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The Suez Canal

The impact of war and the pandemic on maritime routes, an analysis of port competitiveness indicators, the role of Egypt in global trade and the development of the SCZone

maritime
economy

2023

“The Suez Canal. The impact of war and the pandemic on maritime routes, an analysis of port competitiveness indicators, the role of Egypt in global trade and the development of the SCZone”

is a research carried out by SRM and Alexbank within the Permanent Observatory on Maritime Transports and Logistics

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Publication based on data information available at January 2023.

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Preface

This is the fourth Report jointly produced by Alexbank and SRM to monitor the dynamics of the Suez Canal, one of the most important maritime and logistical hubs in the world, which is acquiring increasing geo-strategic and geo-political importance, since around 12% of international freight traffic of all types (oil, raw materials, containers, etc.) passes through this point.

2015

The first Report was produced in 2015 to analyse the impact of the doubling of the Canal on Mediterranean traffic and routes; in-depth work was carried out on the dynamics that this expansion would entail in maritime routes.

2018

Later, in 2018, we inaugurated the second edition in which we focused in particular on the effects of the Chinese Belt & Road Initiative and on investments in the Suez Canal Zone, one of the most important free zones in the MENA area.

2021

In 2021, SRM and Alexbank, on the other hand, wanted to pay special attention to the impact that the severe Covid-19 pandemic had on maritime and global trades and how these affected the dynamics of the Canal.

2023

And today, in continuation of the work that has been done, the study analyses the most important statistics and phenomena that have intervened to change the global flow of goods and the role of the Canal in this regard. Naturally, the analyses focus on the economic impacts of Russia's invasion of Ukraine and the impacts of the war that continues to significantly influence maritime trends.

The Canal has always shown remarkable resilience to these phenomena, and it is no coincidence that it closed the 2022 fiscal year with record numbers totalling 23,000 ships transited (+15% on 2021).

The Canal is important for the Egyptian economy for the revenue brought in by ship passages and the goods handled in the ports close to Suez, which have unparalleled planning dynamism.

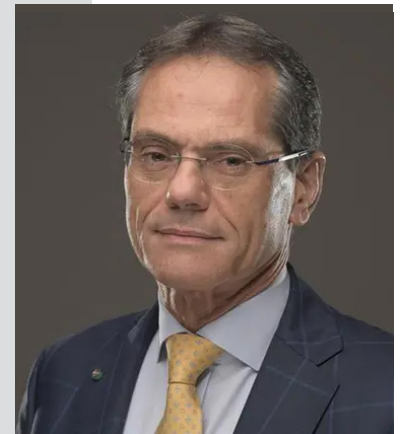
At the same time, the Canal is equally important for Italian ports because the main sea trade route between our country and Asia passes through Suez: every year Italian imports and exports amount to around €80 billion.

This year's study not only delves into the dynamics of the Canal, but also into **the value of Egypt's maritime relations**, which remains an important partner for both Europe (€30 billion of exchange, more than 80% of which is carried out by sea) and Italy (€5.8 billion). This trade therefore relies on **shipping**, and the Report devotes great attention to this modality both in the container sector and in Ro-Ro, where projects to further develop Italy-Egypt routes are at an advanced stage.

The Report is full of many other analyses, information and data. In fact, there is also an analysis of Suez in relation to the numerous investments that are being made in the **Free Zone**, which currently hosts enterprises of various strategic production sectors such as textiles, steel, plastics, agro-food, but also sectors related to energy and sustainability where Egypt intends to play a major role in the Mediterranean context.

With this research, Alexbank and SRM aim to provide a useful tool for understanding the strategic importance of the Canal, its traffic, its investments and the way it increasingly contributes to the Mediterranean acquiring a central role in international trade and the world economy.

Our thanks go to all the researchers who have drawn up the analyses and sourced the information contained in this volume, in the hope that this work will represent another step towards better understanding of maritime transport and logistics issues while also serving as an element that favours closer ties between the economies of our countries and more generally between the two shores of the Mediterranean.



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Executive Summary





The role of the Suez Canal for global supply chains

1

Around **12% of global trade** flows through the Canal, representing **30% of international shipping container volume**. Nearly **5% of world's crude oil**, **10% of oil products** and **8% of LNG** seaborne flows transit the Suez Canal.

