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ROUND 2

COVID-19 MED POLICY BRIEFS

COVID-19 IMPLICATIONS IN THE MEDITERRANEAN

Energy transition, sustainability, and labour
market policies: Implications and
recommendations for the South Mediterranean
countries

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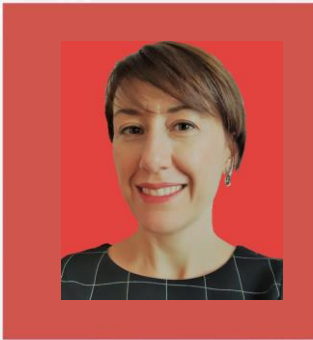


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Summary:

COVID-19 intensifies the urgency for sustainability transition. The Paris Agreement, the UN Agenda 2030, and the European Green Deal, make a priority the increase of renewable energy sources in the energy mix and the decarbonization of the economies. This energy transition will have a significant impact on the South Mediterranean countries, especially on hydrocarbon producers: Egypt, Libya, and Algeria. They may be faced with abrupt shocks in their primary sectors of production and in their labour markets if no timely action is taken. For a resilient future, the energy transition should be coupled with just and inclusive transition in the labour markets. Scientific analysis suggests taking a closer look at policies that can foster the backward and forward links of the energy sector with other sectors in the economy.

The design and implementation of such policies in the South Mediterranean countries can benefit from the cooperation with countries that share similar challenges (i.e., Middle East, Central Asia, sub-Saharan countries), with regions and countries that develop policies to turn energy projects into an engine of industrial growth and employment creation (e.g., EU, Norway), and with institutions that bring significant knowledge on this matter (like the World Bank).

Recommendations include: i) the well-informed policy design, ii) promotion of cooperation through clusters and regional schemes, iii) emphasis on know-how, technology, and skills transferability beyond the energy sector, iv) timely intervention in the education system, v) priority allocation of public funding and international assistance to education, skills, and technological upgrade of the labour force, that can improve job prospects, resilience, and long-term sustainability.

COVID-19 IMPLICATIONS IN THE MEDITERRANEAN**1. Introduction**

COVID-19 intensifies the urgency for sustainability transition (World Bank, 2020; IMF, 2020; WHO, 2020; European Commission, 2020). Following the United Nations Agenda to 2030, countries worldwide agreed in 2015 on 17 Sustainable Development Goals (SDGs) to guide national, regional, and global decisions until 2030 (United Nations, 2015). The Paris Agreement, and the Nationally Determined Contributions (NDCs) adopted by 196 Parties at COP 21 in 2015 aim at limiting global warming to below 2°C, compared to the pre-industrial levels (UNFCCC, 2021). The Southern Mediterranean (South-Med) countries have committed to the UN Agenda to 2030 and are signatory parties of the Paris Agreement¹. Thus, the commitments deriving from these international agreements should guide the national policies of the South-Med countries with horizon to 2030. Meanwhile, the European Commission revealed in 2019 its European Green Deal, the European Union (EU) plan to make its economy sustainable (European Commission, 2021). EU energy policies are expected to impact the South-Med as the two regions have strong trade links.

These global and regional plans put energy transition at the core of sustainable development. Energy transition, i.e., the transformation of the energy sector from fossil-based to zero-carbon, bears significant implications for the South-Med oil-producing countries Egypt, Algeria, and Libya. Challenges are similar to those faced by other oil-dependent countries in the Middle East, in Central Asia, and in the Sub-Saharan Africa. Oil-producing countries must decarbonize and at the same time diversify their economies and no longer rely on oil to provide their main source of revenue and employment generation. The challenge of exploiting conventional energy sources while progressing with the energy transition is also of relevance for the new-comers in the exploration of hydrocarbons in the Mediterranean (Israel, Lebanon, Cyprus, Greece).

For a resilient future, energy transition should go hand in hand with just transition in the labour markets, i.e., the inclusive and fair labour market transformation. This is important for the labour market segments that are directly and/or indirectly linked to the energy sector (e.g., extraction, construction, transport, maintenance services, etc). Energy transition makes sense only if expensive carbon lock-in (Unruh, 2000), silos between industries, gaps between developed and developing countries, the global North and South are overcome (Pauw et al, 2019; Eicke et al, 2019). This requires the uptake of new skills, time, and flexibility from employees, businesses, and policy makers (Tsani, 2020; Facchinetti et al, 2016). If transition comes as an uneven shock to the labour force, it may lead to

¹ South-Med countries include Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia. Palestine is a non-member observer state of the UN.

increased social unrest, supply bottlenecks and market distortions (Matsuo and Schmidt, 2019).

