateral policies of the Member States and by the regional Mediterranean Solar Plan (MSP), which was launched in 2008 within the framework of the Union for the Mediterranean (UfM).

2.2.1 The future of the European energy policy: The Energy Union

The increasing focus of the European Commission on energy has been proven by the recent creation of the Energy Union, the initiative launched by the Juncker Commission in February 2015 with the publication of two Communications and aimed at covering the whole spectrum of European energy policy. Indeed, despite a strong initial anti-Russian focus, the final proposal of the Energy Union was framed under five omni-comprehensive dimensions: security of

3 Mtep stands for million-ton equivalent of petroleum.

supply, energy market, energy efficiency, decarbonization, and research and development.

In its two years of operation, the Energy Union has been significantly active, in particular through the delivery of three legislative packages. The last one, the second "Winter Package", contains the most ambitious initiatives ever taken on European energy policy. Indeed, it involves more than one thousand pages of documents and thirteen pieces of legislation or legislative proposals, ranging from decarbonization to energy-security-related measures. Yet, the Commission initiative has still a long way to go to achieve full implementation and, despite its declared focus on energy efficiency and its wide-ranging nature, the greatest share of its action has been taken in the field of security of supply.

VP Maroš Šefčovič has truly been the first "energy diplomat" of the EU, achieving key results in delicate issues, as in the case of the still ongoing trilateral talks between Ukraine, the EU and Russia. The Energy Union has also had a relevant role in the Mediterranean, strengthening for instance EU–Algeria energy cooperation, actively participating in the launch of the three energy platforms and establishing a high-level energy dialogue with Turkey. Considering the possible evolution of the Southern Gas Corridor towards Eastern Mediterranean resources, and the need for increased regional cooperation in the area, a structured initiative such as the Energy Union could be of focal importance to strengthen the energy dialogue between the two shores of the Mediterranean and deliver key energy infrastructures.

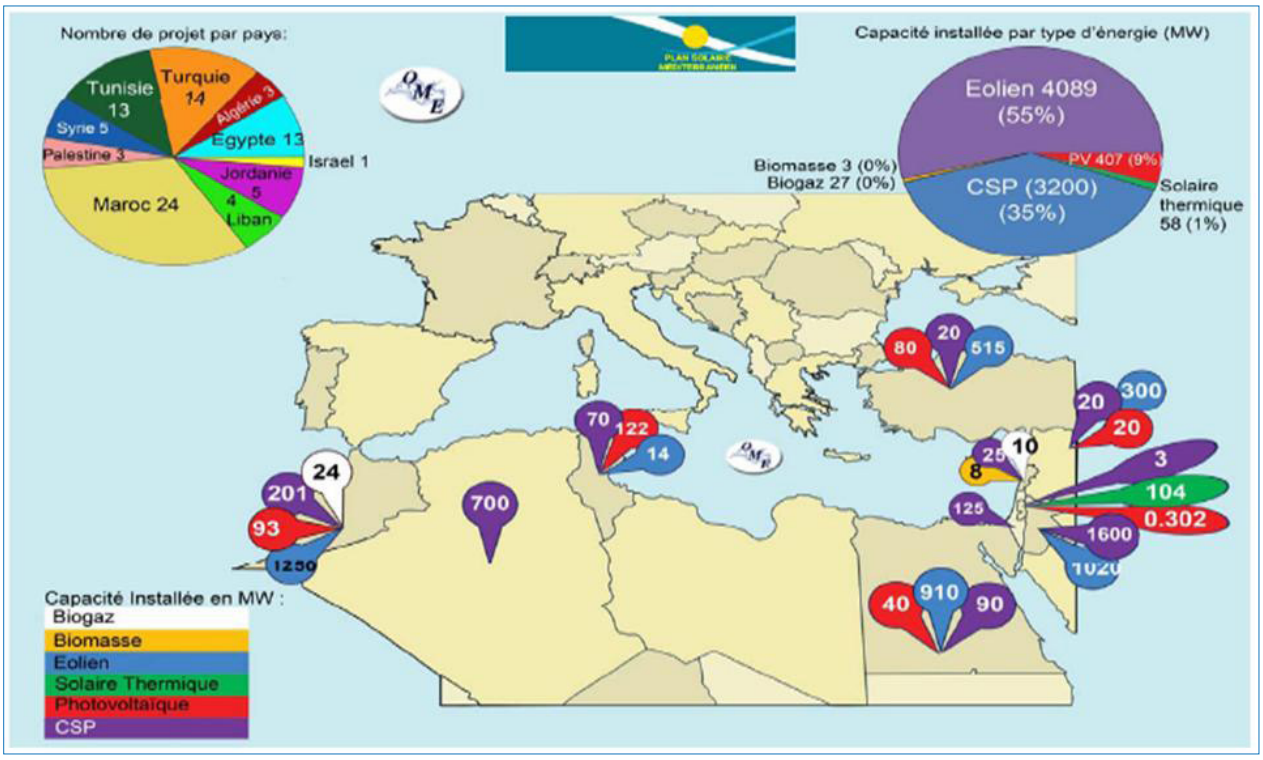
2.2.2 The need for a new Mediterranean energy initiative after the MSP