2

Suez Canal is also an important **chokepoint in global food trade: 14.6% of world cereal imports** and **14.5% of world fertilizers imports** depend on navigation through it.

The impact of the war-induced change in trade patterns on the Suez Canal traffic

1

Increase in oil tankers transits:
Northbound (rise in European and Canadian imports from the Arab Gulf);
Southbound (Diversion of Russia's crude exports to Asia).

2

Increase in LNG carrier transits:
Northbound (from the Arab Gulf to Europe); **Southbound** (relative increase from Russia, the United States and North Africa to Asian countries).

3

Increase in bulk carrier transits: surge in dry bulk commodities being **shipped from Asia and Australia to Europe**.

Ships, main goods and revenues

1 In the **first half of 2022 transiting goods traffic** amounted to **553.5 million tons** registering a **growth** equal to **5.8%** on the first half of 2021. Southbound goods amounted to 282.4 million tons, decreasing by 6.4%, while Northbound goods amounted to 271.1 million tons with an increase of 22.4%.

3 The number of transiting ships in the Suez Canal reached **23,583 in 2022**, a **+15%** compared to 2021.

5 The **Canal's revenues** recorded in **2022** an **all-time high** reaching **\$8 billion**, a rise of **25%** over 2021.

2 **Oil & Products** reached **124 million tons** in the first half of 2022, compared to 92.8 million tons in the same period of 2021, an **increase of 33.6%**.

4 The navigation movement in the Suez Canal **recorded** on Monday **7/11/2022** new and **unprecedented records in terms of daily transit statistics**, with **94 ships** crossed from both directions.

6 The **Suez Canal Authority (SCA)** **increased the transit tolls for all types of vessels by 15% and by 10% for dry bulk ships and cruise ships since January of 2023**. Raising transit tolls is justified by the increase of energy prices, freight rates and daily tanker time-charter rates.

The future of the Suez Canal is being reshaped

1

In May 2021, Egypt started the **dredging work to enlarge the southern entrance** of the Suez Canal in order to improve navigation movement and reduce the transit time of ships, as well as increase the navigational safety factor in the southern region.

3

The Suez Canal Container Terminal (SCCT) operated by APM Terminals in Port Said, located at the mouth of the Suez Canal on the Mediterranean, **is to be expanded** with a **\$500 million investment**. The targeted capacity after the expansion will reach 6 million TEUs.

2

The **project will cost 3 billion Egyptian pounds (\$191 million)** and will be **completed by June 2023**.

4

The SCA is working on changing the Suez Canal into a **green maritime shipping canal by 2030**. All 16 navigational monitoring stations along the Canal are currently running by wind energy, and this contributes to reducing 16 tons of CO₂ emissions per year.

Main indicators of international competitiveness

1 Egypt's **shipping connectivity is on the rise**, especially after the Suez Canal expansion.

3 **Maritime relationships of Egypt**, according to the **Liner Shipping Bilateral Connectivity Index (LSBCI)**, are mainly with **other Med countries** and **Italy is the first one**. It could be a signal of a shortening of global chains so that there are no interruptions in production, realizing in this way some smoothing supply chains.

5 **Port Said ranked 31st in the world** and **6th in the Med Area**.

7 In Egypt the median time for all ships is 1.4 day; for containerships is 0.9; for liquid bulk carriers is 1.7; for liquid petroleum gas carrier is 1.8; for dry breakbulk carriers is 2.4 and for dry bulk carriers is 4.6.

2 Based on the **LSCI (Liner Shipping Connectivity Index)** in the 4th quarter 2022, with 68.47 points, Egypt ranked **22nd in the world** (China holds the 1st position), **4th among the MENA countries** (behind the UAE, Morocco and Saudi Arabia) and **2nd in Africa** (after Morocco).

4 In terms of **Port Liner Shipping Connectivity Index (PLSCI)**, Port Said is the most connected Egyptian container port in 4th quarter of 2022. At this date, Damietta port ranked 2nd over the port of El Sokhna and Alexandria.

