3 Infrastructure

This chapter examines infrastructure integration and the role of infrastructure for economic integration in the Euro-Mediterranean region. It covers regional transport and electricity networks that support economic development and competitiveness at both the national and regional levels. The chapter provides policy recommendations to enhance economic integration through better development of infrastructure in the region.

Key takeaways

- Infrastructure for transport and energy is an important enabler of economic integration and development. It facilitates movement of people, goods and services across the border and promotes economic diversification. Yet, in the Euro-Mediterranean region, especially the Southern and Eastern Mediterranean, infrastructure connectivity is still limited. Although in recent years economies in the region have built extensive transport and energy networks, the level of investment is not enough to meet the growing connectivity needs between countries.
- In transport, infrastructure connectivity challenges in the region include a lack of multi-modal connectivity, over-reliance on roads and a fragmented port system. The high logistics costs and delays limit participation in global value chains and trade integration. Other, more-efficient and potentially environmentally friendly modes of transportation, such as rail or inland waterways, could be a solution for freight traffic but are currently limited the region.
- Maritime transport is the main channel for trade across the region. Currently, there is potential for many ports in the Southern and Eastern Mediterranean to improve their trans-shipment function to become more competitive and enhance their role as national or regional gateways. Some ports have also become important hubs in the Mediterranean thanks to investments in logistics and infrastructure services, which have enhanced their connectivity with global markets.
- Energy integration could provide significant development benefits for the Southern and Eastern Mediterranean countries, but it is still in early stages of development. The electricity sector is largely dominated by state-owned enterprises, often supported by subsidies that make the price of electricity too low for investors to have any incentive to enter the market. Promoting more competition and lifting entry barriers could help attract more investments in electricity generation and distribution networks.
- Although economies in the Southern Mediterranean region are well endowed with renewable energy sources, they have not sufficiently diversified their power supply. Many have set up national renewable energy targets and the deployment of related projects is well under way, but many economies are expected to rely on gas and oil to generate electricity at least until 2030. Challenges include not only the lack of proper infrastructure but also a lack of a harmonised regulatory framework at the national and sub-regional levels.
- Integration in infrastructure is also limited due to regulatory barriers in the Southern and Eastern Mediterranean regions. The OECD foreign direct investment (FDI) Restrictiveness Index reveals that restrictions to foreign direct investment in these two regions are still relatively high compared to the OECD average, particularly in transportation sectors such as maritime, rails, airports (for both passenger and cargo services) and in a few countries in electricity generation and distribution services.

Introduction

Relevance of infrastructure for regional integration

Infrastructure connectivity[1] is high on the policy agenda of the Union for the Mediterranean (UfM), which has long recognised the multiplier effect of infrastructure connectivity on the process of regional integration, as well as the key role of infrastructure in sustainable development. The UfM Roadmap for Action, adopted in 2017, underlined the organisation's commitment to the connectivity of infrastructure, notably with regard to interconnectedness in energy, transport and, more recently, digitalisation (UfM, 2017[1]).

Better regional infrastructure can help the economies in the region overcome their peripheral situation in the global economy and play a more important role in regional and global value chains. High levels of transport and energy connectivity can also lead to better access to employment, education, health and other public services, as well as tourism activities, thereby raising productivity and promoting economic and social development (OECD-ITF, 2019[2]). For instance, with the extension of transportation links, more people in the UfM region could benefit from opportunities for personal and professional development, contributing to the region's knowledge creation and to regional stability and peace.

Despite these benefits, however, the integration of infrastructure in the region remains limited due to a range of challenges. Most often, infrastructure projects that support regional integration involve several countries and are sensitive to domestic and foreign policy issues. Projects that are part of regional corridors or networks linking two or more countries have strong public-good characteristics and require large-scale capital mobilisation where the distribution of costs and benefits across the borders is complex. The multiplicity of stakeholders involved in cross-border projects is an additional challenge, partly due to the difficulty of prioritising and securing widespread support for cross-border projects, vis-à-vis the process for domestic ones. Countries still need to develop a "thinking regional" approach that incorporates regional connectivity into the design and development of infrastructure at the national level.

In addressing these challenges, there is also a growing recognition that infrastructure investments in the region should focus on quality, inclusiveness, and sustainability. The UN Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change acknowledge the need for more sustainable growth. These agreements call for greater focus on infrastructure connectivity that is inclusive and sustainable, as well as more energy-efficient and benefiting the poor. Meeting such commitments requires level-playing-field policies for low-carbon infrastructure solutions, better institutions and market regulations.

This chapter focuses on the physical transport and energy networks in the UfM region, as well as the regulatory issues affecting the performance of such networks. It uses a set of indicators to monitor the evolution of performance of countries in the region in these areas. The chapter reflects that the policy discussion has broadened from the immediate concerns of financing and the enabling environment for investments in infrastructure, to the key question of how better connectivity across and within regions and countries can boost trade, investment, and industrial development – and, ultimately, more sustainable and inclusive economic growth.

The chapter does not cover digital interconnectedness, which has also gained relevance in the context of scaling up regional infrastructure connectivity, as exemplified by the UfM Official Ministerial Declaration on Digital Economy in 2014 (UfM, 2014[3]). It does, however, recognise that continuous progression in information and communication technologies (ICTs) is accelerating regional economic integration in the UfM – not only as a new engine of economic growth, but also a source of innovation across all economic sectors. ICTs are transforming the conduct of business and the delivery of public services, increasing the efficiency of trade of services, and improving people-to-people connectivity across borders. The Covid-19 health and economic crisis has also highlighted the opportunities and challenges of the digital infrastructure in many UfM economies, calling for more investments in digital connectivity to enhance its potential for the recovery.

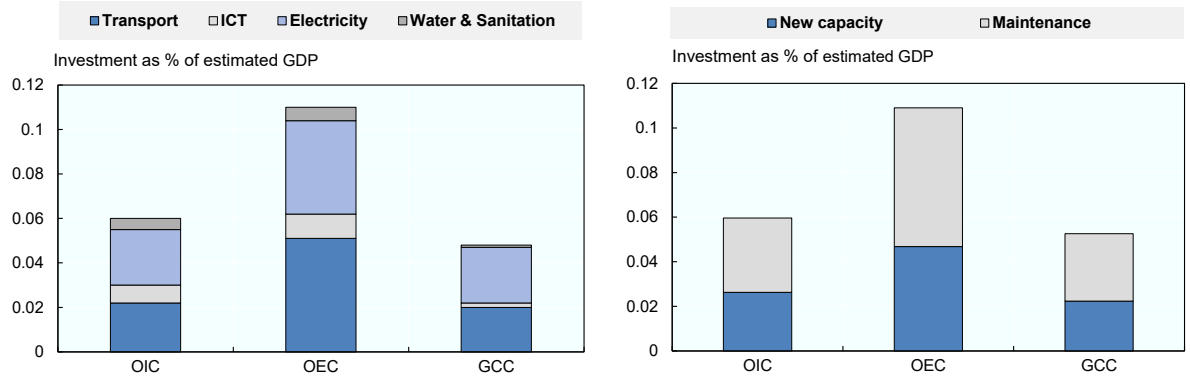
Current infrastructure gaps

Many Southern and Eastern Mediterranean economies have seen increased investments in physical infrastructure in the past decades, but the supply of infrastructure has not kept pace with the growing needs. The Middle East and North Africa (MENA) region spent between 3% and 5% of gross domestic product (GDP) annually in infrastructure in the last decade, mainly focusing on ports and airports; this spending was higher than in Latin America, Europe and Central Asia but lower than in South Asia and East Asia (IAI, 2018[4]). Numerous studies on the MENA region have shown a lack of investments in cross-border road and rail projects to develop a regional market and improve intra-regional connectivity (ISPI, 2019[5]). In the Western Balkans, despite annual public infrastructure investment rates averaging over 6% of GDP over the past 15 years, infrastructure gaps are also high (IMF, 2018[6]). In 2015 around 30% of the Western Balkan region's road network required immediate maintenance or upgrade, and 30% of the rail network had capacity constraints (IBRD, 2015[7]).

In MENA, the (World Bank, 2020a[8]) estimates that the needs over the next five to ten years are over USD 106 billion a year (or 7% of the annual regional GDP) to maintain existing infrastructure and create new (Figure 3.1). The gaps are present across all infrastructure segments, but are more prevalent in cross- border road transport and energy. Transport and electricity account for around 43% of total needs, followed by ICT (9%) and water and sanitation (5%). The electricity needs alone will require USD 46 billion (or 3% of the annual regional GDP). Oil exporting countries require infrastructure totalling around 11% of GDP, compared to 6% for oil importing countries. Proper maintenance and quality control of the existing assets is also necessary, while rehabilitation needs are expected to account for slightly more than 50% of the total infrastructure needs (Estache , et al, 2013[9]).

Figure 3.1. Annual infrastructure needs in selected economies in MENA region, up to 2025

By main sector



Note Oil exporting economies include Algeria, Iran, Islamic Rep., Iraq, Libya, Syrian Arab Republic, Yemen, Rep.; Oil importing economies include Egypt, Jordan, Lebanon, Morocco, Tunisia. Data are estimated based on a general equilibrium model.
Source: World Bank 2020 estimations based on methodology developed in (Estache , et al, 2013[9]) which are still considered valid today.

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Similarly to the rest of the world, infrastructure projects in the MENA region have been traditionally financed by state-owned enterprises (SOEs). In many MENA economies, SOEs have been dominating the infrastructure landscape while the presence of the domestic and foreign private sector has been limited. Public-private partnerships (PPPs) could be an avenue to mobilise more private sector investments, but currently they are limited. Some MENA governments (e.g. Jordan, Morocco, Tunisia and Egypt) have started to build a credible environment for PPPs by updating their PPP laws and setting up PPP agencies

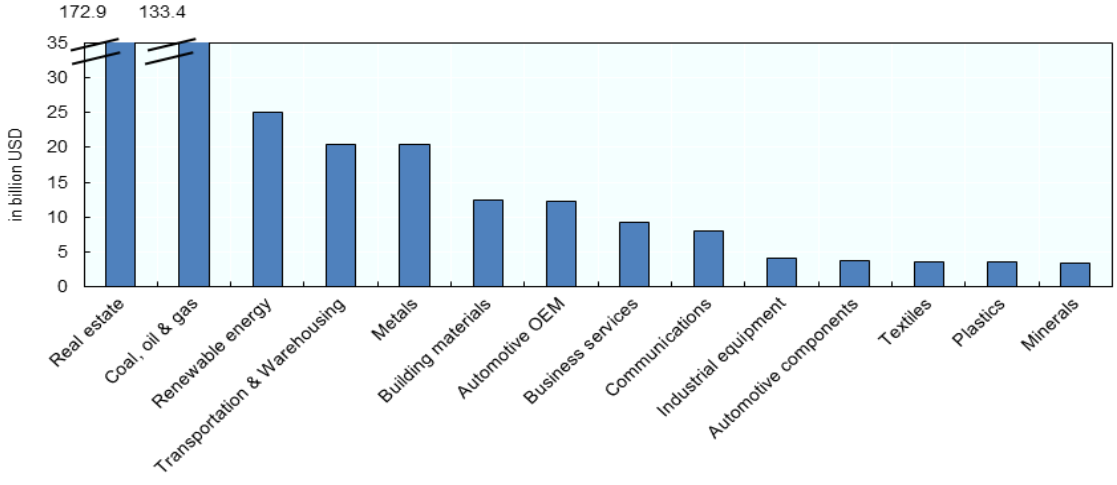
or specialised units within existing institutions. More involvement by the private sector in infrastructure through PPPs could not only improve infrastructure efficiency and bring new technologies and skills, but also reduce the fiscal burden on public budgets (OECD, 2021[10]).