The Mediterranean Solar Plan had both political and industrial objectives. It was part of the Union for the Mediterranean (2008), which was the successor to the New Neighbourhood Policy (2004) and tried to enforce the Barcelona Process (1995). The MSP was considered as the general framework of the EuroMed Policy. Its aim was the development of renewable (mainly solar) energy systems for power generation in the Mediterranean, with the purpose of achieving a capacity of 20 gigawatts/year by 2020 (Darbouche 2011). At the same time, the German government launched the Desertec programme (2009) based on the development of a EuroMed network of concentrated solar projects linked in a transmed grid. Desertec was a bottom-up initiative of German industry, launched by a consortium of European companies, and in competition with the MSP as a top-down project. We can notice here a huge difference in energy policy approaches between France and Germany. Desertec was the result of regular meetings over a long period of time including various stakeholders (mainly big German enterprises, researchers and public organizations). The concept and the philosophy of Desertec emerged from intensive discussions with stakeholders including German companies such as Siemens but also Algerian ones like Cevital. The French approach was completely different. It was mainly a political decision within the Mediterranean Solar Plan integrating stakeholders around the French public electric grid operator (EDF-France, Tunur-Tunisie, Terna-Italia, ONEE-Morocco). It took time to conciliate the different strategies of Desertec on one hand and the Medgrid consortia led by the French on the other. These different initiatives demonstrate the potential difficulties in combining EU multilateral policies with the bilateral interests of Member States. One of the positive results of the MSP is that most of the Southern Mediterranean countries have developed national solar plans and have formulated national strategies supported by international donors such as the World Bank, the African Development Bank, and the European Investment Bank. Thus, renewable energy including solar energy has received government support, becoming an important component of the international fight

against global warming.

From the beginning it was decided to launch concrete plans, with a target of 1GW in 2010. Whereas 120 projects were identified at first, the conditions determined by the SMC piloting group were: the agreement of the heads of State, the existence of a project carrier for each project adopted, and the profitable nature of the projects (Figure 9). But the effective implementation of such planned projects was very limited.

Figure 9 | Initial projects of solar plans



Source: OME and French Ministry of Ecology (2009).

Rather than a Mediterranean plan dealing only with solar energy, the MSP is actually a plan for renewable energies, with near equality between solar energy and wind energy. The latter is already present in a certain number of countries on the southern shore of the Mediterranean, in particular Egypt.

In parallel with the MSP, the Desertec project was launched in 2009. It was based on previous initiatives such as the Trans-Mediterranean Renewable Energy Cooperation and supported by Europe and in particular Germany.[4] The Desertec project aimed at producing green electricity in the desert with a series of concentrated solar units and at exporting a part of it to Europe through a high-voltage trans-Mediterranean grid.

4 The Trans-Mediterranean Renewable Energy Cooperation (TREC) was an initiative in the field of renewable forms of energy, on the part of The Club of Rome, the Hamburg Climate Protection Foundation and the National Energy Research Center of Jordan (NERC). It was founded in September 2003, and developed the Desertec concept.

After a few years, however, it became clear that political issues and economic challenges were much greater than initially assumed. In 2014, almost all of the stakeholders left the Desertec project. One of the main reasons was that governance issues had been largely underestimated, as had costs. The requisite long-distance infrastructures (high-voltage direct current grid) were lacking. The MSP also failed when in 2013 the Ministers of Energy refused to approve the master plan elaborated by the secretariat of the Union for the Mediterranean. It became clear that, for example, the possibility for Mediterranean countries to export green energy had been overestimated and even impossible due to the huge local demand for electricity. It also became clear that Spain was increasingly reluctant to import green electricity as its own capacity for solar electricity was more than sufficient and the debts due to subvention to the sector were already too high. Ultimately, the failure of the MSP shows the lack of unified perspective for European energy.

Yet at the same time, European policy helped to launch numerous projects that were afterwards financed by the SMCs with aid of European countries within the framework of bilateral funds.[5] European policy raised awareness of the need for an energy transition, and helped to create forums and meetings between the stakeholders. In brief, the MSP has paved the way for national solar plans.

However, as Kilpeläinen (2013) notes, the academic and policy debate on the development of renewable energy in the South East Mediterranean (SEM) region tends to be focused around technical and financial feasibility issues, completely neglecting social and environmental concerns. It furthermore does not take into account how SEM countries perceive EU energy policies in the Mediterranean, which would help to establish "sustainable and equal relations" between SMCs and European countries.

2.2.3 The climate change context

Policies concerning energy must be included in the climate change agenda and the fight against climate change. Indeed, Morocco hosted the COP22 and seized the opportunity to confirm its will to reinforce its contribution to the Paris Agreement. Moreover, all countries involved in the study confirmed their intended contributions, as shown in Table 3.

It is crucial to mention that the international climate change agenda has opened huge opportunities for Europe to reinforce its cooperation with the SMCs. Europe could help improve technology transfers, boost a general framework for investment and increase capacity building in strategic sectors including research.

5 For example, the Italian company TerniEnergia will build in Tunisia the biggest photovoltaic central in the Maghreb for a total capacity of 10 megawatts (MW). France helped with the Moroccan plan for rural electrification.