6 From the comparison between Egypt and the main competitors of the MENA area and Mediterranean Europe on the **waiting times** of the main types of ships, it emerges that some improvement in port logistics is expected.

Egypt trade relations: goods and partner

1

In 2021 **Egypt trade** valued about **€97 bn** (of which €62.4 in import and €34.4 in export). The **EU is the biggest trading partner of the country**, covering about 1/4 of the entire Egypt's total trade volume. According to data, there has been a progressive growth of traffic between the two entities.

3

Italy is Egypt's first European trading partner and **fifth in the world**, after China, Saudi Arabia, the United States and Turkey.

5

Nearly **1,200 Italian companies** are operating in the **Egyptian market** in the fields of energy, industry, agriculture, transport, logistics, tourism, construction, information technology and financial services.

2

Traffic in value **between EU and Egypt travels mainly by sea (80.9%)** so it is clear the need to **upgrade the maritime transport system Egypt into an international hub of trade and logistics**.

4

The volume of **Italian net direct investments in Egypt** estimated in **2021** at **€8.1 bn**.

6

According to **2021** data, **Italy's import-export with Egypt** was equal to **€5.8 bn**.

7

In 2021, **Italy was the no. 8 supplier to Egypt** with a 3.54% market share, second in Europe only to Germany (4.89%). **Italy ranks second as Egypt's export destination** with a 6.7% market share.

9

In the **first nine months of 2022, Italian trade with Egypt** was **€4.6 bn**, an **increase by 10%** on the same period of 2021.

11

The **top 5 products exported from Italy to Egypt** are in order: machinery (alone accounts for 23% of the total), coke and refined products, chemicals, metals and transport equipment.

8

Sea is the **main mode** of transport for **import-export with Egypt in value (84%)**, the **only one in volume**.

10

The **top 5 products imported from Italy** are in order: chemicals (alone accounts for 27% of the total), metals, minerals, coke and refined products, textile and apparel.

12

The strong sea trade relations between Italy and Egypt are also confirmed by the existence of regular shipping services linking the two countries (RO-RO and container services).

The Suez Canal Zone

1 Egypt has been adopting a **comprehensive reform plan to structurally develop its economy** affirming as an **export hub for domestic and international players**.

3 Investors will benefit from a number of privileges that the SCZone offers: a unique geographical position, access to large markets, skilled & affordable labour, business-friendly processes, infrastructure and logistics, supportive regulatory framework.

5 The Egyptian government has also signed a number of MOUs and preliminary agreements with international companies to establish multiple plants in the **SCZone** to produce **green hydrogen**, with an estimated **investment cost of \$30 bn**.

2 Egypt signed **16 preferential trade agreements** with major economic blocs worldwide, **covering almost 107 countries**.

4 The **SCZone** has implemented a number of mega **infrastructure** projects and of **industrial & logistical projects** to prepare the area to receive investors at a cost of almost **\$18bn**.

6 The SCZone has proved its resilience against global crises. During the period between **July 2021 and June 2022**, the **Suez Canal Economic Authority** has achieved almost **EGP3.4 billion in revenue**.



Chapter 1 | **The resilience of the Suez Canal traffic in a world affected by war and pandemic**

Foreword. The importance of the Suez Canal for global supply chains. Some numbers

The Suez Canal is a strategic maritime passage for global supply chains and among the world's most significant trade chokepoints. The Suez route is vital to the economic ties between Europe and Asia through the Mediterranean: the 120-mile waterway saves around 6,100 miles of transit using London, UK – Mumbai, India as two base points. The difference is roughly 26 days to 44 in sea time and is similar for container ship transits from Shanghai to Rotterdam. In addition, the Egyptian state is keen to develop the axis of the Suez Canal and the economic zone, by establishing development projects capable to attract both domestic and foreign investments. This, within the framework of a comprehensive strategy to transform the Canal into a global logistics center for supply and resupply, at a time when the global need is growing to facilitate the movement of trade and supply in light of successive crises to which all the countries of the world are exposed.

Regarding the importance of the Suez Canal Authority to the world, it ranks second among the top 10 logistics companies in the Middle East and North Africa in 2021¹.