In recent years, private foreign investments have increased, especially in the energy sectors. A review of announced greenfield FDI in eight economies of the region shows that direct investments in the region are still disproportionally flowing to real estate and extractive and fossil fuel projects (see Chapter 2 for overall FDI trends in selected economies in the region). Between 2003 and 2019, greenfield FDI in the region accounted for over USD 535 billion, with real estate accounting for USD 173 billion (or 32%) of total investments, closely followed by investments in infrastructure projects related to the oil and natural gas sector (USD 133 billion or 25%) (Figure 3.2). These sectors are the most attractive for greenfield FDI across almost all countries. For instance, Egypt attracted the largest share of investments in the region with USD 191 billion (43% of the total), followed by Algeria and Tunisia (both 15%). Investments in these three countries primarily targeted the coal, oil and natural gas sectors (46% for Egypt) and real estate.

Although at a much lower scale, greenfield investments in renewable energy accounted for a total of USD 20 billion or 4% of the total investments in the region, while the transport sector received only USD 4 billion (or 1% of total greenfield FDI). In recent years, the MENA region, and increasingly the Western Balkans, became a significant recipient of Chinese investment and construction deals (Box 3.1). Overall, while these investments are growing, they are primarily in fossil fuels and extractive industries, which is not in line with the economic diversification objectives of the region.

Figure 3.2. Announced greenfield FDI in selected economies in the MENA region, 2003-19

By selected sectors



Note: Data are available for Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestinian Authority, and Tunisia.
Source: OECD based on fDi Markets (2020), https://www.fdiintelligence.com/fdi-markets.

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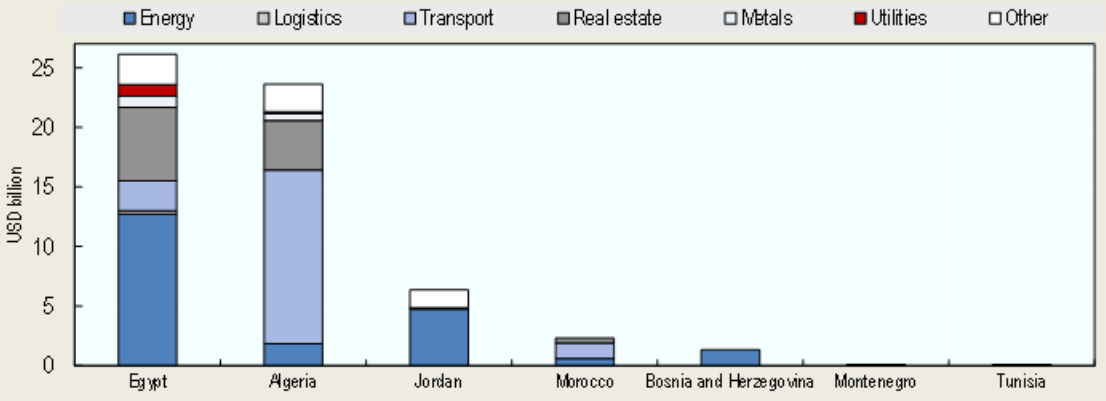
Box 3.1. Belt and Road Initiative in MENA and Balkan countries

Between 2005 and 2019, the MENA and Balkan regions received significant Chinese investments in infrastructure, with nearly half of them focusing on energy projects, followed by transport and real estate. Many of these projects are considered part of the Belt and Road Initiative (BRI), a development strategy launched by China in 2013 to build global connectivity and co-operation. The largest investments are in Algeria and Egypt. In Egypt, investments have increased by 53% (up from USD 16.4 billion) since the launch of the BRI, and now total USD 26.1 billion. Half of these investments are focused on the energy sector, followed by real estate (23%) and the logistics and transport sectors (11%). Algeria is the only country in the region where most projects are focused on the transport sector (USD 14.6 billion or over 62%), with major contracts managed by Chinese construction companies such as China Railway Construction. Other countries in the region have also received Chinese investments, albeit on a lower scale. This is the case in Tunisia, which has received USD 110 million of investments in real estate.

In Bosnia and Herzegovina, Chinese investments total close to USD 3 billion, 71% of which in the energy sector, while Montenegro received USD 1.2 billion of investments primarily focusing on the transport sector. Besides Chinese investments, the EU also contributed with grants and loans of over USD 13 billion in transport and energy infrastructure in the Western Balkans since the 1990s. More recently, the EU launched the Economic and Investment Plan for the Western Balkans, a USD 11 billion package for flagship projects to foster regional economic integration. Priority projects include transport and energy connections to foster economic development, market integration and cross-border trade within the region and with the European Union.

Chinese investments and construction projects in selected MENA and Balkan economies 2005-19, by sector



Note: Other includes agriculture, utilities, tourism, education, health, chemicals, entertainment, industry, textiles, and telecom.
Source: (AEI, 2019[11]), (European Commission, 2020b[12]).

Monitoring infrastructure integration

International indicators of infrastructure integration are available for nearly all countries in the UfM region, including in the Southern and Eastern Mediterranean region. The indicators selected for monitoring are intended to provide an update on the status of transport and energy integration in the region, and to help

identify where the gaps are and what areas can be improved (Table 3.1). The information conveyed by the indicators is complemented by more discerning factual information on the current situation in individual economies.

Table 3.1. Key indicators of infrastructure integration in the UfM

Indicator	Description	Coverage	Frequency
Indicator I1. Cross-border projects in transport and energy	This indicator provides an overview of selected regional infrastructure projects in the energy and transport sector that are planned and under construction. *Multiple sources*	All UfM	Various years
Indicator I7. Regulatory restrictiveness on foreign direct investment in the energy and transport sectors	This indicator measures the restrictiveness of a country's FDI rules in four areas: foreign equity restrictions; discriminatory screening or approval mechanisms; restrictions on key foreign personnel; and operational restrictions. It covers 22 sectors, among which are restrictions in transport (air, maritime and surface) and energy services (electricity generation and distribution). *Source:* OECD FDI restrictiveness index	Available for OECD, EU, Albania, Algeria, Bosnia and Herzegovina, Egypt, Jordan, Lebanon, Morocco, Palestinian Authority and Tunisia	Annual, last available 2019
Transport			
Indicator I2. Logistics Performance	This indicator, based on the World Bank Logistics Performance Index, measures the quality of trade logistics in a country. It measures the perceptions of logistics operators in countries they operate in and those with which they trade on the ground. *Source*: World Bank Logistics Performance Index	All UfM, except Palestinian Authority	Biannual, last available 2018
Indicator I3. Liner Shipping Connectivity	This indicator measures the level of each country's integration into global liner shipping networks. It is based on an index set at 100 for the maximum value of country connectivity in the first quarter (Q1) of 2006. It comprises six components: scheduled ship calls, annual twenty-foot-equivalent units (TEU) capacity, number of regular liner shipping services and shipping companies, average size (in TEU) of ships, and number of direct liner shipping services to other countries. *Source*: UNCTAD Maritime Transport Indicators	All UfM except Palestinian Authority	Annual, last available 2020
Indicator I4. Median time in port (days)	This indicator measures the median time (in days) container ships spend in a country's ports during one calendar year. The figures are derived from the fusion of automatic identification system information with port mapping intelligence by Marine Traffic (http://marinetraffic.com), covering ships of 1000 gross tonnage. Passenger and ferry ships are excluded from the calculations. Source: UNCTAD STAT	All UfM	Annual, last available 2018
Energy			
Indicator I5. Getting electricity indicators	These indicators measure the procedures, time and cost required for a business to obtain a permanent electricity connection for a newly constructed warehouse. In addition, they also measure supply reliability, transparency of tariffs and the price of electricity. *Source*: World Bank Doing Business	All UfM	Annual, last available 2019
Indicator I6. Electricity trade flows	This indicator measures regional imports and exports of electricity within the UfM. The information is based on UN Comtrade data on electrical energy flows. *Source*: UN Comtrade Database	All UfM	Annual, last available 2019

Indicator I1. Cross-border projects in transport and energy

Regional infrastructure projects are important for enhancing integration in the UfM region, especially by increasing the connectivity of Southern and Eastern Mediterranean economies. A number of cross-border transport and energy projects have been identified under different initiatives and programmes involving several economies in the region. Some of these are new projects, while others are part of already existing

projects linking two or more countries. Their completion, and the launch of new projects, are used as one of the dimensions to measure progress in regional integration in infrastructure.

Major regional infrastructure projects, under construction or planned, involving economies in the region include the following:

Transport

- The Central Section of the Trans-Maghreb Motorway Axis, currently under construction, aims at connecting the Algerian, Moroccan and Tunisian national motorway networks. It will provide a continuous motorway corridor from Agadir (Morocco) to Ras Jedir (Tunisian-Libyan border). The project is expected to cost USD 797 million (with funding coming from the European Union and the governments of Tunisia and Morocco) and is considered of strategic importance to the Euro-Mediterranean region because it will improve transport conditions, facilitate trade relations and increase mobility for the population of the region (UfM, 2017a[13]).
- The Adriatic-Ionian Motorway project currently under construction is a 1500 km motorway linking north-east Italy with south-west Greece through Slovenia, Croatia, Bosnia and Herzegovina, and Montenegro. The project is part of the Trans-European Transport Network (TEN-T) Mediterranean Core Network Corridor connecting central and Northern Europe with the Balkan Peninsula. The project is estimated to cost USD 1 428 billion, partially funded by the governments of concerned countries (Total Slovenia News, 2018[14]).
- The Halkali-Kapikule Railway Line (Turkey) is a planned railway project that involves the construction of a 76 km section of a new high-speed railway line from Halkali station, Istanbul, to just before Cerkezkoy station. The project is part of a new high-speed railway between Istanbul and Kapikule near the border with Bulgaria. It will also be part of the TEN-T and is expected to cost USD 382 million; it will be funded by the Asian Infrastructure Investment Bank and the European Bank for Reconstruction and Development (AIIB, 2020[15]).

Energy

- The Trans Adriatic Pipeline is an 878 km-long oil and gas pipeline currently under construction to transport natural gas from the Caspian region to Europe through Greece, Albania and Italy. The initial capacity of the pipeline will be 10 billion cubic meters (bcm) per year, which can be expanded to 20 bcm per year in future. The greenfield project is expected to cost USD 4.3 billion, to be funded by Snam Rete Gas, BP Global, the State Oil Company of the Azerbaijan Republic (SOCAR), Fluxys, Enagas, and AXPO Group (NS Energy, 2020[16]).
- The Euro-Africa Interconnector project, which is currently under construction, comprises the development of a 2 000 megawatt (MW) electricity interconnector between Egypt, Cyprus, Greece and Europe. With a total length of 1 396 km, it is considered the largest interconnector cable in the world. The first stage of the construction will have an initial transmission capacity of 1 000 MW and an estimated cost of USD 3 billion. The commissioning of the Cyprus-Egypt line is expected to start in December 2022, while the Cyprus-Crete line is expected to start in December 2023. The project is expected to be developed following best industry practices and EU, national and international regulations (EuroAfrica Interconnector, 2020[17]).
- The Italy-Montenegro-Serbia-Bosnia and Herzegovina Energy Interconnection Project currently under construction consists in a new 455 km-long cable line (of which 433 km is an undersea power link) between Italy and Montenegro and a 400 kilowatt (kW) transmission line between Serbia and Bosnia and Herzegovina. It is designed to allow export of renewable energy from the Western Balkans to Italy and to create an integrated European energy market, with Montenegro being a significant regional hub. The project has a wider significance for the region in that it represents the first energy interconnection between the Western Balkans and the European Union (Serbia Energy,

2019[18]). The project is expected to cost USD 1 billion and will be funded by the Italian investor Terna.