This brief contributes to the policy debate related to energy transition. The end goal is to shed more light on the policies which can support just transition in the labour markets in the face of a clean energy future in the Mediterranean. These may relate to the COVID-19 fiscal responses, and to the cooperation opportunities that can capitalize on the South-Med links with the EU and other countries and regions worldwide. The brief builds on the review of the state-of-the-art scientific literature on the economic, social and welfare implications of energy transition and labour markets transformations. The remainder of the brief is structured as follows: Section 2 presents the regional context with focus on energy and labour markets. Section 3 discusses the opportunities and challenges related to energy transition employment-focused policies and interventions. The last section concludes by offering some policy recommendations.

2. South-Med in sustainability and energy transition perspective

According to the 2020 Sustainable Development Report (Sachs et al., 2020) South-Med countries score a total SDG Index of above 65 (Table 1). This means that they are approximately two-thirds of the way away from achieving the SDGs. Nevertheless, the detailed review of the SDG7 (clean and affordable energy) and of the 2019 Arab region SDG indicators (Luomi et al., 2019) shows the distance that South-Med countries must cover with regards to the uptake of renewable energy (solar, wind, etc.) in the energy mix. Oil-dependent countries in the Middle East, in sub-Saharan Africa and in Central Asia also face this challenge. South-Med (excluding Israel), Middle East, sub-Saharan and Central Asian oil-producing countries are found at the lower end of the 2020 Energy transition Index (WEF, 2020), recording low system performance and transition readiness (Figure 1). Robust action is also required from the oil-dependent countries and regions to address unemployment, particularly among the youth (Table 2).

Table 1 2020 SDG Dashboard for South-Med countries and selected country groups

Country/Region	2020 SDG Index		Sustainable Development Goals																
	Score	Rank	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Algeria	72.3	56	Green	Red	Orange	Yellow	Orange	Orange	Yellow	Red	Red	Yellow	Orange	Yellow	Yellow	Red	Orange	Orange	Yellow
Egypt, Arab Rep.	68.8	83	Yellow	Red	Red	Orange	Red	Orange	Yellow	Red	Red	Red	Orange	Yellow	Yellow	Orange	Yellow	Red	Orange
Israel	74.6	40	Orange	Red	Green	Red	Orange	Orange	Orange	Yellow	Yellow	Red	Orange	Red	Red	Orange	Orange	Orange	Red
Jordan	68.1	89	Yellow	Orange	Red	Orange	Red	Orange	Yellow	Red	Red	Red	Orange	Yellow	Yellow	Grey	Red	Orange	Orange
Lebanon	66.7	95	Green	Red	Orange	Orange	Red	Orange	Yellow	Red	Orange	Orange	Orange	Yellow	Yellow	Red	Orange	Orange	Orange
Libya	n.a.	n.a.	Grey	Red	Orange	Grey	Red	Red	Orange	Red	Red	Grey	Orange	Orange	Yellow	Red	Orange	Red	Grey
Morocco	71.3	64	Yellow	Red	Red	Yellow	Red	Orange	Yellow	Red	Orange	Orange	Orange	Green	Green	Red	Yellow	Orange	Yellow

Table 2 Renewable electricity output and unemployment in the South-Med and in selected Arab countries

	Algeria	Egypt, Arab Rep.	Jordan	Lebanon	Libya	Morocco	West Bank and Gaza	Tunisia	Qatar	United Arab Emirates	Oman	Saudi Arabia	Bahrain	Kuwait
Renewable electricity output (% of total electricity output, average 2010-2015)*	0.6	9.0	0.5	4.7	0.0	13.0	0.0	2.0	0.0	0.1	0.0	0.0	0.0	0.0
SDG7 indicator: Renewable electricity output (% of total electricity output, reference year 2015)**														
Unemployment (% of total labor force, average 2010-2019)*	10.8	11.6	5.7	13.9	6.3	18.8	9.2	22.3	15.7	7.5	9.9	6.0	7.0	5.1
SDG 8 indicator: Unemployment rate (% of total labor force, reference year 2018)**														
Youth unemployment (% of total labor force ages 15-24, average 2010-2015)*	26.6	30.9	9.9	32.3	17.4	49.6	20.4	37.4	35.9	16.8	25.9	11.7	15.1	10.4
SDG 8 indicator: Unemployment, youth total (% of total labor force ages 15-24, reference year 2018)**														



Source: **Luomi et al (2019). The dashboard shows the performance assessment of the selected indicator. Performance is indicated with the use of a specific color: Green color indicates target indicator achievement. Yellow, amber, and red indicate increasing distance from target achievement, with red indicating the largest distance away from the target achievement. *Authors' estimations. Time series data are extracted from the World Bank databank, World Development Indicators. 2015 latest year for data on renewable electricity output. 2019 latest year for data on total and youth unemployment.