Around 12% of global trade flows through the Canal, representing 30% of international container traffic volume². Nearly 5% of world's crude oil, 10% of oil products and 8% of LNG seaborne flows transit the Suez Canal, according to the U.S. Energy Information Administration: about 25% of Middle East LNG exports

¹ Forbes. 10 Biggest Logistics Companies in MENA 2021.

² World Economic Forum (2021, 25 March). The Suez Canal in numbers [<https://www.weforum.org/agenda/2021/03/the-suez-canal-in-numbers/>].

transited the waterway to deliver gas mainly for European buyers. In this regard, Egypt's Suez Canal, adopting flexible marketing policies, aims to have a 15% share of global energy trade by 2040.

Each year, more than \$1 trillion worth of goods pass through the Canal.

1. Economy, Trade & Disruption.

The role of the Suez Canal in the global trade framework

The economic consequences when global supply chain relations are disrupted can have dramatic effects as it was the case with the outbreak of the Corona pandemic, but also with the Suez Canal blockage in March 2021 after the grounding of the Ever Given, a 20,000 TEU container ship, and now with the Russia's invasion of Ukraine.

The war is a human tragedy for the people directly involved, but its economic implications are global. The war came at a difficult moment for the world economy. Despite the heavy impact of Covid-19, the international trade system was able to show a remarkable degree of resilience, but the recovery from the pandemic-induced recession has been decelerating due to continued COVID-19 flareups and diminished policy support³. Inflation is growing in many countries impacting consumers' confidence and spending, and large economies have and are still heightening interest rates to reign it in. Disruptions in world trade and investments curb growth in developing countries and add to price pressures, especially if governments impose trade restrictions to shield their economies.

Yet, in the first half of 2022, the impressive rebound in the total value of world trade in goods and services (\$7.7 trillion in the first quarter) was not matched in real terms by a growth in trade volumes⁴. This divergence is explained by the rally in commodity prices, and both UNCTAD and the WTO agree on the concrete risk of a loss of momentum in the growth of trade. Following Russia's invasion of the Ukraine, however, the dominos of supply-chain havoc began tumbling once again, this time intertwined with issues involving national security, political alliances, energy availability, climate change, nationalism, inflation, and the limits of globalization.

Against such a complicated background, policy actions are needed to strengthen maritime trade and increase its resilience to shocks which are both exogenous to the shipping

³ World Bank (2022). The Impact of the War in Ukraine on Global Trade and Investment.

⁴ Tajoli L. and Tentori D. (2022, 21 November). International Trade: Globalisation is Here to Stay [<https://www.ispionline.it/en/pubblicazione/international-trade-globalisation-here-stay-36548>].

sector (e.g., future pandemics) and endogenous (e.g., bottlenecks at logistical level determined by the port congestion, the shortage of containers or workforce). First of all, technology and digitalisation are fundamental to improve ports' efficiency and productivity in transports (for instance as regards smart ports and shipping). Secondly, energy sustainability can also be key in promoting efficiency in maritime trade while contributing to reaching climate neutrality targets. Finally, last – but definitely not least – nearshoring and reshoring projects should be complemented by plans aimed at multiplying and diversifying supply routes instead of reducing them. Surging transport costs and delays in accessing materials have encouraged more firms to consider nearshoring, the process of transferring manufacturing or supplier business to a nearby country closer to the location of demand for its manufactured products. Some European famous brands plan to move more manufacturing from Asia closer to European markets in response to rising shipping costs. In some cases, governments are seeking to reduce their countries' reliance on key components sourced from overseas. The United States, European Union and others have all announced plans to develop their own chipmaking industries. Eventually, that may help ease a global chip shortage stoked by surging demand for cars and other products that include chips, as well as pandemic-linked production problems.

One possible longer-term consequence of the recent heightened geopolitical tensions could be a polarisation of the two preeminent global ecosystems centered around the US and China. That could hasten supply chain reorganizations and even lead to reshoring/nearshoring, where businesses move manufacturing back home or closer.

These prospects generate perspectives of intensification of regional trade and increase the centrality of areas such as the Mediterranean Sea which unites three different continents – Europe, Asia, Africa involved in nearshoring strategies – and therefore of the Suez Canal for the transit of global trade.