- The Elmed Interconnector (Tunisia-Italy Power Interconnector) currently under construction involves the development of a new 600 MW sub-sea high-voltage direct current (HVDC) link between Tunisia and Sicily. With a length of 200 km, it will connect the Italian and Tunisian electricity grids, allowing them to trade electricity. Among other objectives, the project aims to help Tunisia integrate its future intermittent renewable energy with the wider European power network and enable deeper integration. The USD 600 million project will be jointly funded by the Société Tunisienne de l'Electricité et du Gaz and the Italian company Terna.
- The Mediterranean Solar Plan is a planned project to build a 20 gigawatt (GW) power plant to produce solar energy in North Africa by 2020. The ultimate objective is to develop renewable energy and electricity transmission capacity in the Euro-Mediterranean region (Plan Solaire Mediterranean, 2020[19]).

While these regional projects and initiatives will provide additional infrastructure to ensure a higher level of integration, they might not be enough to bridge the infrastructure gaps of countries. To facilitate the development of more regional infrastructure, countries also need to integrate the regional dimension into their domestic infrastructure strategies and plans. There are currently a number of infrastructure strategies across countries that take into account regional connectivity objectives:

- In Morocco, the 2040 Rail Strategy (*Plan Rail Maroc*) aims to develop the rail network across the country by 2040 and contribute to territorial development (ONCF, 2020[20]). The National Port Strategy 2030 aims to expand and upgrade the country's ports along the Atlantic and Mediterranean coasts.
- In Algeria, an important priority is to upgrade ports to increase their capacity to handle large vessels and make Algeria a Mediterranean hub (International Trade Administration, 2019[21]). The opening of a rail line linking Annaba with Tunisia is also driving the push for regional connectivity (Oxford Business Group, 2017[22]).
- In Jordan, infrastructure priorities are laid out in the Jordan Economic Growth Plan 2018-22 for each sector. The Plan's objectives include completing and upgrading transport networks such as airports and ports, and developing a multimodal transport system to connect with neighbouring countries and Europe.

In developing regional infrastructure, governments in the region should cooperate in taking advantage of existing international tools and instruments designed to improve the quality, compatibility and inter-operability of infrastructure networks. Annex 3.A provides a list of selected internationally recognised tools and instruments related to sustainable infrastructure. Adhering to best-practice principles may be expensive in the short term, because infrastructure projects will have to meet higher standards of efficiency, safety and sustainability; however, they incur lower lifecycle costs than infrastructure with various standards at country level, which could impose long-term costs.

Indicator I2. Logistics Performance

Transport and logistics plays a critical role in strengthening ties between domestic and global markets and facilitating regional and global trade. Despite significant achievements in recent years, the quality and quantity of infrastructure in the Southern and Eastern Mediterranean region still lags behind, causing higher trade cost and delays. The World Bank's Logistics Performance Index (LPI), which measures the quality of infrastructures and the efficiency of customs services, reveals considerable variations between UfM economies (Figure 3.3).

In the MENA region, the LPI indicates that Egypt improved its score from 2.61 in 2010 to 2.82 in 2018, moving from 92nd to 67th in the total ranking of countries; Algeria also improved its performance by 3.8%.

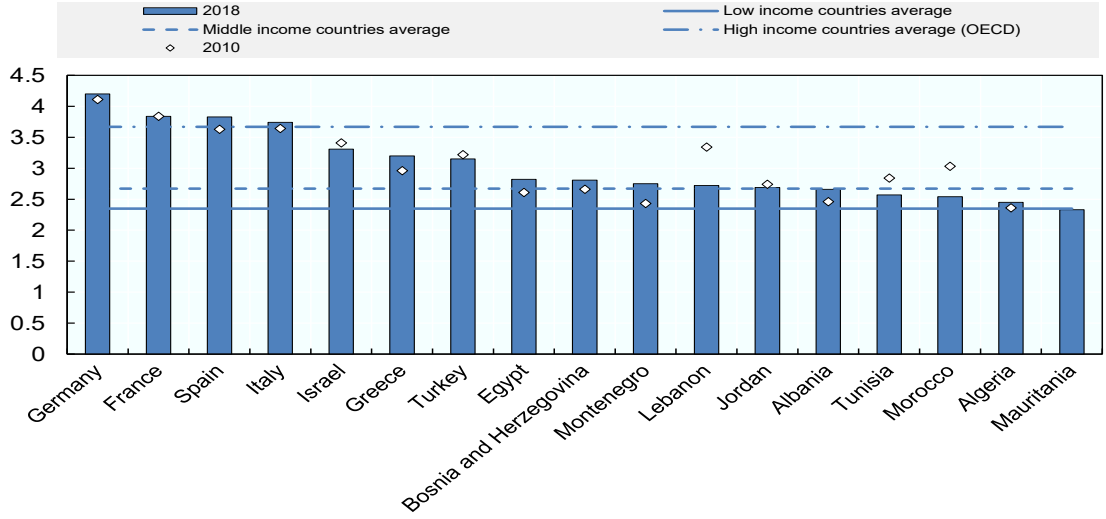
In Tunisia and Lebanon there is significant scope for improvement as compared to 2010 as their performance decreased by 9.5% and 19%, respectively. Morocco`s performance declined from 3.03 in 2012 to 2.54 in 2018, moving from 50th to 109th, which may be due to weaknesses in customs services and the ability to track and trace consignments. Morocco has many logistics operators that provide low-quality and fragmented services, and the number of logistics operators that meet international standards is low (Chauffour, 2018[23]).

Currently, there are numerous missing links in the road and rail transport that impede the development of trade corridors. These include the closing of the Morocco-Algeria border, which makes it impossible to transport goods from Libya, Tunisia, and Algeria to Morocco or Mauritania by road. Rail tracks in Algeria, Morocco and Tunisia also stop at the borders, making rail connectivity weak (IMF, 2019[24]).

In the Western Balkans, Bosnia and Herzegovina performs the best (2.81), followed by Montenegro (2.75) and Albania (2.66). While good logistics is not a guarantee for deeper involvement in regional and global value chains, countries with poor logistics performance tend to be less engaged in trade (OECD, 2021[10]). In the Balkan region, road transport dominates the freight sector and there are significant quality gaps in transport and logistics systems, leading to high trading costs and congestion as well as high levels of pollution (World Bank, 2018[25]). Other transport modes that are more efficient and environmentally sustainable, such as rail or inland waterways, could be a solution for freight traffic, but they are limited across the region, and often need maintenance or urgent repair (Ash N and Gibb A, 2018[26]).

Figure 3.3. Logistics performance, selected UfM economies

Score from 1 to 5 (best)



Note: The World Bank Logistics Performance Index (LPI) is based on a worldwide survey of logistics operators on the ground, providing feedback on the logistics "friendliness" of the countries in which they operate and those with which they trade. Data for Morocco refer to 2012 instead of 2010.
Source: World Bank Logistics Performance Index (LPI) database, https://datacatalog.worldbank.org/dataset/logistics-performance-index.

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Improving the quality of infrastructure and logistics is crucial for the region's integration and participation in production networks. The MENA economies' participation in trade and value chains is driven partly by exclusive zone-based regimes such as the Tangier Free Zone in Morocco, the Suez Canal Economic Zone in Egypt, or special exporting regimes in Tunisia and Jordan, which also play an important role in the economic development of the Mediterranean region.

- In Egypt, the expansion of the Suez Canal in 2015 and the establishment of the Suez Canal Economic Zone aims at reinforcing the position of the Suez Canal as a global maritime trade route, and exploiting its potential for investment attraction and export-oriented growth.
- In Morocco, Tanger Med port is a major logistic and industrial hub that connects to 186 ports worldwide. It is currently used as a platform for major European car manufacturers to assemble vehicles and build engines to export to EU and African markets. The aim of the Tanger Med project is to better integrate Morocco into global supply chains by offering logistics zones with free port advantages and direct accessibility to global shipping routes.

An integral part of a successful logistics strategy is the dry-port projects that have been set up in various countries in the region:

- In Egypt, the 6th of October Dry Port, expected to be operational by 2022, will be the country's first inland port (DB Schenker, 2020[27]). With an area of over 100 *feddans* (approx. 420 000 square meters), it will be the largest logistics facility in Africa. It is expected to handle 720 000 containers per day and will be linked by railway lines between Alexandria and 6th of October City. The project is one of the eight dry ports that the government aims to develop throughout the country to improve logistics.
- Jordan aims to establish a network of dry ports to exploit its geographic position as a natural transport and logistics corridor for the rest of the region. Dry ports are planned at Ma'an, at Madounah in Amman, and at Mafraq to link rail to the country's overall logistics network (Oxford Business Group, 2016[28]). These projects, which are part of an integrated logistics policy, could play an important role in facilitating economic activities that generate more commercial and trade flows in the region.

Indicator I3. Liner Shipping Connectivity

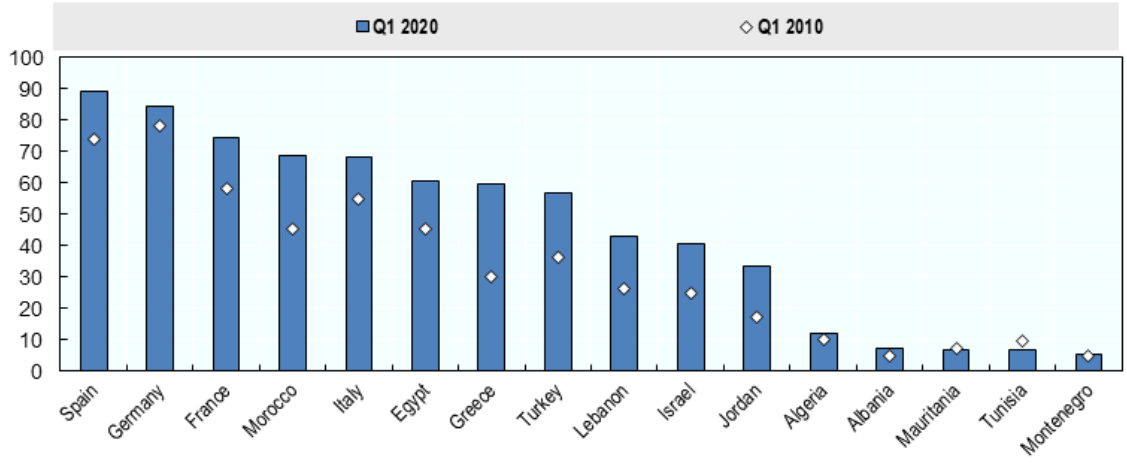
With 80% of the volume and 70% of the value of international trade across the globe carried on ships, maritime transport is the most important transport mode for goods, including in the Mediterranean region (OECD, 2021[10]). Today, the Mediterranean shores concentrate around 27% of the world's scheduled services and short-sea shipping between its shores, making the region a central trade route for global container shipping (SRM, 2020a[29]). The maritime networks in the Mediterranean are fragmented, which impedes the development of intra-regional maritime trade. Cargo traffic between MENA countries is only 5% of total cargo traffic in the Mediterranean, while traffic between European ports is 70% and between Europe and North Africa is 15% (IMF, 2019[24]).

In general, there are few direct links among MENA countries. The number of inter-port links or port pairs across the Mediterranean has declined in recent years, from 2,279 in 2009 to 1,532 in 2016 (Arvis et al, 2019[30]). For instance, Tunisia has direct links only to its closest European trade partners. There are very few direct lines of sea transport among Maghreb countries, which transport their intraregional goods through third-country ports, such as Marseille, Almeria or Rotterdam (ibid). Such diversions generate additional trade costs and reduce price competitiveness.