In the face of global and national commitments to energy transition South-Med countries, like the Middle East, Central Asia and sub-Saharan countries, are faced with challenges of timely transition in the labour markets. Energy transition is expected to lower labour demand in the energy intensive sectors and in the extractive (coal, oil, gas) industries (Cedefop, 2013; ILO, 2011). On the other hand, investments in renewable energy should have a direct positive employment effect and an indirect positive effect on sectors providing inputs to these investments (Pestel, 2019; Hillebrand et al, 2006; Lehr et al, 2008; Blazeczak et al, 2014; Simas and Pacca, 2014; Markandya et al, 2016; Lehr and Ulrich, 2017). Moving to a low-carbon economy increases the demand for middle-skill employment (electricians, mechanics, technicians) and expertise with technical education (Cedefop, 2010). The uptake of new technologies triggers demand for specific new skills of the workforce. These relate to new design and construction methods, development and use of novel materials and technologies, new energy efficient technical solutions, development and use of energy efficiency and carbon emission measurements (Cambridge Econometrics, 2015; Brookings, 2011; Dierdorff et al, 2013). Overall, energy transition should be coupled with demand for cross-cutting knowledge. The impact on demand for labour and specific skills relates to the speed that new technologies will replace the conventional ones. The more rapid the technological change, the higher the possibility that the existing training and education systems will be unable to provide the necessary and up to date skills. If barriers to female labour force in the South-Med (Tsani et al, 2013) continue to exist, then women are expected to be more vulnerable to the energy transition.

3. Labour policies for just and inclusive energy transition

Labour market implications of energy transition highlight the need for a careful consideration of “local content” policies. Local content policies target the utilization and the development of the local industrial and human capital base through the creation of

economic interactions between the energy sector and the rest of the productive sectors of the economy (Tordo et al, 2013; Tsani, 2020; Kalyuzhnova, 2021). Local content policies aim at increasing the value added beyond that directly derived from the energy production activities as well as creating opportunities for employment, innovation, and transfer of know-how. In a simple format, and rather less efficient, local content policies make minimum provisions for the use of goods and services produced locally through specific laws and regulations applicable to foreign investors (UNCTAD, 2014). More advanced, and rather more efficient versions of local content policies go beyond regulatory requirements on domestic goods and employment, and target the facilitation of domestic innovation, knowledge transfer and integration of the domestic suppliers in the international supply chain.

While local content policies have been so far relevant for hydrocarbon producing countries, scientific analysis shows that they are also relevant for renewable energy projects (Binz et al, 2017; Rennkamp et al., 2017). Similar to hydrocarbons, investments in renewables (solar, wind etc) are often undertaken by large international companies, which come with established international supply chains. Renewable energy projects are also characterized by high-capital intensity and expert knowledge requirements. If no appropriate measures are taken in the countries where renewable energy projects materialize, then local suppliers and labour may not benefit from the investments made and from the resulting activities. Beyond the potential positive impact on the local supply chain and labour markets, local content policies may: i) have an accelerating impact on the political momentum for ambitious renewable energy policies, ii) support the move of the economic base away from consumption and rent-seeking closer to the creation of domestic value added, iii) “leap-frog” existing barriers to technological transfer, iv) bring more new mature players to the global market, which increase competition and innovation (UNCTAD, 2014).