In such scenario, the unblocking of the Black Sea maritime route agreed at the beginning of August by Ukraine and Russia provided some relief and – at least in these first few months – helped to lower tensions, reducing the risks of trade fragmentation and above all, fears of a global food crisis. Suez Canal is in fact also an important chokepoint in global food trade: 14.6% of world cereal imports and 14.5% of world fertilizers imports depend on navigation through it.

Based on baseline middle-of-the-road expectations, 38% of the value of global trade in agricultural commodities, excluding fertilizer, is expected to transit the main global three chokepoints in 2030⁵. In other words, 20% is expected to pass through the Panama Canal, 10% through the Turkish Straits, and 8% through the Suez Canal.

⁵ King R. (2022, 20 June). Exploring the cascading impacts from climate shocks to chokepoints in global food trade, Resource Trade. Earth [<https://resourcetrade.earth/publications/cascading-impacts-from-climate-shocks-to-food-trade-chokepoints>].

Agricultural imports: chokepoint dependence, 2018-20

	Panama Canal	Dover Strait	Strait of Gibraltar	Turkish Straits	Suez Canal	Strait of Bab-al-Mandab	Strait of Hormuz	Strait of Malacca
World imports: Cereals	9.5%	3.2%	10.7%	16.7%	14.6%	13.6%	6.4%	13.5%
World imports: Fertilizers	7.2%	6.8%	17.6%	11.8%	14.5%	14.4%	8.5%	15.7%
EU imports: Cereals	2.3%	5.9%	5.1%	11.0%	4.7%	4.7%	0.0%	2.0%
World imports: Soybeans	17.0%	4.4%	10.5%	3.4%	4.5%	4.2%	2.3%	33.5%
EU imports: Soybeans	5.4%	20.7%	13.0%	3.0%	1.8%	1.8%	0.0%	0.8%
EU imports: Fertilizers	1.4%	6.8%	4.0%	6.0%	1.2%	1.2%	0.2%	0.7%

Table 1 | Source: Chatham House, The Royal Institute of International Affairs, 2022