An essential factor in the success of port connectivity depends on how well they are positioned in global transportation networks, shipping and other services. The Liner Shipping Connectivity Index (LSCI)[2], which captures how well countries are connected to global liner shipping networks, reveals that there is scope for Mediterranean ports in general to be part of these networks (Figure 3.4). Spain and Germany rank high thanks to their major global seaports. In the MENA region, Morocco and Egypt score higher than their regional peers. In the Western Balkans, both Albania and Montenegro rank low. With the exception of Mauritania and Tunisia, most countries improved their performance between 2010 and 2020 – with Greece and Jordan making the most progress, followed by Lebanon[3], Israel and Morocco. Given that most of international trade, particularly in MENA countries, is by sea, the LSCI is also an important determinant of a country's trade competitiveness.

Figure 3.4. Liner shipping connectivity, 2010-20

Scale (0-100)



Note: Please see (Table 3.1) on key indicators for further explanation on what the indicator measures. The index for Lebanon reflects the situation before the explosion at Beirut port in August 2020 and consequent disruption in logistics.
Source: UNCTAD Maritime transport indicators, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=92.

To increase participation in value chains, policy actions should combine policies that increase logistics performance with efforts to build on trade agreements with regional and non-regional partners. The recently signed African Continental Free Trade Agreement (AfCFTA) opens opportunities for the Southern Mediterranean in terms of new markets and attracting investment.

Indicator I4. Median time spent in port (days)

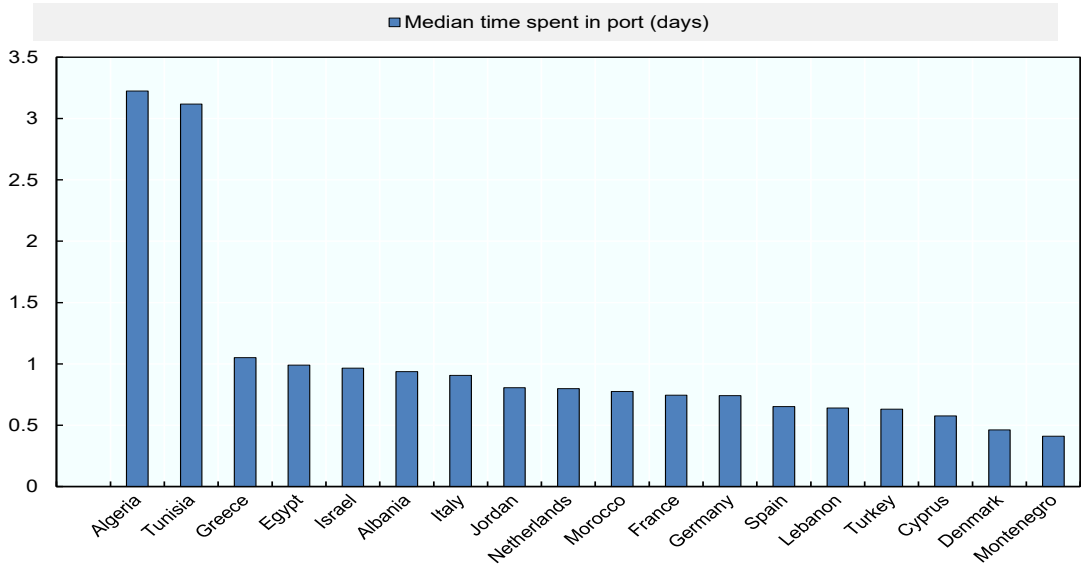
To further benefit from international trade and strengthen their role as an important maritime route, ports in the Mediterranean need to increase their profile as a global trans-shipment hub. The main trans-shipment hubs in the Mediterranean Sea include Piraeus (Greece), Marsaxlokk (Malta), Gioia Tauro (Italy), Algeciras and Valencia (Spain), Suez Canal (Egypt), and Tanger-Med (Morocco). Their competitiveness is determined not only by their strategic geographic position, but also by the overall quality of services – for example, the integration between port facilities, inland terminals and multimodal corridors (Euromesco, 2020[31]). All of these container ports are operated by global terminal operators, each operating a wide number of terminals in different countries; best practices are transferred between all of their terminals, creating continuous upward pressure on service levels. This means that terminal attractiveness is also determined by the way in which concessions granted to them allow operators to improve performance (OECD, 2017[32]).

The time ships spent in port is also an indication of a port's efficiency and competitiveness in trade. Every hour of ship time saved in a port helps ports, carriers and shippers save money on various costs and investments, including capital expenditures on ships and inventory holding costs of merchandise goods (UNCTAD, 2019[33]).

New marine-traffic data compiled by UNCTAD on the time ships spend in port during calls reveal variations among Southern and Eastern Mediterranean ports for container ships (Figure 3.5).

- Whereas almost all ports presented in the figure have waiting times of less than one day, Algeria and Tunisia are the exceptions, with waiting times of over three days. More specifically:
- In 2019, the median time of container ships spent in port during one port call in the MENA region ranged from 0.6 days in Lebanon to 3.2 days in Algeria. Morocco and Jordan had 0.8 each, while in Tunisia and Egypt, the waiting times 3.1 and 1 day respectively.
- In the Western Balkans, Montenegro is the best performer, with 0.5 days spent in port while in Albania it takes 0.9 days.
- With the exception of Greece, in 2019 the median time spent in ports in other EU countries was less than one day.

Figure 3.5. Median time spent in ports, 2019



Note: Container ships refer to ships that carry standardized sea-containers.
Source: UNCTAD port call and performance statistics.
https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?IF_ActivePath=P%2C11

StatLink https://stat.link/mt6rcz

One of the most important developments in container shipping in the Mediterranean is the rise of concentration of container shipping lines, which has important implications at the regional level. This trend has accelerated in recent decades, mainly due to mergers and acquisitions and the rise of alliances between big container shipping carriers. Between 2002 and 2016, the concentration rate of the top four container-carriers increased from around 25% to 50% (OECD, 2017[32]). As a result, fewer big players control larger flows of cargo, which will determine the ability of the Southern Mediterranean ports to capture more trans-shipment cargo, depending on the competitiveness of their trade routes. For example, for Asia-Europe trade, container carriers can re-route their services via Cape Hope around the African continent to avoid Suez Canal charges, which is now possible thanks to low oil prices. For instance, Maersk and MSC have diverted two of their joint services, adding seven days to the round trip between Asia and northern Europe. This in fact occurred in the context of the COVID-19 crisis, which pressured the Suez Canal Authority into tariff reductions (OECD-ITF, 2020[34]).

Another important related trend which requires adaptations of infrastructure is the rise of mega container ships. As transport costs per ton are decreasing due to bigger containers, larger ports in the Mediterranean

such as Suez have a comparative advantage in moving large vessels. Despite the increase in trade distance (measured by nautical miles for maritime trade), cost per ton has declined while container-carrying capacity has increased by approximatively 1 200% since 1968. With its expansion, the Suez Canal can accommodate bigger container ships. For instance, in April 2017, Mitsui O.S.K. Lines (MOL) put into service for the first time a container ship with a capacity of 20,170 TEUs – which Egypt can handle, but other ports in the Mediterranean cannot, even with expansion (MOL, 2017[35]).

Indicator I5. Getting electricity

Access to reliable and affordable electricity is a key decision factor for investors in industries where electricity is a major component of their cost structures. The reliability and cost of electricity supply remain important concerns for many investors in MENA and Western Balkan economies (Table 3.2).

- In the MENA region, in Jordan it takes 55 days to obtain electricity, which is faster than in other countries in the region such as Egypt, Morocco, and the Palestinian Authority; but the price of electricity in Jordan is the highest in the region (US cent 24.6 per kWh).
- In the Western Balkans, Montenegro has the highest number of days to get electricity (131) and the highest cost per kWh. It recently implemented automated systems to monitor and report power outages. This performance is relatively better than the average of the MENA region, but it is still lower than some of its regional peers.

Table 3.2. Getting electricity indicators in selected UfM economies, 2020

	Getting Electricity' Rank	Procedures (number)	Time (days)	Cost (% of income per capita)	Reliability of supply and transparency of tariff index (0-8)	Price of electricity (US cents per kWh)
Country						
Albania	107	6	71	448.6	5	9.4
Algeria	102	5	84	967	5	2.1
Bosnia and Herzegovina	74	5	69	289	6	11.6
Egypt	77	5	53	180.2	5	9.7
Jordan	69	5	55	285.3	6	24.6
Israel	83	5	102	13.3	6	11.8
Lebanon	127	4	89	128	0	13
Morocco	34	4	31	1308.8	6	12.4
Montenegro	134	7	131	144.4	5	14.1
Tunisia	63	4	65	719.1	6	7.7
Palestinian Authority	86	5	47	1383.9	5	17.6
Turkey	41	4	34	62.3	5	8.9
Middle East and North Africa	86	4.4	63.5	419.6	4.4	
OECD high income	43	4.4	74.8	61.0	7.4	

Source: The World Bank, Doing Business Indicators 2020, https://www.doingbusiness.org.

Indicator I6. Electricity trade flows

The integration of energy is a key economic link between the Southern and Eastern Mediterranean and with the EU. Although the MENA region has historically been a peripheral demand market for energy, its energy demand has been growing fast in recent years and is expected to almost double by 2040 (Zelt , et al, 2019[36]). The region holds one third of global oil and gas production and resources, and has growing energy connections with Europe, particularly power interconnections and natural gas and hydrogen

infrastructure (International Energy Forum, 2020[37]). The European Commission estimates that total final energy consumption in Southern Mediterranean could increase by 37% by 2040, with one-half being driven by an increase in electricity consumption (SRM, 2020b[38]).

A number of sub-regional initiatives are in place to interconnect the electricity networks and allow for electricity trade among the UfM countries (Box 3.2). Each has the potential to substitute power generation and provide stability to the energy system of a country. While some of these electricity interconnections have existed for some time, their utilisation remains low (particularly in the Southern Mediterranean) and they have led only to a modest electricity trade. Challenges include not only the lack of proper infrastructure but also a lack of a harmonised regulatory framework at the national and sub-regional levels.

Box 3.2. Selected regional interconnection schemes in the UfM

The Southern and Eastern Mediterranean economies have a number of regional electrical interconnection projects and schemes; combined, they form a total transmission system comprising around 400 000 km of high-voltage transmission lines. The EU also has its own policy to connect the energy infrastructure of its member states:

Western Balkans

Trans-Balkans Electricity Corridor is a 400 kV transmission network connecting the electricity transmission systems of Serbia, Montenegro, Bosnia and Herzegovina to those of Croatia, Hungary, Romania and Italy. The project includes the construction of an undersea interconnection cable between Montenegro (Lastva) and Italy (Villanova), converter stations in Italy and Montenegro, new constructions and upgrades in internal 400 kV network in Montenegro and Serbia, and the construction of 400 kV interconnection overhead lines between Montenegro, Serbia and Bosnia and Herzegovina. Overall, the project aims to improve conditions for electricity transmission from the north to the southern part of the region and allow further integration of the electricity market with Europe.

MENA

The Maghreb regional interconnection between Algeria, Morocco and Tunisia. Initially developed in the 1950s, the network evolved into multiple high-voltage transmission interconnections between the three countries. All three countries are now synchronised with the pan-European high-voltage transmission network (ENTSO-E Continental Europe Network). Despite increases in network capacity in recent years, electricity trade among countries has been rather modest. For instance, Tunisia and Algeria are only allowed to exchange 200 MW despite being linked via five tie lines with a transmission capacity of 1760 MW.

The Eight-Country and Territories Interconnection (ECI) between Egypt, Iraq, Jordan, Lebanon, Syria, Turkey and the Palestinian Authority. The projects started in 1988 with Egypt, Iraq, Jordan, Syria, and Turkey as part of an effort to upgrade their electricity systems to a regional standard. Later, the agreement was extended to other three countries, namely Lebanon, Libya and the Palestinian Authority. Among the eight, Turkey fully synchronised its grid in 2011 with the European one, with a view to starting commercial electricity trade in subsequent years.