Table 3 | Intended nationally determined contributions (INDCs) or Paris Agreement

	Energy efficiency	Renewable energy	CO_2 mitigation
Lebanon	-3% in electricity demand vs. BAU (up to -10% conditional target)	15% of electricity and heat (up to 20% conditional)	Min of -15% compared to BAU (up to -30% conditional)
Morocco	-15% of energy consumption	52% of electricity capacity	Min of -13% compared to BAU (up to -34%)
Tunisia	-30% of energy demand vs. 2010	30% of electricity generation	Min of -9% compared to BAU (up to -38%)
EU (Cyprus, France, Greece, Italy, Malta, Portugal, Slovenia, Spain)	A minimum 27% decrease of energy demand in 2030	A minimum 27% increase of RE in 2030	-40% GHG compared to 1990

Source: Guarrera (2016: 24).
Notes: BAU means business as usual which is the benchmark scenario, GHG greenhouse gas emission and RE renewable energy.

2.2.4 Improve transport infrastructure for electricity

The profitability of the projects of the Mediterranean Solar Plan – or any transnational project on electricity – assumes the construction of transport infrastructures for electric current between the Southern zone and the Northern zone. If export is considered (which is not limited to countries sharing common borders), it is also necessary to implement a trans-Mediterranean network of specific lines.

Indeed, one of the problems with electrical energy is the amount of loss during transport, which is significant for distances higher than 1,000 km. Even if countries on the southern shore of the Mediterranean were to improve their conventional electrical communication to match the standards of Eastern European countries, over a distance of 3,000 km, 45 percent of electricity would be lost with the current networks (DLR 2006). The only solution is to use high voltage direct current (HVDC) which would limits the losses to 10 percent over this distance. These HVDC lines can be likened to super motorways for electricity, since they would be reserved for longer distance transport and the interconnection of domestic networks. They would strengthen the global safety of the system in case of local system failure, and would have only a limited number of contacts with the national networks. Yet, the problem is that these lines exist only partially, and we are very far from a network sufficient to permit electricity transmission from North to South (Figure 10).

It is worth noting that the construction of these infrastructures is not a serious problem in technical terms, but it entails very heavy investments. To date, no solution has been found to finance the HVDC grid between Tunisia and Italy despite several projects such as Elmed or more recently TuNur.[6]

6 See the TuNur website: *Transmission*, http://www.nurenergie.com/tunur/index.php/english/project/transmission.

Figure 10 | Mediterranean electric grid

Source: DLR (2006: 15).

2.2.5 The relative success story of the Prosol project

Tunisia launched the Prosol programme in 2005 (Missaoui 2007). Lasting for more than 10 years, this innovative project supported renewable energies not on the basis of large infrastructure projects but with the diffusion of a simple and decentralized technology. By associating banks that provided loans to consumers and by granting subsidies targeted by the government, the Tunisian government was able to widely diffuse the use of solar energy for the heating of domestic water. The loans for construction were refunded by direct levy on the electricity invoice, thereby limiting the risk assumed by the financial operators. From 2004 to 2008, installation of the sensors rose from 4,000 m2 to 85,000 m2. The sector allowed the creation of 750 installation and maintenance companies and provided employment for 2,000 people. On the basis of this success, the experiment is going to be widened to the industrial sector. Tunisia has just launched a plan for installation and management, over the period 2011–2014, of 10 MW photovoltaic installations on 5,000 residential housing units (2 W/k/house).

This relative success story suggests that the future of solar energy lies in the diffusion of simple and decentralized technologies such as cold solar energy and solar water heaters, parallel to the creation of wide-area networks of production and infrastructure. Such initiatives are likely to have generally a positive impact on household and livelihoods and in particular help women and men control resources in more effective way especially that households are independent in their usage of solar energy.

3. Challenges for a New European Policy on Industry and Energy

3.1 Challenges for Industry and Trade

Industry and trade face several challenges in the EuroMed region. For trade agreements, one of the first elements that contributed to the difficulties in implementing a deep and comprehensive free trade area was the heterogeneous positions of the European actors regarding the idea and the modalities of an FTA with the Mediterranean region. This heterogeneity delayed the signature and the negotiations between the two parties. The DCFTA would aim at improving market access opportunities and the investment climate, and at supporting economic reforms undertaken by countries from the southern shore of the Mediterranean. It would also entail a significant extension of the scope of the existing Association Agreement to include trade in services, government procurement, competition, intellectual property rights and investment protection.

Another important issue is that countries in the Southern Mediterranean have not succeeded in integrating their economies. Their intraregional trade still stands at very low, prohibitive levels. This frightens off international investors. As a consequence, they still hold a very low share of global FDIs, considered necessary to stimulate economic development. One of the drawbacks of existing FDI is its concentration in the oil sector which has low added value and is capital-intensive. This is why FDI coming from the EU has not had a significant impact on employment and on the value-added rating of the industrial sector.

However, it is worth noting that the EuroMed Association Agreement between the EU and Egypt, in force since 2004, does not contain substantive provisions on the establishment, treatment or protection of foreign investment. Nevertheless, various aspects of investment are covered by provisions such as those on movement of capital, cooperation or investment promotion. At the bilateral level, there are currently 22 bilateral investment treaties (BITs) signed between Egypt and most of the EU countries, which will continue in force unless terminated by the two parties or replaced by a new agreement with the EU. Their provisions aim at reciprocal promotion and protection of foreign investment and usually provide for investor–State international dispute settlement mechanisms.