Several countries include local content policies in their green strategy agendas. Examples include both developed (e.g., Canada, USA, Spain, Italy, France, Greece) and developing (e.g., China, Brazil, Argentina, India, South Africa, Tunisia, Ecuador) countries. Indicative examples include: i) Ontario, Canada where feed in tariffs require that certain components for wind and solar energy come from local manufacturing, ii) Spain: local content policies have been related to the remarkable Gamesa’s growth as a global wind manufacturer (Kuntze and Morenhoute, 2013). In Navara, local content policies are linked to the creation of 4000 jobs (Hao et al., 2010), iii) Brazil’s local content experience with oil and gas has been used for the development of local content requirements (60%) for wind energy. Access to subsidized loans from Brazil’s national Development Bank has been conditional on local content requirements, iv) South Africa: The Green Economy Accord has been used as a vehicle for vertical cooperation between the government, business and the labour community², v) in Saudi Arabia the “In-Kingdom Total Value Added” program, encourages the purchase of goods and services from the local suppliers’ base aiming to double Saudi Aramco’s percentage of locally manufactured energy-related goods and services to 70% by 2021³. Local content targets can also be identified in the Egypt Vision 2030, in Jordan’s

² See: <https://www.windpowermonthly.com/article/1009934/south-african-100mw-wind-farm-hold-pending-ppa>

³ See: <https://www.export.gov/apex/article2?id=Saudi-Arabia-Market-Challenges>

National Employment Strategy 2011-2020, and in Morocco's National Energy Strategy launched in 2009 and in the 2020 Vision of the National Agency for the Promotion of Employment and skills (Cote, 2019).

If properly designed and implemented, local content policies can support employment. On the other hand, if local content policies are too restrictive or not fully grasping the local potential to address the sectoral needs, they may hurt competitiveness, increase projects' costs, and hinder international interest in energy projects with large development potential for the host countries. Additional challenges related to local content policies in the energy sector relate to the: i) technological complexity, ii) existing domestic capacity, and iii) time needed to build links between the energy sector and the local economy (European Committee of the Regions, 2017; Levett and Chandler, 2012). (Small) developing economies often have a thin industrial base and thus may find it difficult to provide fast competitive inputs (goods and services) to the green energy projects (Tsani, 2020). Foreign investors usually show preference to tap their established technology and service supply networks, thus importing the value chains in the host countries rather than putting effort in integrating local suppliers into the value chain (Matsuo and Schmidt, 2019). Lack of skills is often recorded in the early stages of an energy project. Skill shortages are related to the education system, quality and requirements of the existing industrial base or to the progress of the investments in the energy projects, e.g. if projects do not allow for the early development of skills in the domestic market (Tsani, 2021).

4. Implications and policy recommendations for the South-Med region

COVID-19 pandemic is likely to have a significant and persistent impact on the global economy and the energy system. While the economic activity is expected to partially recover over the next years, some effects may persist (for instance people may choose to travel less, or work from home). The impact of COVID-19 on the oil-dependent economies is indicative of the impact that global energy transition will have on hydrocarbon producers if no timely action is taken. If labour transition policies are not implemented, oil-based economies run the risk of being left with outdated/low skills for their human capital, low diversity in the labour markets, poor job prospects and increasing need for public support.

For a resilient future, energy transition should be coupled with just labour transition policies. Into this direction several considerations and recommendations are relevant to the South-Med countries:

1. Hydrocarbon producers in the South-Med share similar socio-economic structure, just energy and labour market transition challenges with other oil-dependent countries in the Middle East, in the sub-Saharan Africa and in Central Asia. In the quest for (just) energy transition oil-dependent countries should join forces and capitalize on cooperation in different fronts. These may include the decarbonization of the energy system, innovation in clean hydrocarbon

exploration, and the identification of optimal sectoral and labour market policies tailored to the needs of the oil-dependent countries.