European Union

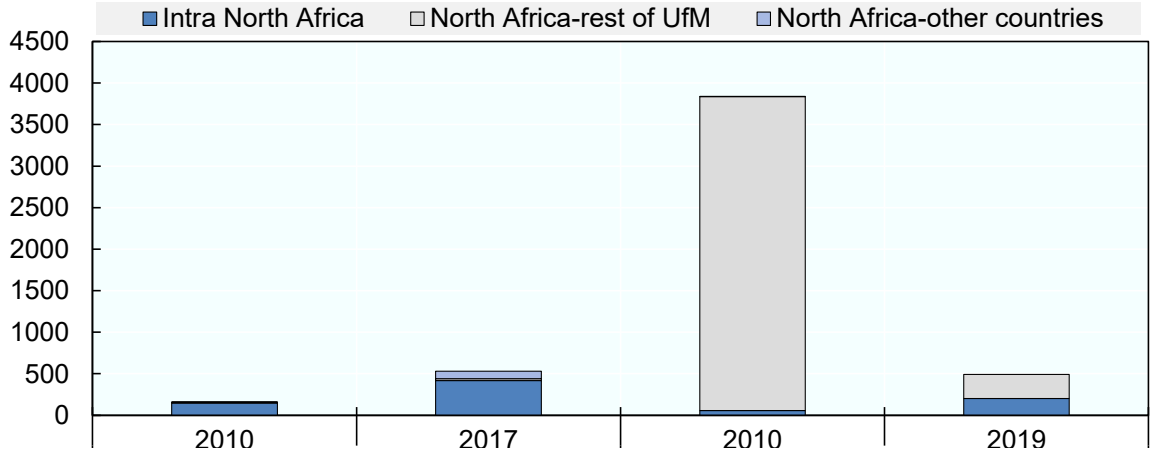
The *Trans-European Network for Energy (TEN-E)* is an EU policy to better connect the energy infrastructure of EU countries through cross-border infrastructure projects called “Projects of Common Interest”. The projects cover nine priority corridors in the areas of electricity, gas and oil infrastructure, which the EU will help develop in order to connect regions that are isolated from European energy markets, strengthen existing cross-border interconnections and help integrate renewable energy. This

includes: North Seas Offshore Grid; North-South Electricity Interconnections in Eastern Europe (NSI West Electricity); North-South Electricity Interconnections in Central Eastern and South Eastern Europe (NSI East Electricity); Baltic Energy Market Interconnection Plan in electricity (BEMIP Electricity); North-South Gas Interconnections in Western Europe (NSI West Gas); North-South Gas Interconnections in Central Eastern and South Eastern Europe (NSI East Gas); Southern Gas Corridor (SGC); Baltic Energy Market Interconnection Plan in Gas (BEMIP Gas); and oil supply connections in central eastern Europe (OSC). The regulation for TEN-E is currently being updated by the European Union to ensure alignment with the climate neutrality objective of the European Green Deal.

Source: (CGES, 2020[39]), (European Commission, 2020a[40]).

Overall, both exports and imports of energy between countries in the UfM increased between 2010 and 2019 ( ). These averages are largely driven by member states of the European Union, where national electricity markets are well integrated, allowing for complementarities among countries. For instance, France, Portugal and Slovenia are big exporters of power, while Greece, Italy and Spain are big importers (although Spain also exports). In the Southern and Eastern Mediterranean regions, international electricity trade is rather limited except for a few cases where countries trade electricity with the EU; Morocco, for example, imports about 15% of its electricity from Spain.

Figure 3.6. Electrical energy trade in the UfM

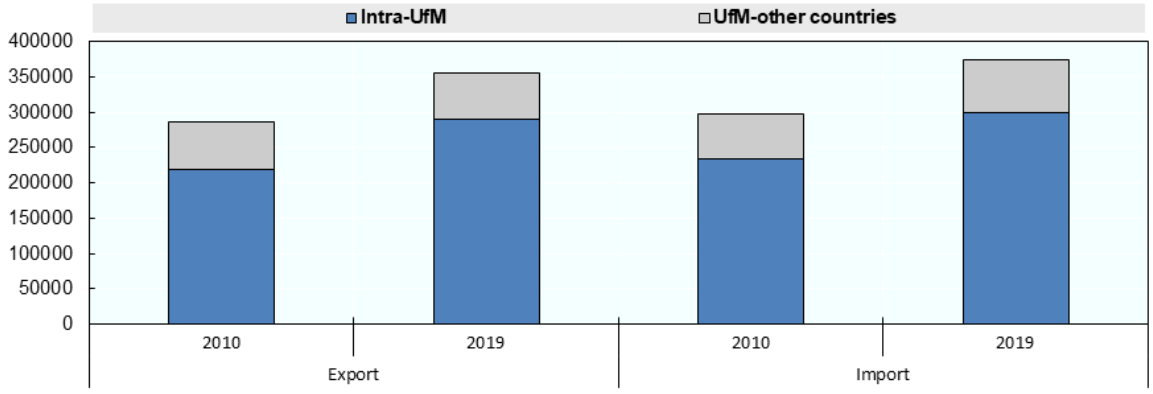


Note: Exports to other countries include Afghanistan, Andorra, Vatican, Iraq, Libya, Macedonia, Norway, San Marino, Russian Federation, Serbia, Switzerland, Syria, USA, Imports from other countries include Azerbaijan, Belarus, Macedonia, Northway, Russian Federation, Switzerland, Ukraine, and United Kingdom
Source: Source: UN COMTRADE Statistics, https://comtrade.un.org.

StatLink https://stat.link/596gfn

Figure 3.7. Electrical energy trade in the UfM

Thousands of kilowatt-hours



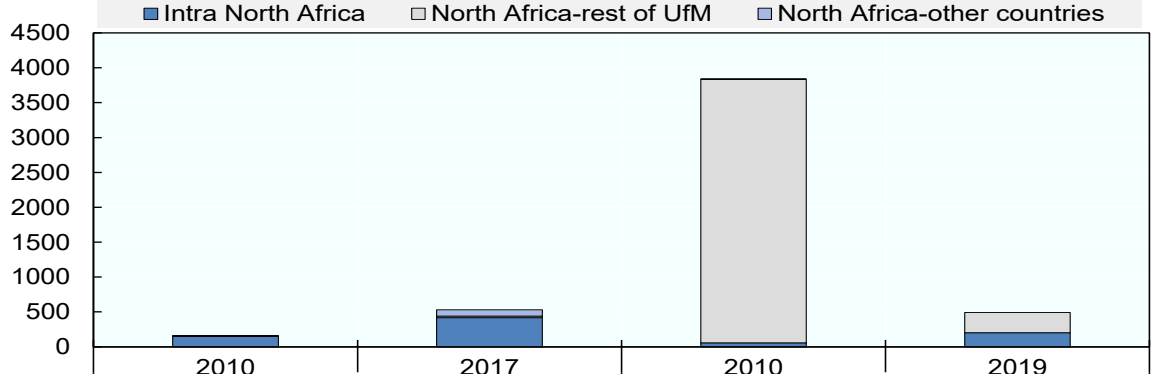
Note: Exports to other countries include Afghanistan, Andorra, Vatican, Iraq, Libya, Macedonia, Norway, San Marino, Russian Federation, Serbia, Switzerland, Syria, and the United States. Imports from other countries include Azerbaijan, Belarus, Macedonia, Northway, Russian Federation, Switzerland, Ukraine and United Kingdom.
Source: UN COMTRADE Statistics, https://comtrade.un.org.

StatLink https://stat.link/u4oh5r

North African countries' electricity exchanges with the EU are limited to mutual aid and annual trade contracts (MEDREG, 2019[41]). The Moroccan-Spanish cross-border interconnection is the only line that connects the sub-region with the EU, and represented almost 100% of North African electricity imports from the rest of the UfM in 2010 (Figure 3.8). These imports decreased in 2019, but the share of imports among North African economies increased. In terms of exports, between 2010 and 2017 the volume of total exports increased, primarily driven by exports to non-UfM countries, while the share of intra-regional exports decreased slightly.

Figure 3.8. Electrical energy trade in North Africa

Thousands of kilowatt-hours



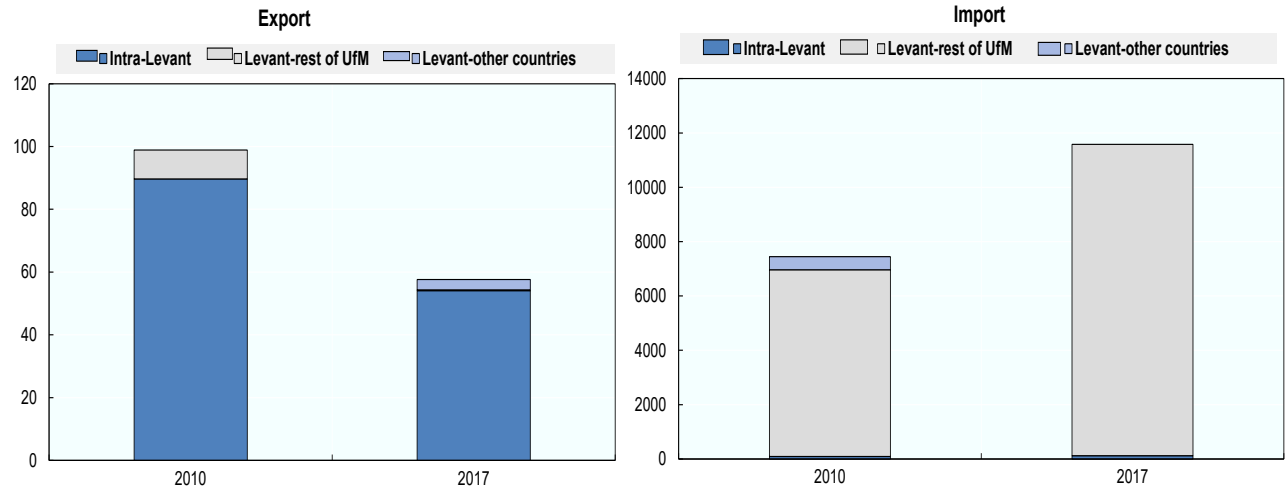
Note: North Africa includes Algeria, Egypt, Morocco and Tunisia. Exports to and imports from other countries include Libya and Syria.
Source: UN COMTRADE Statistics. https://comtrade.un.org.

StatLink https://stat.link/973vjx

In the Levant, the volume of electricity shared between the three countries (Lebanon, Palestinian Authority, and Jordan) is very low despite being part of the Eight-Country and Territories Interconnection project see (Box 3.2). The region exports a symbolic amount of electricity, while imports from the rest of UfM increased by more than half between 2010 and 2017 (Figure 3.9).This includes Jordan imports from Egypt, and Palestinian Authority imports from both Egypt and Israel. The Palestinian Authority's dependence on Israel for its electricity supply is high, reaching up to 99% in the West Bank. Since 2008, Jordan also started exporting 20 MW of power to the West Bank, and there are plans for a new interconnection to increase the voltage level to 400 kW (MEDREG, 2019[41]). The Lebanese electrical grid is only connected with Syria.