However, measures taken to attract foreign direct investment should not go against workers' rights. Indeed, since the 1990s, in order to increase foreign investment, governments of SMCs have revised labour codes to deregulate the labour market by ensuring freedom of hiring and firing, restricting the right to strike and allowing the use of fixed-term contracts. Therefore, another key challenge facing the manufacturing sector in the SEM region concerns the low quality of working conditions. Indeed, the integration of many SEM countries into the international and European market has been often based on low-cost outsourcing in unskilled activities, generally tapping into a reserve pool of young female labour (Paciello et al. 2016). For example, since the 1980s, Morocco has become a key supplier of garment products to the EU. While this industry provides an important source of employment for women, working conditions here are very poor, with very low wages, long working hours and temporary contracts. As several studies show, in Morocco the increase in labour-intensive, export-oriented activities in the clothing/textile industry has been made possible thanks to the employment of a large

number of women – mostly youth and teenagers from poor and vulnerable households – in very bad working conditions and for low wages (Paciello et al. 2016, Clean Clothes Campaign 2003, Errazzouki 2015). Moreover, as Arianna Rossi (2013) shows in her work on garment factories in Morocco, economic upgrading in global production networks does not necessarily contribute to the achievement of social upgrading for workers, namely improvements of their rights. While working conditions appear to improve for regular workers, the opposite happens for irregular workers since the new activities are associated with even greater pressure on flexibility, reactivity to market demands, and speed of delivery (Rossi 2013). More in general, very little is known about how EU policies targeted to the manufacturing sector in the SEM region have so far affected local working conditions, including their gender implications. WP6 will seek to shed light on these aspects which are particularly relevant from the perspective of local people, thus investigating the perspectives of those stakeholders directly concerned with labour issues (trade unions, business organizations, EU associations working in defence of labour rights in SMCs such as OXFAM International and so on).

Furthermore, the global financial and economic crisis that began in North America and Europe in mid-2007 has clearly underscored the risks of SMCs' heavy dependence on trade exchanges with the EU (Paciello 2010). Therefore, from the perspective of SMCs, the diversification of trade partners outside the EU might provide a more convenient option. In addition, when discussing EU trade policies in the Southern Mediterranean region from the perspective of local needs, it is important to bear in mind that, with the dismantling of tariffs on SMC products that are more sensitive to competition from European products, the establishment of a Euro-Mediterranean free trade area is likely to have high social costs for many small and medium-sized firms in SMCs, which might be unable to compete with higher quality EU goods. As a result, the problem of unemployment and labour precariousness is likely to worsen throughout the period of adjustment especially for women who perhaps have lower choices and opportunities than men, unless concrete action is taken to mitigate the negative social effects associated with trade liberalization (Paciello 2010).

Relatedly, some authors also question the effectiveness of trade policies in encouraging industrial diversification in the SEM region. For Morocco, Yusuf (2014) shows that by implementing trade liberalization with the EU, the country is not following the most appropriate policy to improve people's living standards and encourage production diversification toward more sophisticated manufacturing products. Indeed, trade liberalization has so far led to reinforcing specialization in producing goods in which Morocco already enjoys a comparative advantage, namely low-value products such as textiles and clothing that is female intensive. Hence, while there is an opportunity for women to boost their employment, there is also a significant threat if women's rights are not respected in these sectors.

Finally, EU–SEM trade cooperation and policies aimed at industrial upgrading in the Mediterranean region need to take into account their environmental implications (Cheterian 2010, Syngellakis 1997). In other words, in order to respond to local people's needs and interests, they will have to reconcile with environmental protection and sustainable development. One of the major negative environmental consequences of industrial development and increased trade is increased pressure on resources such as water and soil, and increased pollution (Syngellakis 1997). Also there is the risk that in order to attract foreign investment, SEM countries will lower environmental standards in specific economic zones. Given the lack of information and research about the linkages between environmental impact, industrial development and

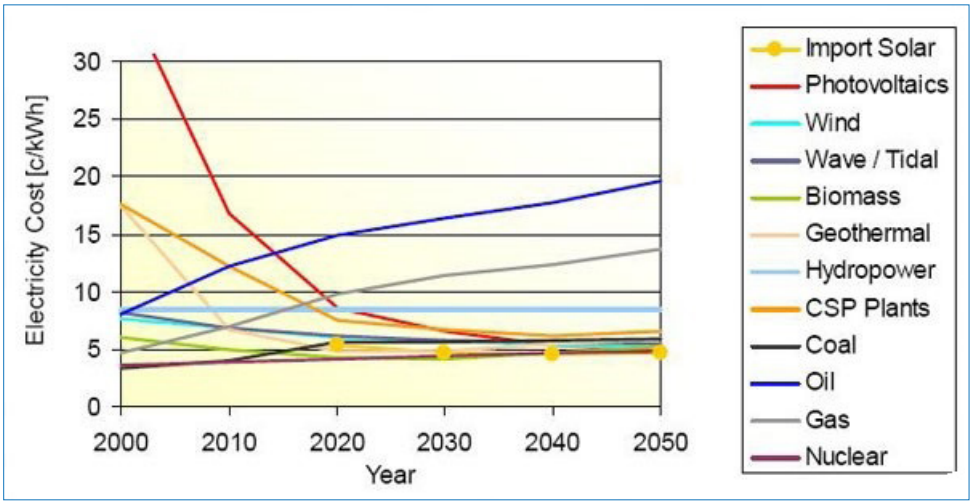
trade liberalization in the Mediterranean region, WP6 will also attempt to better understand the implications of EU industry and trade policies on the environment, as well as how local stakeholders perceive and frame such problems.