Proportion of global trade transiting the three chokepoints

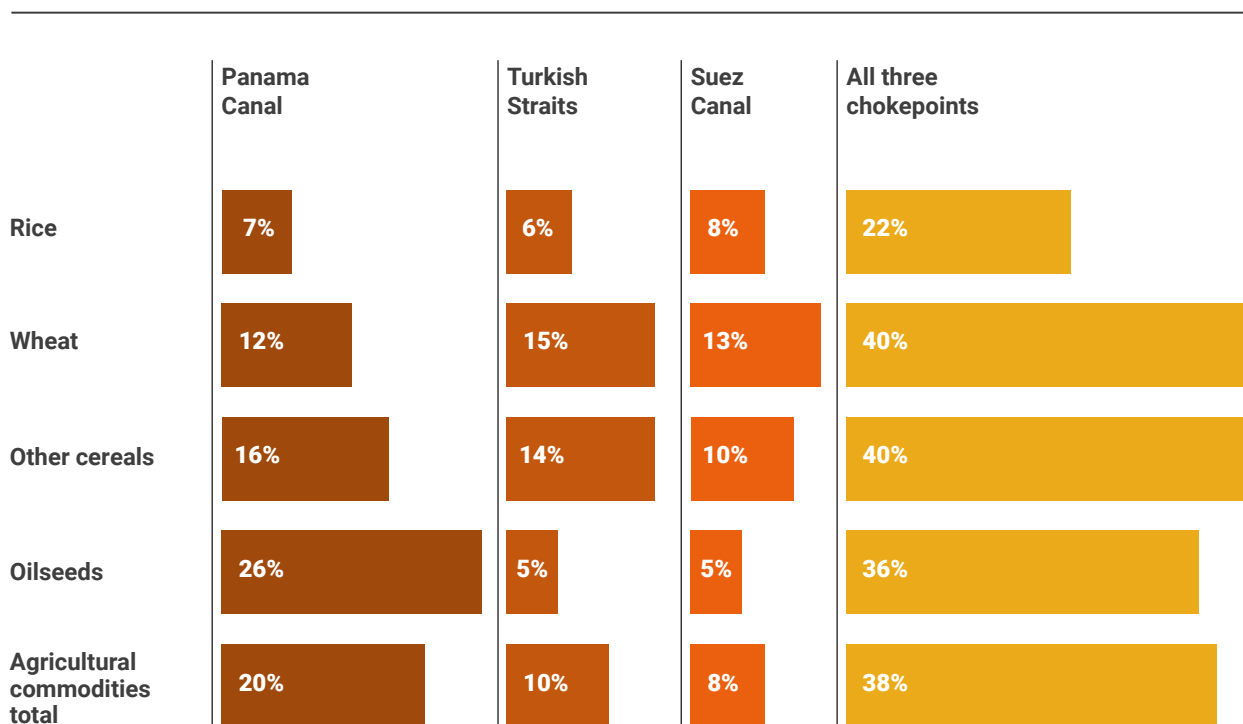


Figure 1 | Source: Chatham House, The Royal Institute of International Affairs, 2022

The brief 2021 Ever Given blockage in the Suez Canal directly affected only around 0.3% of merchandise trade of the year, but the rippling downstream impacts were still being felt months later. For some countries and regions, their high dependencies on particular production regions and trade routes for their food security, will make them being much more exposed and vulnerable even to relatively small disruptions.

Despite the critical issues, currently the forecast for global supply chain is looking good overall. But there are some downside risks behind the corner: shortage of raw materials, weak trends in China, inflation rising at unprecedented rates, are economic elements that contribute to explaining the level of stress – and understanding the disruptions – experienced by global value chains. On top of that, one should also add the geopolitical tensions between China and the United States, with Europe standing in between the two super-powers: against such a complicated scenario, it is not difficult to understand why the paradigm of globalisation – as we are used to know it – could be undermined.

However, such a deal could not avoid a drastic reduction in global trade. The WTO drastically cut trade growth forecasts to 3.5% for 2022 and expectations for 2023 remain low, a lackluster 1% increase in trade. In parallel, the shipping services provider Clarkson Research predicted that the trends in maritime transport, which represents the mirror of international trade, have deteriorated. Global seaborne trade is now projected to reduce by 0.7% to 11.9 billion tonnes in full year 2022 and to grow by 1.5% in 2023.