Figure 3.9. Electrical energy trade in the Levant

Thousands of kilowatt-hours



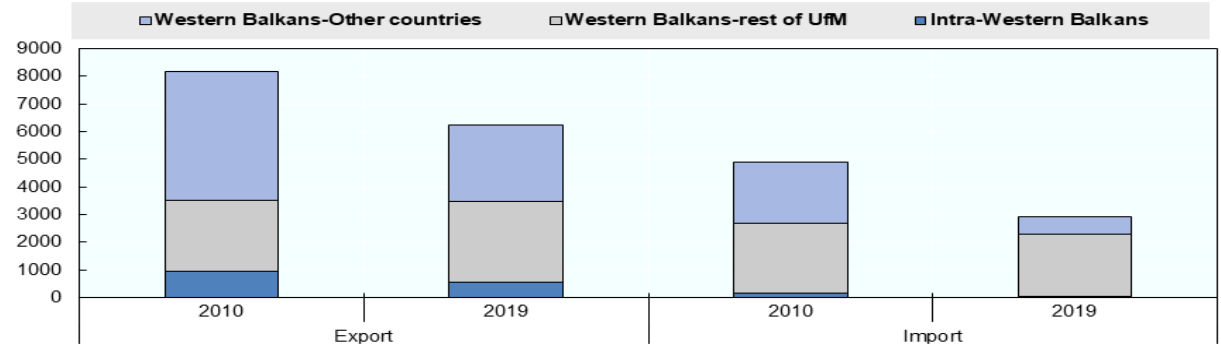
Note: Levant includes Lebanon, Palestinian Authority and Jordan. Imports from other countries include Syria.
Source: UN COMTRADE Statistics, https://comtrade.un.org.

StatLink https://stat.link/tjnyio

In the Western Balkans, both exports and imports of electricity trade decreased between 2010 and 2019 (Figure 3.10). More than half (57%) of electricity was exported to non-UfM countries in 2010, while 32% of electricity exports were to other UfM countries. In 2019, however, this trend reversed and the Western Balkans exported more electricity to UfM countries rather than to other (non-UfM) countries. The region's imports of electricity decreased significantly in 2019 compared to 2010, with an important decrease of imports from other countries and a slight decrease of imports from the rest of UfM.

Figure 3.10. Electrical energy trade in the Western Balkans

Thousands of kilowatt-hours



Note: Exports to and imports from other countries refer only to Serbia and Switzerland.
Source: UN COMTRADE Statistics, https://comtrade.un.org/.

Energy relations between North Africa and Europe are still based on oil and gas with over 60% of North Africa's oil and gas exports being sent to Europe (Eurostatgas, 2019[42]). However, given North Africa's geographical position, it has a high potential for the deployment of renewable energies for power generation. Thanks to a relatively large number of sun-rising hours per year, some countries in the region have among the best solar-power potentials worldwide, including in solar photovoltaic (PV) and concentrated solar power. Concentrated solar power plants could generate 100 times the combined electricity consumption of MENA and Europe together (IEA, 2010[43]). Increased trade of electricity from green energy sources between the two regions could also play a crucial role in achieving the EU objectives to completely decarbonise the European electricity system by 2050 and allow countries to move towards a low-carbon future (SRM, 2020b[38]). There is also a growing interest in the potential of renewable hydrogen to achieve this transition; the MENA region could be an important supplier for the EU, as highlighted in the recent European Hydrogen Strategy (European Commission, 2020[44]).

Despite the high potential of renewable energy for electricity generation, the share of renewables in the electricity capacity of the Southern Mediterranean remains low compared to global trends. As a result, the share of renewable energy in final energy consumption varies greatly between countries. It is estimated to account for 0.1% in Algeria, between 5 and 5.5% in Egypt and Jordan, and between 10 and 12% in Morocco and Tunisia (OECD, 2021[10]). Many countries in the region have set up national renewable energy targets and the deployment of related projects is well under way in the MENA region (Table 3.3). However, many economies are expected to rely on gas and oil to generate electricity at least until 2030 and need to better articulate these strategies with a clear action plan on greenhouse gas emissions or the long-term sustainability of transport and energy systems. Further investments are also needed to enable inter-zonal flows while ensuring continuity of services without security issues, including those related to geopolitical concerns (SRM, 2020b[38]).

Table 3.3. Renewable energy targets in selected Southern Mediterranean economies

	Overall renewable energy targets	Technology-specific targets	Year
Country			
Algeria	27% of electricity generation by 2030; 22 GW of installed capacity	Solar photovoltaic (PV): 3 GW by 2020, 13.6 GW by 2030 Wind: 1 GW by 2020, 5 GW by 2030 Concentrating solar thermal power (CSP): 2 GW by 2020, 2 GW by 2030 Biomass: 0.4 GW by 2020, 2 GW by 2030	2020 and 2030

	Overall renewable energy targets	Technology-specific targets	Year
		Geothermal: 15 MW by 2030	
Egypt	20% of electricity generation by 2022 and 42% by 2035	Solar PV: 0.2 GW by 2020, 0.7 GW by 2027 Wind: 7.2 GW by 2020 CSP: 1.1 GW by 2020, 2.8 GW by 2030 Hydropower: 2.8 GW by 2020	2022 and 2035
Israel	10% of electricity generation by 2020 and 17% of electricity generation by 2030	Solar PV and CSP: 63.4% of total generation by 2020 Wind: 29% of total generation by 2020 Biomass (including biogas): 7.6% of total generation by 2020	2020 and 2030
Jordan	2 GW of installed capacity by 2020; 10% of energy supply	Solar PV: 0.6–1 GW by 2020 Wind: 0.6–1 GW by 2020 Waste-to-energy: 30–50 MW by 2020	2020
Lebanon	12% (9 TWh) of the total electricity and heating demand by 2020	Solar PV, CSP and solar water heaters: 4.2% of total RE by 2020 Wind: 2.1% of the total RE by 2020 Hydropower: 3.2% of the total RE by 2020 Biomass: 2.5% of the total RE by 2020	2020
Morocco	42% of electricity installed capacity and 52% by 2030	Solar energy (PV and CSP): 2 GW by 2020 Wind: 2 GW by 2020 Hydropower: 2 GW by 2020	2020 and 2030
Palestinian Authority	10% of domestic electricity generation by 2020; 130 MW of installed capacity	Solar PV: 34.6% of the total RE by 2020 Wind: 33.8% of the total RE by 2020 CSP: 15.4% of the total RE by 2020	2020
Tunisia	30% of electricity generation by 2030	Solar PV: 1.5 GW by 2030 Wind: 1.7 GW by 2030 CSP: 0.5 GW by 2030 Biomass: 0.3 GW by 2030	2030

Source: (Aghahosseini et al, 2020[45]).

One of the main challenges in promoting renewable energies, particularly for the MENA region is to create a reliable regulatory environment and improve institutional conditions. In the MENA region, most economies still need to encourage competition and entry of independent power producers for renewable energy (OECD, 2016[46]). The electricity sector is largely dominated by state-owned enterprises (SOEs), often with subsidies that make the price of electricity too low for investors to have any incentive to enter the market (World Bank, 2020b[47]). Numerous countries rely on line ministries as regulators, even if they often operate in the sector through SOEs. Separate regulators can help promote confidence about the regulator acting objectively and transparently. Jordan and Morocco have been among the first to reinforce enabling conditions for investment in renewable electricity generation. Jordan is a positive example, as it has unbundled generation, transmission, and distribution in the electricity sector, following the 2003 General Electricity Law.

Indicator I7. Regulatory restrictiveness on foreign investments in energy and transport

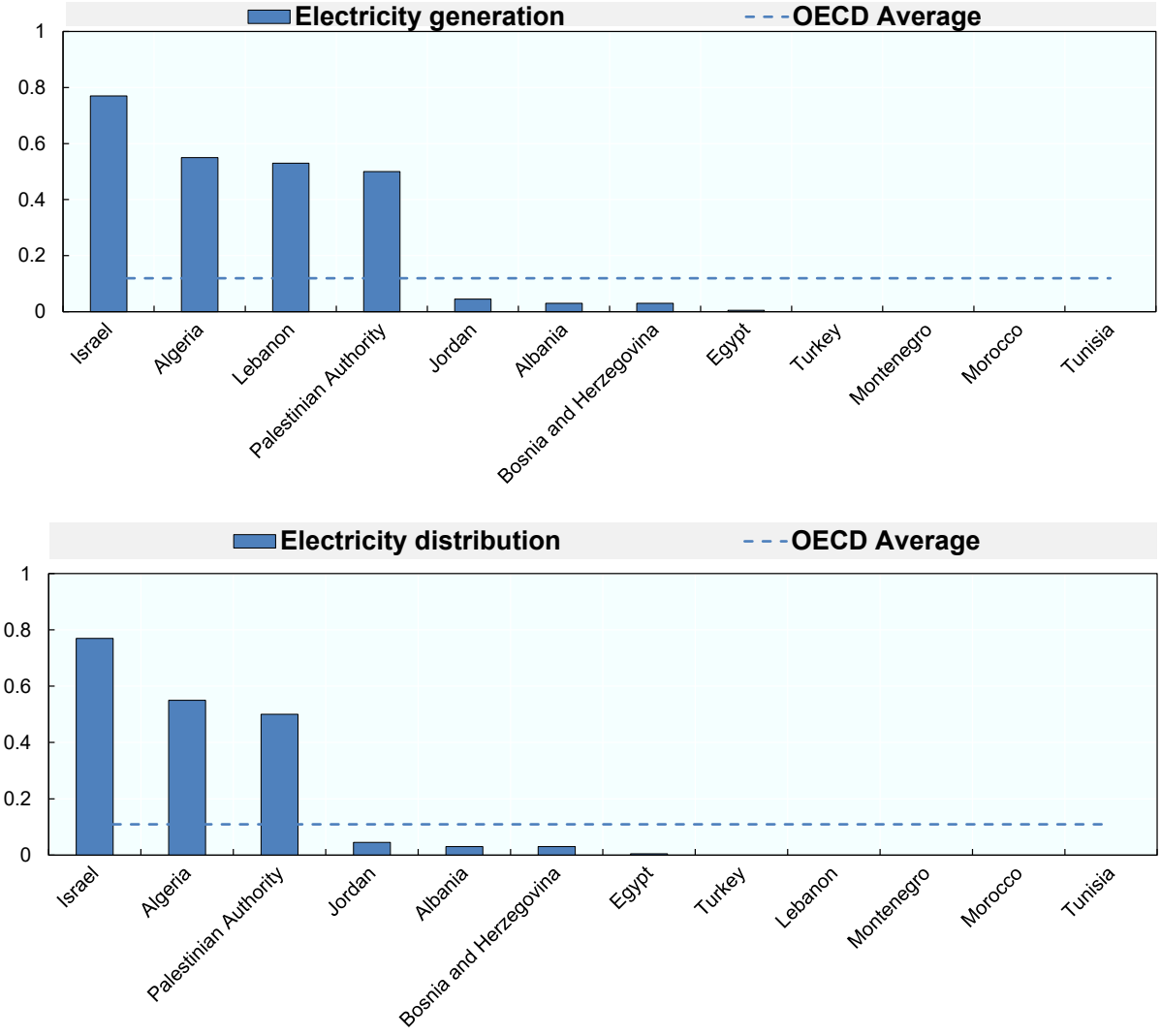
Investments in connectivity require an adequate policy environment, which involves removing administrative bottlenecks to investment and improving the regulatory environment. For connectivity, competitive transport (maritime and air) and electricity sectors are essential. Most of the Southern and Eastern Mediterranean markets are relatively open to foreign investments. Yet, in the transport and electricity sectors, restrictions are still relatively high (Figure 3.11) (see Chapter 2 on Finance for a general overview of restrictions measured by the OECD FDI Regulatory Restrictiveness Index). The FDI Index