3.2 Challenges for Energy

3.2.1 The challenge of financing the energy transition

One of the biggest challenges of the energy transition is to bridge the gap between the cost of the renewable energy kilowat (KwRE) and the fossil energy kilowat (KwFE), as illustrated by Figure 11. The following graph indicates that such a gap may be bridged in the next decades. Until this crossing point, renewable energy can only be developed if combined financing solutions are adopted in order to facilitate investments in non-profitable activities.

Figure 11 | Gap between fossil and renewable energy



Source: DLR (2006: 11).

The problem of financing renewable energies is primarily one of massive initial investments – calculated at 75 billion dollars – to build the infrastructure of production and transport and to finance research, which will enable a sufficient decline in the costs. The costs are primarily fixed and must be borne over a long period. Once benefits surpass costs, the production will be profitable and drawn by strong demand. Thus, there is a double uncertainty: the trajectory of fossil raw materials, and mobilization of the threshold of required investment to exceed the critical point. It is clear that the public sector alone cannot cover these levels of investment (Viard 2008) and it will be necessary to articulate dynamic private sector investments with official and public guarantees and the installation of means of financing that distribute the risk and reduce the horizon of profitability of this type of investment.

The most widespread means to develop investments in renewable energies is the contract of long-run purchase concluded with a current distributor, whereby a fixed purchase price is guaranteed over a duration of several years (feed-in tariffs). This scenario presupposes that private operators can produce electricity and diffuse it on the network, which is not possible for some Southern Mediterranean countries. The tariffs can vary according to quantity, place, type

of production, methods of delivery, etc. Following Germany, most of the European countries have enacted legislation allowing the development of such contracts, which are attractive for both individuals and companies. For the Mediterranean Solar Plan, this solution will certainly be privileged because of the public-managed nature of the energy market in the countries of the southern shore. Each State will have to allow the concluding of contract by mutual agreement, either with the main line operator (generally a public enterprise), or with economic actors needing electricity.

This procedure can also be launched by invitation to tender (competitive bidding). The best supplier in terms of price proposal obtains the market. This method supposes the existence of many private operators who can enter into competition, which is not yet the case in the Southern Mediterranean countries. Even if individuals have low potential to take part in this process, especially in the Mediterranean countries, small organizations, enterprises, and even communities may intervene in the market. At the moment, except for the Prosol project discussed below, the positive implications for local populations remain very low.

A second means of supporting the financing of renewable energies (renewable portfolio standards) consists of imposing on electricity producers an increase in the share of clean energies in their production. This is a solution largely adopted in the United States. Along these lines, Tunisia is considering the extension of the use of energy-saving lights. Allocating specific funds for renewable energies makes it possible to facilitate investment in companies that are developing new innovating projects. Such measures feed the funds of venture capital but can also finance research and accompany the creation of infrastructures, to provide long-term loans or to guarantee certain risks that the banking system or insurers would cover at prohibitive cost. As an example, the InfraMed fund was created in April 2009 to finance the development projects within the framework of the UfM. The fund brings together the Caisse des depots et Consignations (France), the Cassa Depositi e Prestiti (Italy), the Caisse des depots et de Gestion (CdG) of Morocco, and the Egyptian investment bank EFG-Hermes. Net metering is a mode of invoicing for individual customers who have small production capacity. The electricity invoice reflects electricity consumed net of electricity injected into the network. The idea underlying this project was to support development of small production capacities on the part of private individuals, in particular photovoltaic installations.

Another possibility that is becoming more widely available in the provisions of international agreements is the use of commercial instruments like certificates of renewable energy. To fulfil their obligations in terms of renewable energy utilization, companies can provide certificates of renewable energy, which are exchangeable on a market that could be open to developing countries. There exists an organization gathering 18 European countries that exchange on this "market" where the sale of certificates makes it possible to lower the production costs of renewable energies.

Finally, incentives for the purchase of manufactured products consuming less electricity, with possible tax exemptions, can support the reduction of consumption.

3.2.2 Overcoming the limits of the regional approach

The Union for the Mediterranean aligns with the Barcelona Process (1995) which was a regional project aiming at promoting the Mediterranean as a whole. The UfM insisted on

regional cooperation with different instruments to improve South–South links. The rationale was to create an integrated energy market in the whole region. The multilateral approach is highlighted in the documents of the UfM. The most recent initiative, to establish three energy cooperation platforms for gas, electricity and renewable energy, aimed at facilitating partnerships, trust and transparency between UfM member states and energy stakeholders in the region (EU, State organizations, energy enterprises, consultants, local committees, NGOs) as well as researchers. But as we noted earlier, previous efforts to launch regional programmes were partially unsuccessful. Such initiatives lack the political will to change day-to-day cooperation, which is mainly based on bilateral agreements and national interests. In reality, the level of intra-regional trade between the SMCs is very low. In addition, the energy market is fragmented in the region and the present situation of instability after the "Arab spring" makes a dynamic regional cooperation difficult for the immediate future. It is thus necessary to develop at least a shared vision for the future.

3.2.3 Issues in developing governance for public–private partnership

Clearly, the MSP did not achieve its objectives and needs to be adapted. Such a project cannot exist without significant participation of the private sector, both in the construction of infrastructure and the creation of production capacities. Whilst the construction of large power plants poses no problem in principle, the involvement of a multitude of small producers and small investors is more problematic. Similar to what happened in industrialized countries, small producers will probably be the only ones that can ensure the emergence of a real industrial base for energy. The States may launch big projects such as the Solar Unit Nour in Morocco but public investments will be limited compared with the importance of the renewable energy sector in the future. Government alone will not be able to meet the needs of the energy transition.