Trend 2020-2023 var.% yoy world GDP, international trade, seaborne trade

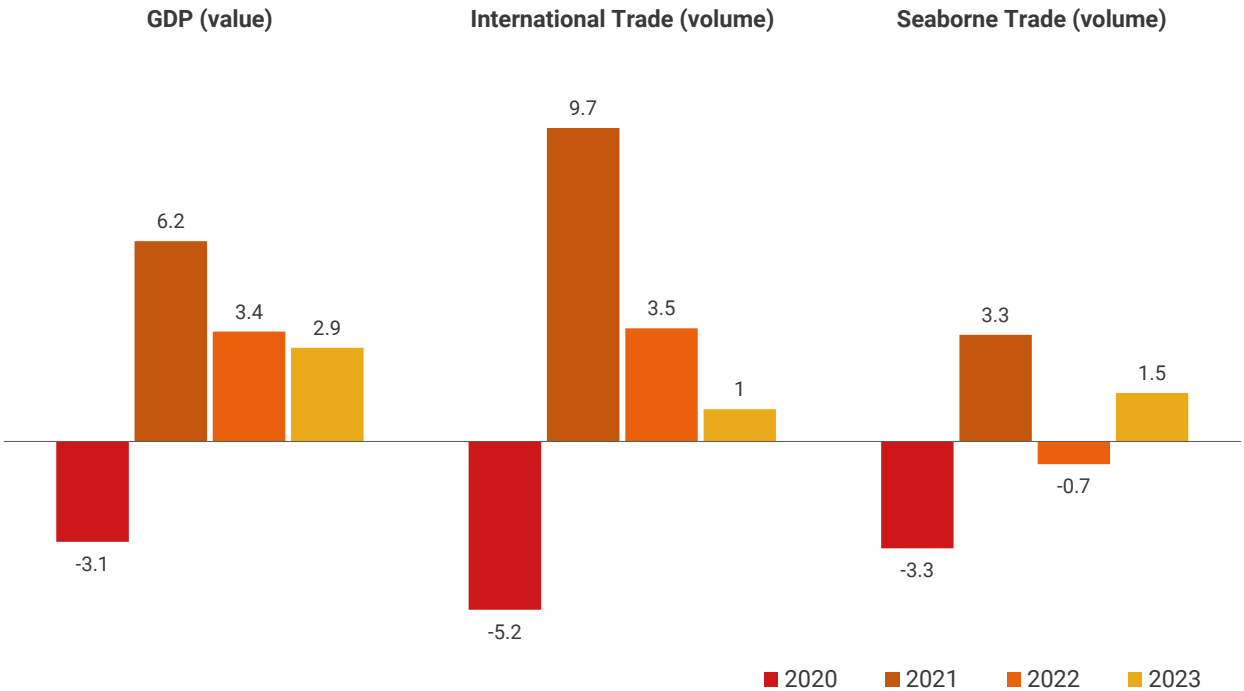


Figure 2 | Source: SRM on IMF, WTO, Clarksons Research

The scenario described by the WTO largely overlaps with the one outlined by the International Monetary Fund in its January 2023 World Economic Outlook Update, forecasting growth for GDP by 3.4% in 2022 and 2.9% next year. Europe will suffer, heavily affected by the economic consequences of the conflict in Ukraine, because of high inflation and energy prices.

2. The recent shipping dynamics and impacts on the Suez Canal

Macroeconomic headwinds, impacts from the conflict and developments in China are affecting seaborne trade volumes.

Disrupted regional logistics, the halting of port operations in Ukraine, the destruction of important infrastructure, trade restrictions, increased insurance costs, and higher fuel prices, have all contributed to the logistical hurdles arising in the Black Sea region. They have also contributed to a more costly and unpredictable global trading and shipping environment. Many countries have had to look further afield for suppliers of oil, gas and grain.

Consequently, shipping distances increased, along with transit times and costs.

It is not possible to associate all challenging developments in global shipping with a specific cause. The war in Ukraine is one of several major issues currently affecting international maritime transport, compounding other challenges such as the COVID-19 pandemic, port congestion, the need to switch to low carbon fuels. Higher energy prices exacerbate the challenges faced by shippers. However, trade restrictions and shifts in trading patterns resulting from the war have led to a surge in ton-mile demand. Daily rates for smaller-size tankers, which are key for regional oil trading in the Black Sea, Baltic Sea and Mediterranean Sea regions, have dramatically increased. Overall, tankers' average earnings have more than trebled between March and mid-Nov 2022 to over \$75,000/day.

The higher energy costs have also led to higher marine bunker prices, raising shipping costs for all maritime transport sectors. By the end of May 2022, the global average price for very low Sulphur fuel oil (VLSFO) reached over \$1,000 per ton, a 64% increase with respect to the start of the year – and the average fuel surcharges charged by container shipping lines have risen close to 50% since the beginning of the war⁶.

Trade in food and energy are feeling the most immediate impact of the war. Russia and Ukraine rank among the top seven global producers and exporters of wheat, corn, barley, sunflower seeds, and sunflower oil. Russia is also a major supplier of fossil fuels, such as crude oil and natural gas, in addition to fertilizer and agricultural commodities.

⁶ UNCTAD (2022, 28 June). The war in Ukraine and its effects on maritime trade logistics.

Disruptions of these supplies are fueling a surge in prices, with negative consequences for global trade and welfare and asymmetric effects on exporting and importing countries. Exporters gain from higher commodity prices and increase production and shipments, replacing part of the decrease in exports from Ukraine and Russia. Importers are hurt twice: they both consume these commodities and use them as inputs to produce other goods and services for export.

As the Black Sea region is a large exporter of fertilizers, the resulting shortages and price increases could translate into lower crop yields in many regions. This in turn could lead to food prices reaching new highs.

The Russian invasion has prompted an unprecedented reaction by the United States, the European Union, and other high-income economies, in the form of sanctions. These range from sanctions targeting Russian individuals and enterprises, to bans on Russian energy imports and restrictions on exports of selected electronics to Russia, such as semiconductors.