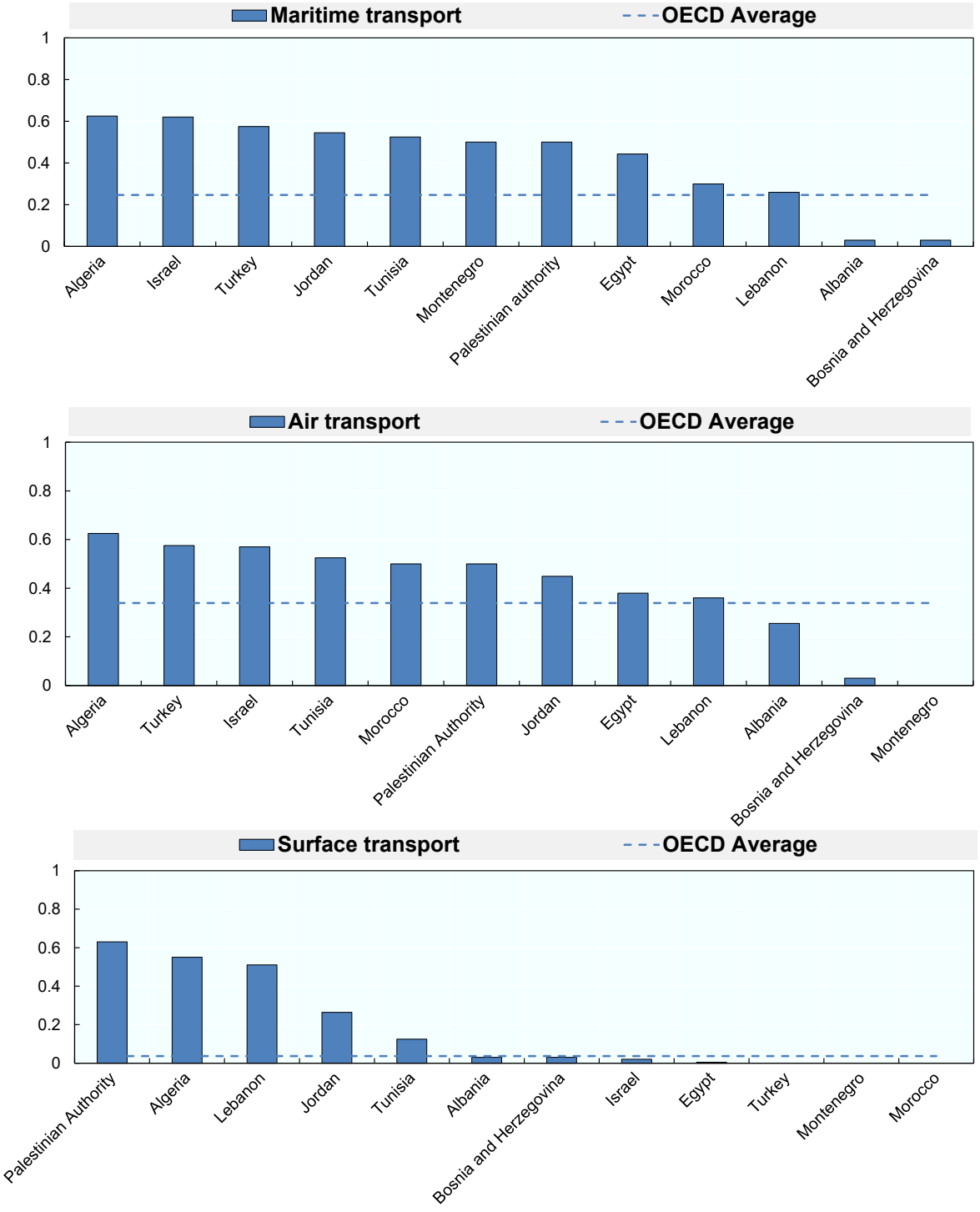
covers services provided over the infrastructure, including the management of the infrastructure itself; but most of the restrictions, and the bulk of activities, lie in services provided over the infrastructure. Countries in the Eastern and Southern Mediterranean generally have higher restrictions than the OECD average. The restrictions, and the bulk of activities, lie in services provided over the infrastructure. Countries in the Eastern and Southern Mediterranean generally have higher restrictions than the OECD average.

- In the Eastern Mediterranean, Montenegro's restrictions in the maritime sector are higher than those of Albania and Bosnia and Herzegovina, as well as being higher than the OECD average. In contrast, Albania and Bosnia and Herzegovina's restrictions in electricity generation and distribution are lower than the OECD average.
- In the Southern Mediterranean, Algeria has among the highest restrictions across the board, in maritime and air transport, and electricity sectors. In Jordan, high restrictions in the transport sector have reduced market entry and increased market power of trucking companies. In Morocco, foreign investment in air transport companies is limited to 49% of capital, while in maritime transport, for a vessel to fly the Moroccan flag, it must be 75% Moroccan-owned (OECD, 2017a[48]). Egypt has higher restrictions in maritime transport than Morocco and Lebanon. Its Maritime Law 1 of 1998 allows foreign investments only in the form of joint-venture companies in which foreign equity does not exceed 49%. Other horizontal restrictions among economies in the southern Mediterranean that can affect infrastructure investments include limits on foreign land ownership. For instance, in Lebanon and Jordan, land purchases for business use by foreigners require approvals, while Algeria, Jordan and the Palestine Authority apply preference to domestic firms in government procurement (OECD, 2021[10]).

Figure 3.11. FDI regulatory restrictiveness in selected infrastructure sectors, 2019

From 0 (open) to 1 (closed)





Note: PA refers to the Palestinian Authority.
Source: OECD, *FDI Regulatory Restrictiveness Index*, https://www.oecd.org/investment/fdiindex.htm

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Conclusions and policy considerations

- In order to improve the level of integration in the Southern and Eastern Mediterranean, governments need to consider the regional dimension when developing transport and energy networks. This means defining infrastructure in a more integrated and structured way, taking into account regional connectivity as part of the design and development of infrastructure. This also requires overcoming a range of co-ordination and government capacity challenges, including better co-ordination between countries and different branches of ministries.
- In developing such infrastructure, governments should also co-operate on common standards to ensure better quality, compatibility and inter-operability of infrastructure networks across the region. While this may be expensive in the short term (because infrastructure projects have to meet higher standards of efficiency, safety and sustainability), they incur lower lifecycle costs than infrastructure with different standards, which often impose long-term costs. Having a common approach to standards can also create a larger market for products and services, with lower prices and shorter times for deployment.
- Increasing investments in transport and logistics can reduce trade costs while supporting integration in regional and global value chains. Governments could consider more investments in the logistics industry to expand capacity and support better logistics services. Better multi-modal transport links could also help reorient some of the freight trade from a high reliance on roads to other modes of transport, such as rails and ports.
- Economies in the region need to improve the capacity and efficiency of their ports and ensure connectivity with the inland areas. This includes reducing capacity bottlenecks and waiting times while also linking ports with rails and other multi-modal transport for better connectivity with large inland areas. Successful policies have also focused on linking ports with well-developed special economic zones and research centres and universities, as well as building on trade agreements with regional and non-regional partners to facilitate movements of goods and services and develop linkages with global economic hubs. Projects should also have an inclusive approach to connect rural-urban areas and benefit all segments of the population in the society.
- Promoting more competition and lifting entry barriers in the power sector to improve the level playing field between new entrants and incumbents – could help attract more investments in electricity generation and distribution networks. The electricity sector is largely dominated by SOEs, often with subsidies that make the price of electricity too low for investors to have any incentive to enter the market. Numerous countries rely on line ministries as regulators, even if they often operate in the sector through such enterprises; having separate regulators can also help promote more confidence in the market that the regulator will act objectively and in a transparent way. Overall, incentives-based regulations with independent regulators have positive effects on investment levels, and therefore can contribute to more regional integration.
- Encouraging competition and entry of private investors in the energy sector may also allow more renewable projects to be developed and contribute to the power generation mix. Many countries in the region are well endowed with renewable energy sources but have not sufficiently diversified their power supply. Although many have set up national renewable energy targets and the deployment of related projects is well under way, they expect to rely on gas and oil to generate electricity at least until 2030. Challenges include not only the lack of proper infrastructure but also a lack of a harmonised regulatory framework at the national and sub-regional levels. The European Union could play a key role in providing technical support to its southern neighbours on harmonisation of regulations in the renewable energy sector.
- The economies of the Southern and Eastern Mediterranean present high restrictions to foreign investment ownership in maritime and air transport as well as electricity distribution and generation.

When such policies are necessary to address the countries' national security risks or concerns, governments should ensure that these statutory regulations are not more restrictive than needed.

- A major challenge in the UfM region relates to the limited availability of specific indicators to measure regional integration in energy and transport sectors. To better understand the reasons behind the limited integration and the specific policy options, more forward-looking indicators – focusing on key integration aspects including dry ports (size and typology), costs, permits and technical standards – could be developed at both national and regional levels.

References

AEI (2019), *China Global Investment Tracker, American Enterprise Institute*, https://www.aei.org/china-global-investment-tracker. [11]

Aghahosseini et al (2020), *Towards sustainable development in the MENA region: Analysing the feasibility of a 100% renewable electricity system in 2030", Energy Strategy Reviews, Volume 28*, https://doi.org/10.1016/j.esr.2020.100466. [45]

AIIB (2020), *Turkey: Halkali-Cerkezkoy Rail Project", Asian Infrastructure Investment Bank*, https://www.aiib.org/en/projects/details/2020/proposed/Turkey-Halkali-Cerkezkoy-Rail-Project.html. [15]

Arvis et al (2019), *Maritime Networks, Port Efficiency, and Hinterland Connectivity in the Mediterranean: International Development in Focus*, https://openknowledge.worldbank.org/handle/10986/30585. [30]

Ash N and Gibb A (2018), *Transport in the Balkans: Current Problems and Future Strategies*, https://secco2.eu/sites/default/files/digital_library/2018-10/AnA-TransportintheBalkansCurrentProblemsandFutureStrategies.pdf. [26]

CGES (2020), *Trans-Balkan corridor section Montenegro*, https://www.cges.me/en/projects/trans-balkan-corridor#:~:text=The%20Trans%2DBalkan%20corridor%20is,connection%20with%20the%20immediate%20surroundings.&text=%E2%80%93%20the%20undersea%20cable%20Italy%20%E2%80%93%20Montenegro. [39]

Chauffour, J. (2018), *Morocco 2040: Emerging by Investing in Intangible Capital, Directions in Development, World Bank*, https://openknowledge.worldbank.org/bitstream/handle/10986/28442/9781464810664.pdf?sequence=2&isAllowed=y. [23]

DB Schenker (2020), *1st Dry Port in Egypt", DB Schenker News*, https://www.dbschenker.com/eg-en/about/press-center/corporate-news/1st-dry-port-in-egypt-628286. [27]

Estache , et al (2013), *Infrastructure and Employment Creation in the Middle East and North Africa, World Bank, Washington*, https://openknowledge.worldbank.org/bitstream/handle/10986/12237/NonAsciiFileName0.pdf. [9]

EuroAfrica Interconnector (2020), *EuroAfrica Interconnector*, https://www.euroafrica-interconnector.com/. [17]

Euromesco (2020), *Infrastructure and Power in the Middle East and North Africa, Joint Policy Study 17, Euromesco*, https://www.euromesco.net/wp-content/uploads/2020/09/JPS_Infrastructures-and-power-in-the-MENA.pdf. [31]

European Commission (2020), *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Hydrogen Strategy for a Climate-Neutral Europe*, https://ec.europa.eu/energy/sites/ener/files/hydrogen_strategy.pdf. [44]

European Commission (2020b), *An Economic and Investment Plan for the Western Balkans*, https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/communication_on_wb_economic_and_investment_plan_october_2020_en.pdf. [12]

European Commission (2020a), *Trans-European Energy Networks*, https://ec.europa.eu/energy/topics/infrastructure/trans-european-networks-energy_en. [40]

Eurostatgas (2019), *Natural gas supply statistics; Consumption trends*, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Natural_gas_supply_. [42]