Yet, when moving from the macro to the micro level, and from public organizations and decisions to the business of the private sector, questions of governance process and technology choices arise. It seems necessary to complement the traditional regional approach by a bilateral and feasible approach and to promote public–private partnership. Such a method will ensure that cooperation will be based on the crucial interests of the SMC, but also will mobilize the huge investments needed to meet the growing demand. There are some very specific questions that investors need to address when they decide to invest in a country:

- What laws govern the market?
- Under what conditions (if any) can a company generate electricity and use the national infrastructure?
- What about actual practice beyond the legislation?
- Is there a sufficient time horizon and a high degree of certainty about pricing conditions (purchase price, network access) – which inevitably raises the issue of trust in the State policies and the different administrations involved.
- How can potential conflicts be dealt with at different levels?
- What technical and security standards will be defined?
- How will international agreements secure the flow of investment and/or regulate international trade in electricity?
- How much financing is required?
- What are the tax benefits, and what are the guaranteed rates of return on local and international levels?

- How are fees calculated for the use of national and transnational networks?

We may interpret the difficulties encountered by the MSP as reflecting governance issues and political economy constraints that have been underestimated. This is mainly due to a centralized approach and also a growing gap between a regional approach including all South Mediterranean countries and the reality of energy exchanges which are based on bilateral trade. For example, the HVDC grid between Tunisia and Italy should be financed by Europe but other European or SM countries (except Tunisia and Italy) are not really interested in this project.

Energy transition is also a question of political economy, i.e., the political tensions and conflicts between the different stakeholders (the business elite tied to incumbent regimes, trade unions, business organizations representing different interests, European companies, consumer organizations and so on). In coercive regimes, large reforms even against the interests of the main stakeholders may be facilitated. This was the case for the Prosol project. The State was strong enough to exert force on the national monopolistic producer of electricity to accept that consumers would pay for their individual solar installation via their electricity bill. While this was a crucial aspect of the success of the programme because it gave strong guarantees to the banks, it did not benefit consumers. On the other hand, decentralization of energy production and consumption need the participation of individual stakeholders who learn to participate in decisions in the public space. This in turn means that renewable energy policies may be a driver for democracy, enable better voicing, and create a channel of intervention for civil society.

3.2.4 Developing small grids and small solutions

It is important to identify the philosophy underlying the choice of organization and policies regarding renewable energy. Historically in all countries, the choice was a highly centralized system with connected national and transnational grids where a public monopole produced and distributed electricity. Even if the structure (grids) and the production tend to be differentiated, and if newcomers and new providers intervene on the grid, the historical choices remain visible.

However, renewable energy may completely change the philosophy because small production units can produce for local needs without connection to national grids. Communities may for example produce their own electricity with a set of different technologies adapted to their specific resources. This is turn will increase access to electricity, especially in impoverished rural areas. For the Mediterranean Solar Plan, the choice was a centralized setting premised on a network of trans-Mediterranean high-voltage power lines to ensure the continuous flow of electricity over long distances. This is the fundamental option favoured by France and Germany with their different consortia Medgrid and Desertec. The philosophy was to support large production units by leveraging the power concentration. We think that this choice in fact provides part of the explanation for the failure of the MSP. Instead, the development of renewable energy should be based on small units for local needs. A multitude or small investments, of small units, of small grids at all scales may lead to huge development in the renewable energy sector. For instance, the Prosol programme in Tunisia which supports individual solar-water heaters was a success because it relies on the multiplication of individual solar-thermal installations. Such a decentralized philosophy does not fit the views or interests of industrial lobbies, but is very effective and inexpensive.

3.2.5 Create good quality job opportunities

The oil industry creates very limited job opportunities since it is a highly capital-intensive sector and provides job opportunities only for a very low number of occupations such as petroleum engineers who often need to be imported. So, as far as renewable energy is concerned, projects and policies implemented in this field should start exploiting the potential for creating large numbers of good quality jobs, especially for women. Indeed, the oil industry is in general highly capital intensive and the labour used in it is chiefly male-dominated. This is why renewable energy policies may be perceived as gender improving.

3.2.6 Identifying stakeholders and policies from a bottom-up perspective

Considering the previous elements, it is important to go further than official State policies on energy, even if Mediterranean countries are still largely centralized. Energy policies are still considered as falling absolutely within the competence of the government. In most countries, the producer and supplier of electricity is a unique public entity in a monopolistic position. Distribution and production are not always separated and private producers are strictly limited in operation. In such a context, energy policy remains a top-down affair elaborated within a limited number of actors (State organization, Energy Ministries, think tanks).

By contrast, energy transition represents both an opportunity and a challenge to open the energy market and to include a greater number of stakeholders on the production and consumption side. Renewable energy concerns also the civil society, which must be included in the policy process to guarantee its efficiency. This is because acceptance of the policies and changes in behaviours or representations are key elements for success.

In order to understand the challenges of the energy sector for the EU, it is thus important to identify all the stakeholders in a multi-scalar approach and from a bottom-up perspective. It is necessary to involve the NGOs, academic researchers, the local communities, and even the citizens in a new way of governance if we are to explore all the potentialities and the opportunities of the renewable energy sector. The Prosol project in Tunisia was a good example of an inclusive system. Taking into account the advocacy of associations or of civil society is of great importance even if their voices are still hardly heard. This will be highly policy-relevant in order to examine how different segments and especially women perceive energy issues. This must be addressed in the fieldwork as data on these issues do not exist.