- ✓ Recommendation: Explore collaboration and solution-driven partnerships with other countries and regions (Middle East, Central Asia, Sub-Sahara) faced with similar structural issues (e.g., oil-dependency) in line with SDG17. Focus should be on i) knowledge sharing and cooperation for access to science, technology, and innovation and ii) encouragement of effective public, public-private and civil society partnerships.
2. Localities where conventional energy production, manufacturing and use take place, but also where green energy projects materialize, pose a challenge for employment and human capital development in energy transition. The stance of public policies towards these localities (e.g., conventional fuel substitution, delay in regional education support, upgrade or creation of technology and skill upgrade clusters, etc.) can impact on the extent and the speed of energy and labour markets transition.
 - ✓ Recommendation: Design and implement well-informed industrial, fiscal and employment policies which consider the present and the future capacity of the domestic economy. These should target the creation of long-term backward and forward links of the energy sector with the domestic economy. Exchange of best practices through partnerships with Middle East, Central Asia and with Sub-Saharan countries can be supportive to these efforts.
 3. Policy interventions in the labour markets and policies aiming at local content in the energy should not impose excess management costs and bureaucratic burdens. Policy design can benefit from the accumulated knowledge on this matter in the countries implementing similar policies and/or in the international institutions (e.g., the World Bank)
 - ✓ Recommendation: Undertake a detailed socio-economic, financial and technology impact assessment and cost-benefit analysis of local content policies related to the energy sector across time and space.
 4. Energy transition calls for overcoming systemic weaknesses of human capital such as lack of science, technology, engineering knowledge and cross-cutting skills. Any legal and regulatory local content requirements may impact on industrial competitiveness, on the emergence of bottleneck problems arising from the skills upgrade requirements, on the speed and on the direction of the transition.
 - ✓ Recommendation: Identify and implement education policies and measures that timely address skill gaps, gender inequality, and industry needs for specific cross-cutting skills. Policies can benefit from the experience of other countries and regions that have developed similar agendas (like the EU or Norway)
 5. COVID-19 has indicated the existence of large technology, human capital, gender and economic inequalities and the need to address them (Tsani et al, 2021a). Technology, know-how and skills transfers should be at the core of local content and just energy transition policies.
 - ✓ Recommendation: Implement cooperation programs, between countries, regions (EU, Middle East) and sectors (e.g. education, public

administration, energy) that facilitate technology, know-how and skills transfer (e.g. exchange programs, internships, close collaboration between education institutions and foreign investors).

6. Creating clusters is especially important for the energy sector that is dominated by large companies which invest heavily in technological upgrade and innovation (Shakya, 2019). Clusters can serve as a platform of integration and exchange of best practices for small and medium size enterprises, which can be an important actor of sustainable development in the South-Med. The creation of clusters can be geographically and/or sectorally distributed, within or outside national borders (e.g., formations can be expanded at transnational or regional level to exploit economies of scale and scope).
 - ✓ Recommendation: Support and develop industrial or technology clusters across the knowledge triangle (research, education, and innovation) in support of business development, access to innovation, better coordination, effective use of public goods and dissemination of best practices.
7. Oil and gas producers (Egypt, Algeria, Libya) should consider the role that hydrocarbons are foreseen to play in the global energy mix in the years to come. Global energy scenarios to 2050 foresee a peak in demand in the period 2020-2030 (depending on policy assumptions of each scenario). After this period of plateauing demand, hydrocarbons are expected to account for a smaller share in the global energy mix as compared to renewable energy sources. This calls for the need to prioritize policies that can support the local supply chain, employment and innovation ecosystem in a way that extends beyond the hydrocarbon sector. This structural change, that the hydrocarbon sector is faced with, is understood by the major international oil companies (Tsani, 2021). Major hydrocarbon players such as ExxonMobil, Saudi Aramco, Equinor, BP and Shell, many of which engage in exploration and production activities in the Mediterranean, have joined forces under the Oil and Gas Climate Initiative (OGCI). The OGCI aims at accelerating the industry response to climate change and to support the Paris Agreement (OGCI, 2020). The members of the OGCI have collectively invested over \$7B each year in low carbon solutions with the intention to lead industry response to climate change. The shift away from oil and gas is also explored by large oil producing countries like Norway.
 - ✓ Recommendation: Policy support to education and cooperation in favor of development of skills and technology beyond hydrocarbons (e.g., offshore safety, environmental monitoring, IT tools for large data management, remote monitoring). Priority can be given to actions that align to OGCI priorities in cooperation with national research institutions and suppliers.
8. COVID-19 responses worldwide and in the Mediterranean, have mobilized public funds for the maintenance of the current consumption and production, income, and employment levels (Tsani et al, 2021b). Given the long-lasting implications of the pandemic and of the public fund mobilization patterns, COVID-19 responses pose a prime opportunity for incentive provision, skills and technology upgrade that are needed for the just transition in the labour markets. Policy makers should consider the importance of digitalization, IT, and green infrastructure so

as to speed-up greening of the economies and of the production and employment generation in the emerging sectors. Infrastructure investments may pay-off in terms of employment and long-term productivity. Fiscal measures should look beyond providing direct financial support to the most vulnerable. Instead, they should actively seek for a combination of financial, training and education support packages that can ensure resilience of the most vulnerable under the current conditions and readiness for future uncertainties and skill requirements.

- ✓ Recommendation: Mobilize and use public funding and international assistance response to COVID-19 towards education, skills and technological upgrade of the labour force, that can improve job prospects during the sustainability transition and in the future.

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