IAI (2018), *Technological trends in the MENA region: the case of digitalisation and information and communications technology (ICT)*, Istituto Affari Internazionali, https://www.iai.it/sites/default/files/menara_wp_23.pdf. [4]

IBRD (2015), *The Regional Balkans Infrastructure Study (REBIS) UpdateReport No. 100619-ECA, International Bank For Reconstruction and Development*, https://openknowledge.worldbank.org/bitstream/handle/10986/28413/REBIS-Update-Final-Report-Main-Text.pdf?sequence=1. [7]

IEA (2010), *Technology Roadmap - Concentrating Solar Power*, https://www.iea.org/reports/technology-roadmap-concentrating-solar-power. [43]

IMF (2019), *Economic Integration in the Maghreb: An Untapped Source of Growth*, https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2019/02/08/Economic-Integration-in-the-Maghreb-An-Untapped-Source-of-Growth-46273. [24]

IMF (2018), *Public Infrastructure in the Western Balkans – Opportunities and Challenges, IMF, Washington DC,*, IMF, https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2018/02/07/Public-Infrastructure-in-the-Western-Balkans-Opportunities-and-Challenges-45547. [6]

International Energy Forum (2020), "Relevance of MENA in energy investment, trade, and innovation for energy sector transformation: The green new deal and circular economy: Session I", https://www.ief.org/_resources/files/events/4th-ief-eu-energy-day-the-green-new-deal-and-circular-economy/03.-ivan-marten.pdf. [37]

International Trade Administration (2019), *International Trade Administration*, https://www.trade.gov/knowledge-product/algeria-public-works-infrastructure-development-and-water-resources. [21]

ISPI (2019), *Weathering the storm, Charting new Courses in the Mediterranean, Italian Institute for International Political Studies*, Italian Institute for International Political Studies, https://www.ispionline.it/sites/default/files/pubblicazioni/med2019_web.pdf. [5]

MEDREG (2019), *How to stimulate infrastructure investments from a regulator's perspective", booklet, Association of Mediterranean Energy Regulators*, http://www.medreg-regulators.org/Portals/_default/Skede/Allegati/Skeda4506-415-2019.5.16/Leaflet-How_to_stimulate_infrastructure-web.pdf?IDUNI=3ojke5qil5tanzq43whrv1ye4263. [41]

Middle East Eye (2020), *Beirut explosion: How the port blast will hit Lebanon's economy*, https://www.middleeasteye.net/news/beirut-explosion-lebanon-economy-port-will-hit. [50]

MOL (2017), "World's Largest Containership Delivered", Mitsui O.S.K. Lines", https://www.mol.co.jp/en/pr/2017/17018.html. [35]

NS Energy (2020), *Trans Adriatic Pipeline*, https://www.nsenergybusiness.com/projects/trans-adriatic-pipeline/#:~:text=The%20Trans%20Adriatic%20Pipeline%20(TAP,had%20begun%20in%20June%202015. [16]

OECD (2021), *Middle East and North Africa Investment Policy Perspectives*, OECD Publishing, Paris, https://dx.doi.org/10.1787/6d84ee94-en. [10]

OECD (2017), "Supporting the Development of the Suez Canal Economic Zone: Identifying Priority Actions for a Dynamic and Sustainable Economic Zone", https://www.oecd.org/mena/competitiveness/SCZone_Project_Brief_EN.pdf. [32]

OECD (2016), *Strengthening governance and competitiveness in the MENA region for stronger and more inclusive growth, Better Policies*, OECD Publishing, https://doi.org/10.1787/9789264265677-en. [46]

OECD (2017a), *National Treatment for Foreign-Controlled Enterprises.*, https://www.oecd.org/daf/inv/investment-policy/national-treatment-instrument-english.pdf. [48]

OECD/World Bank (2018), *Global Infrastructure Connectivity Alliance (GICA) First Annual Meeting Summary.*, https://www.oecd.org/finance/private-pensions/g20-global-infrastructure-connectivity-alliance-2018.htm. [49]

OECD-ITF (2020), *Global Container Shipping and the Coronavirus Crisis", International Transport Forum*, International Transport Forum, https://www.itf-oecd.org/sites/default/files/global-container-shipping-covid-19.pdf. [34]

OECD-ITF (2019), *Summit Ministerial Declaration on Transport Connectivity for Regional Integration*, https://ww. [2]

ONCF (2020), *Morocco's 2040 Rail Strategy", Office National des Chemins de Fer*, https://www.oncf.ma/en/Development/Strategy/Morroco-s-2040-rail-strategy. [20]

Oxford Business Group (2017), *The Report: Algeria*, https://oxfordbusinessgroup.com/overview/peak-performance-development-key-projects-supports-modernisation. [22]

Oxford Business Group (2016), *Jordan's transport sector stabilised by foreign investment and domestic growth*, https://oxfordbusinessgroup.com/overview/stabilising-force-increased-foreign-investment-coupled-domestic-expansion-has-transformed-sector. [28]

Plan Solaire Mediterranean (2020), "Plan Solaire Mediterranean", https://fr.wikipedia.org/wiki/Plan_solaire_m%C3%A9diterran%C3%A9en. [19]

Serbia Energy (2019), *Submarine cable between Italy and Montenegro, importance and perspectives"*, https://serbia-energy.eu/submarine-cable-between-italy-and-montenegro-importance-and-perspectives/. [18]

SRM (2020a), *Italian Maritime Economy. The impact of Covid-19 on maritime transport: strategic routes and global scenarios*, https://www.srm-maritimeconomy.com/wp-content/uploads/2020/10/SUMMARY-maritime-2020-english.pdf. [29]

SRM (2020b), *MED & Italian Energy Report 2020*, https://www.srm-med.com/p/med-italian-energy-report-2019. [38]

Total Slovenia News (2018), "Adriatic-Ionian Transport Infrastructure Needs Investment to Integrate", https://www.total-slovenia-news.com/business/1308-adriatic-ionian-transport-infrastructure-needs-investment-to-integrate. [14]

UfM (2017), *UfM Roadmap for Action*, https://ufmsecretariat.org/wp-content/uploads/2017/10/UfM-Roadmap-for-action-2017.pdf. [1]

UfM (2014), *UfM Official Ministerial Declaration on Digital Economy*, https://ufmsecretariat.org/wp-content/uploads/2014/09/UfMMinistersDeclarationEN.pdf. [3]

UfM (2017a), *Trans-Maghreb Project,*, https://ufmsecretariat.org/wp-content/uploads/2017/12/TUD-Trans-Maghreb_EN.pdf. [13]

UNCTAD (2019), *Review of Maritime Transport 2019, United Nations*, https://unctad.org/en/PublicationChapters/rmt2019ch3_en.pdf. [33]

World Bank (2018), *Project Appraisal Document*, World Bank, http://documents.worldbank.org/curated/en/215731536304313045/pdf/PAD2551-PAD-PUBLIC-Project-Appraisal-Document-PAD-ELMED-v8-3-003.pdf. [25]

World Bank (2020a), *World Bank Enterprise Survey*, https://www.enterprisesurveys.org/. [8]

World Bank (2020b), *World Bank Enterprise Survey*, https://www.enterprisesurveys.org/. [47]

Zelt , et al (2019), *Long-Term Electricity Scenarios for the MENA Region: Assessing the Preferences of Local Stakeholders Using Multi-Criteria Analyses, Energies 12 (16), 1-26*, https://ideas.repec.org/a/gam/jeners/v12y2019i16p3046-d255660.html. [36]

Annex 3.A. International tools and instruments for sustainable infrastructure

A. Policy-related tools and instruments	
Framework condition	G7 Ise-Shima Principles for Promoting Quality Infrastructure
	G20 principles for quality infrastructure investment
	OECD Policy Framework for Investment, adopted by an OECD council recommendation in 2015 to improve investment climate to mobilise private investments, including in quality infrastructure, and to enhance the policy framework.
	Application to selected sectors such as—Transport infrastructure-Procurement guidelines (ITF)
	The OECD Principles for Private Sector Participation in Infrastructure, approved by the OECD council in 2007
Financing	G20/OECD High-level Principles of Long-term Investment Financing by Institutional Investors
	OECD Policy Guidance for Investment in Clean Energy Infrastructure
	Mapping Channels to Mobilise Institutional Investment in Sustainable Energy
	Investment governance and the integration of environmental, social and governance factors
	OECD Investing in Climate, Investing in Growth
	OECD/ WB/ UNEP Financing Climate Futures: Rethinking Infrastructure
Governance	OECD Framework for the Governance of Infrastructure to plan and prioritise investments, manage PPPs and procurement, design effective regulatory environments and manage integrity risks
	G20 Compendium of Good Practices for Promoting Integrity and Transparency in Infrastructure Development – focuses on transparency and integrity in the infrastructure cycle. (anti- corruption and fraud) at Appraisal, Planning, Tendering, Implementation & Contract Management, etc.
	OECD Guidelines for Multinational Enterprises, that integrate Responsible Business Conduct (RBC) principles and standards for investments in the infrastructure project life e-cycle for better economic, environmental and social outcomes, avoid political gridlock, and ensure that infrastructure serves public interest
	G20/OECD Principles of Corporate Governance and OECD Guidelines on Corporate Governance of State-Owned Enterprises
	Anti-corruption, responsible business conduct and the environment, with the OECD Anti-Bribery Convention, OECD Integrity Framework for Public Investment
	Open competition in procurement, with the OECD Recommendation of the Council on Public Procurement and OECD Arrangement on Officially Supported Export Credits
Development	United Nations Sustainable Development Goals OECD DAC Blended Finance Principles for Unlocking Commercial Finance for the SDGs
Environment	The 2019 OECD council Recommendation on the Assessment of Projects with Significant Impact on the Environment
B. Project-related tools and instruments	
Planning and prioritisation	WBG Infrastructure Prioritisation Framework (IPF)
	OECD Principles for the Public Governance of Public-Private Partnerships
Institutional capacity for project development	Multi-lateral Development Banks APMG PPP Certification Program
	WBG Country PPP Readiness Diagnostic
Project preparation	WBG PPP Screening Tool
	WBG/IMF PPP Fiscal Risk Assessment Model (PFRAM)
	WBG Project Readiness Assessment
	WBG Policy Guidelines for Managing Unsolicited Proposals
	OECD Recommendation on Public Procurement
	OECD Recommendation on Fighting Bid Rigging in Public Procurement
	Sustainable Infrastructure Foundation SOURCE

A. Policy-related tools and instruments	
	UNECE International Specialist Centers
	UNECE Standard On Zero Tolerance to Corruption
Transaction support and contract management	WBG Framework for Disclosure in PPP Projects
	WBG Guidance on PPP Contractual Provisions
	GI Hub Annotated Public-private Partnership Risk Allocation Matrices
	The GI Hub PPP Contract Management Tool

Source: Adapted from OECD (2019), *Sustainable Infrastructure for Low-Carbon Development in Central Asia and the Caucasus: Hotspot Analysis and Needs Assessment,* Green Finance and Investment, OECD Publishing, Paris, https://doi.org/10.1787/d1aa6ae9-en

Notes

[1] *Infrastructure connectivity* is a complex concept spanning across several dimensions. At the G20 level, connectivity is defined as linkages of communities, economies and nations through transport, communications, energy and water networks across countries (OECD/World Bank, 2018[49]), Global Infrastructure Connectivity Alliance (GICA) First Annual Meeting Summary).

[2] http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=92.

[3] The data reflect information prior to the explosion in 2020 at Beirut port, which at the time was handling around 70% of the country's exports and imports, including food. Although Lebanon has a smaller second port in Tripoli, 80 km from the capital, the port is not equipped to handle additional cargo volumes or to deal with the amount of food imports needed (Middle East Eye, 2020[50]).