4. Methodology

4.1 Conceptual and Theoretical Framework

WP6 aims to investigate Euro-Mediterranean policy regarding industry and energy in order to deconstruct the theory and practice, and try to pave the way for a new approach or consolidate what has been gained so far. In particular, the research will seek to understand whether EU policies in the energy and industry sectors in the SM region respond to people's welfare and local economic needs (e.g., job creation, industrial diversification, effects for local firms vis-à-vis multinational companies, and so on).

To achieve this objective, the WP6 framework will be based on several theoretical approaches that must be combined in order to give a critical view of the past and pave the way for a better understanding.

1) A constructivist approach in order to analyse the two sectors' policies as a "social fact" constructed in a complex dynamism of historical actors. This means that multilevel stakeholders are competing and collaborating in order to defend their own interests or their own views. For example, a lot of NGOs defending the environment are critical toward the nuclear options of the French government. The States, the international organizations, NGOs and civil society all try to impose their view in order to portray a desirable future. Analysis of the different positions/discourses by the various stakeholders in the different countries will be included in the country reports. All the stakeholders have a moving position in the hierarchy, have different economic and political interests, and have different concerns. They try to influence policies and to impose specific norms. This means that they compete to impose their own representation of the problems. They act to gain power or to reinforce their legitimacy to act. Today, policies can no longer be decided at the top and need to be elaborated and shared by most of the stakeholders. Participative governance is a way to delimit options, norms and visions to make possible a collective public action instead of a top-down policy. Because of the growing participation of different stakeholders, it is necessary to understand how they interact and how they build a common agenda. The constructivist approach identifies the stakeholders (taking into account also the gender dimension), describes their respective positions, and reveals their views and interests. It allows an understanding of the dynamics under the delimitation of what is possible or not, what is desirable or not, and the sphere of possibilities.

2) Second is an institutional and historical approach. Yet both sectors, industry and energy, are interconnected and follow long-term tracks as heavy investments are usually required. This means that the constructivist approach must be completed by a structural-institutional analysis. Historic decisions such as for example the choice on nuclear energy in France create an irreversible path and a series of institutional actors that strongly constrain future decisions. Such actors play an important role but they are very often limited due to the "institutional path". Another aspect is, for example, the availability of resources. A rentier State such as Egypt acts very differently from Tunisia or Morocco which have limited fossil resources. It is then very important for the fieldwork to try to identify both the "institutional path", which is a long-term constraint that limits the horizon and imposes specific challenges, and, at the same time, the capacities of the multilevel players to propose and to be involved in innovative policies in order to address the challenges in transition to renewable energy. In such a perspective we will give information on the structural trends concerning, for example, the strong need for energy on the South shore of the Mediterranean due to both demographic and economic growth. This is a major constraint that must be articulated with the limitations of greenhouse gas emissions. Country reports will highlight specific political economy dynamics (particular configuration of political–business elites, business associations and trade unions and so on). An example of the "institutional" aspects was given in the case of the MSP and Desertec. Both failed because the political economy dynamics, including the conflicts or compromises between the stakeholders, were underestimated. The energy sector must be understood as a complex configuration system inherited from the past and having a positive and stabilizing function. The renewable energy sector, as it allows small-scale decentralized production, allows also new organizational models with a better distribution of power between the stakeholders. As the State is still a prominent actor in the decision process, the private sector in SMCs remains

very close to and dependent on the public sector. But the renewable energy sector opens new perspectives in this regard.

3) A geopolitical approach to the EuroMed zone: another dimension that must be addressed concerning both energy and industry is the will and the possibilities for the two shores of the Mediterranean to establish long-term strategic policies based on multilateral agreement in public investment – or instead to choose a general framework for cooperation in order to let the private sector do the job. The question is then, would Europe and its SM partners be able (or willing) to establish a EuroMed sectorial strategy on energy as Europe has done with, for example, aeronautics? The latter option would be limited to a bilateral or a multilateral agreement on a framework or a set of regulations where stakeholders and mainly the private sector will play. We will give some examples of what might constitute a Euro-Mediterranean community of energy.

The methodology of WP6 sets out, therefore, to employ the three dimensions mentioned above: constructivist, structuralist and geopolitical. The interviewers must be able to identify in the interview guides what is relevant for the different aspects. If possible, a cartography of the actors must be drawn: who are the players (including the weak stakeholders who have little or no voice, including workers' organizations in industrial and energy sectors, women, consumers and so on), what is their position in the game, what kind of relations they have or do not have. Do they have a prominent or a dominant situation? At the same time, the analyses must reveal the long-term structural constraints, especially for women who are likely to be more affected by both industry and energy interventions if the latter are not gender-sensitive.

For each country case study, the respective partners will therefore identity a list of stakeholders to be targeted in the fieldwork. Particular attention will be given to ensuring a heterogeneous sample representing multiple views (e.g., independent trade unions; labour organizations; organizations operating in the area of social and economic rights; associations of manufacturers; businessmen's associations; NGOs that are partners of EU projects, and so on). In line with MEDRESET's innovative approach, particular attention will be given to including those actors who have been excluded by EU interventions and Euro-Mediterranean dialogue as well as representing non-coopted sectors of civil society. Furthermore, the list will also include European and EU-funded stakeholders in both fields.

WP6 will also undertake a qualitative assessment of a selected number of EU-funded projects and programmes in the field of renewable energy manufacturing carried out in the four country case studies.

Finally, WP6 will integrate a gender perspective by involving a partner with specific gender expertise (ASI-REM), providing advice on the conceptual and methodological paper as well as on the policy brief so as to ensure a gender dimension in both research and consultation processes. Moreover, attention will be devoted to understanding the gender implications of EU policies in the energy and industry sectors – for example, how women and men influence or are influenced by the issue under investigation, or the extent to which women and men can access, use, benefit from and control resources and outcomes (Ghosheh 2017). In addition, in selecting the sample of stakeholders to be interviewed, researchers in the WP will attempt to "ensure that [women's and men's] voices and viewpoints are represented" (Ghosheh 2017). In analysing primary and secondary sources related to energy and industry, WP6 will report on

gender-sensitive findings or lack of (Ghosheh 2017).

4.2 Research Techniques

WP6 will combine a variety of research techniques that are discussed below.

4.2.1 Literature Review

Formal and informal reports from national institutions and international organizations will be thoroughly reviewed in order to determine the main characteristics of industry and energy in our countries of interest, the principal challenges facing them, the main EU interventions, and the reasons behind the failure of some of the EU projects.

The academic and grey literature which has emerged in the Middle East and North Africa and in Europe will be reviewed to critically examine the impact of different EU policies in the field of manufacturing industry (including trade liberalization) and energy (including renewable energy and energy transition), from the perspective of people's welfare and local economic needs (e.g., job creation, decent employment opportunities, labour rights, industrial diversification, local firms vis-à-vis multinational companies, sustainable development, and so on).

4.2.2 Analysis of Quantitative Data

In order to better assess the characteristics of the four country case studies in the energy and industry sectors, WP6 will also take into account the following data:

Competitive Industrial Performance index: This index is composed of 8 indicators assessing industrial performance based on an economy's ability to competitively produce and export manufactured goods. Each indicator is weighted on a scale of 0 to 1. It is an objective index of the current competitiveness and manufacturing potential of 142 countries around the world for 1992–2012. It has three dimensions: (i) capacity to produce and export manufactured goods, per capita; (ii) technological dependence or technology upgrading in terms of intensity and quality; (iii) world impact on manufacturing added value and manufactured exports.

Bertelsmann Transformation Index: Transformation as comprehensive and politically driven change in which an authoritarian system and a State-dominated or clientelist economic order evolve in the direction of democracy and a market-based economy. However, this implies neither linear, irreversible development nor a predetermined path of transformation, nor does it suggest that there is an ideal sequence of milestones to be passed. A return to authoritarianism and periods of stalling are possible, as are detours and out-of-sync political and economic change processes. Indeed, democracy under the rule of law and a market economy anchored in principles of social justice represent goals, but not necessarily immediate priorities within complex development processes. Many States, in fact, pass through radical, sometimes even revolutionary developmental stages; others have yet to undergo comprehensive systemic change; and some States are, for the moment, not targeting transformation. Available for 2016 for 130 countries (2006, 2008, 2010, 2012, 2014, 2016).

Doing Business Indicators: Provides objective measures of business regulations and their enforcement across 190 economies and selected cities at the subnational and regional level.

Available for 2016 for 189 countries (2004 to 2016).

Global Competitiveness Index: Assesses the competitiveness landscape of 140 economies, providing insight into the drivers of their productivity and prosperity. Available from 2006 to 2015.

World Bank Governance Indicators: Aggregate and individual governance indicators for over 200 countries and territories over the period 1996–2015, for six dimensions of governance: (1) voice and accountability; (2) political stability and absence of violence; (3) government effectiveness; (4) regulatory quality; (5) rule of law; (6) control of corruption. Governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them. Available for 215 countries from 1996 to 2015.

4.2.3 Content Analysis

WP6 will conduct content analysis of relevant texts produced by the selected stakeholders who will be interviewed (e.g., published and unpublished reports, interviews, official declarations, videos and so on). It will be important to work on materials that explicitly discuss the issue of EU policies as well as those that make no explicit mention of them.

4.2.4 Qualitative Assessment of Selected EU-Funded Projects and Programmes in the Field of Energy and Manufacturing

The research will seek to understand if these undertakings respond to people's welfare and local economic needs (e.g., job creation, industrial diversification, effects for local firms vis-à-vis multinational companies, and so on). To this end, in addition to desk reviews and field visits, WP6 will conduct semi-structured interviews and focus groups with local stakeholders who are involved in the programmes/initiatives (from EU funding body representatives to local authorities and civil society organizations at the receiving end) as well as those who are not involved.

4.2.5 Recursive Multi Stakeholder Consultations (RMSCs)

In addition to desk reviews, WP6 will conduct semi-structured interviews with relevant stakeholders. The RMSC is an innovative methodology which will allow us to reverse the ordinary approach whereby perceptions and priorities of Southern shore partners are included in the picture only marginally and/or *a posteriori*. In MEDRESET, in contrast, EU-level stakeholders are invited to react and position themselves *with reference to structured inputs coming from Mediterranean partners*. This reversal represents an innovative approach capable of generating fresh and innovative policy perspectives (for further details, see the Guidelines prepared by IAI).

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