Since the war broke out, maritime trade has been affected due to the unrest around the Black Sea, which serves as Russia's economic gateway into global markets. Container traffic from and to Russia goes through Baltic ports (40% of total volume) as well as Black Sea and Far East ports (30% each). While traffic to the Northwest (Baltic) is directly affected by European sanctions, Russia may still connect from the Black Sea or Far East to countries or with operators (e.g., Chinese shipping lines) not joining sanctions.

Russia's own shipping lines may be able to operate, but not with ports located in more than 35 countries that have issued sanctions.

The global impact is small, but uncertainty may add to stress in global shipping. Russia is a comparatively small destination for container shipping as its ports handle only about 4.9 million TEUs (for comparison: Canada and Greece handled 6.2 million TEUs and 5.8 million respectively, in 2021). The freed-up capacity in container shipments from and to Russia (due to idling vessels), however, is not expected to alleviate global container-shipping stress; it may instead create increased uncertainty and disruptions at a time when the world economy is on the path of post-pandemic recovery.

Sanctions will not affect bulk shipping of commodities from Russia as severely as container shipping. Russian commodity exports depend on bulk shipping, a massive 800 million tons, with a similar geographical distribution between the three coasts as for container shipping. Bans of Russian-flagged, owned, and operated ships as well as cargo handling in western ports affects bulk shipping from the Baltic Sea, much less so the other regions. Furthermore, in bulk shipping, vessels do not operate on regular lines but are chartered on demand. Services are available from operators in many countries, including those applying no sanctions or less stringent ones than the EU, the UK or the United States.

In mid-November 2022, with just two weeks to go until European Union's ban on Russian crude shipments came into force, Russia already lost more than 90% of its market in the bloc's northern countries, previously the mainstay of shipments from the Baltic and Arctic terminals.

Russia shipped just 95,000 barrels a day to Rotterdam – its only remaining European destination for seaborne deliveries outside the Mediterranean/Black Sea basin – in the four weeks to Nov. 18. That's down from more than 1.2 million barrels a day sent to the region's ports each day in early February. States like Lithuania, France and Germany halted such imports several months ago, while Poland followed suit in September.

Three-quarters of the crude loaded at Russia's Baltic ports is now headed to Asia, with Indian refiners snapping up barrels to take advantage of a grace period offered by the US and the UK and expected to be adopted by the EU. That would exempt from sanctions cargoes that are loaded before the ban comes into effect on Dec. 5, as long as they are delivered by Jan. 19.

The G7 nations are expected to announce the level of their price cap on Russian crude shipment. Cargoes purchased at prices above that level would lose access to European and UK ships, insurance and other services.

The volume of crude on vessels heading to China, India and Turkey, the three countries that have emerged as the biggest buyers of displaced Russian supplies, plus the quantities on ships that are yet to show a final destination, rose to a record 2.45 million barrels a day in the four weeks to Nov. 18.

Diversion of Russia's crude exports to Asia is upending trade flows.

And tankers hauling Russian crude are becoming cagier about their final destinations. There has been a big jump in vessels leaving the Baltic and showing their next destination as Port Said or the Suez Canal. It remains likely that most of these vessels end up in India, with some heading to China and the occasional vessel going to other destinations such as the United Arab Emirates, or Sri Lanka. Russia's seaborne crude exports to European countries fell to their lowest level for the year so far, averaging 569,000 barrels a day in the 28 days to Nov. 18. Flows were down by 131,000 barrels a day, or 19%, from the period to Nov. 11.

Thanks to the war-induced change in trade patterns, the Egyptian Suez Canal earned the most revenue in its history due to the influx of Western ships passing through it in search of oil and its derivatives. The war in Ukraine caused an increase in oil tankers transiting the canal. Due to the trend of reducing imports from Russia, northbound trade increased mainly as a result of a rise in European and Canadian imports from the Arab Gulf. Meanwhile, oil traffic heading south has increased due to Russia's tendency to export oil to Asia, far from Europe.

Even in the gas segment, the Suez Canal received many liquified natural gas (LNG) tankers coming from the Gulf countries and the south towards Europe. According to Suez Canal Authority these LNG carriers have compensated and even overcome the loss of traffic from the Black Sea, which was caused by the war. More LNG now transits the Suez Canal heading north from the Arab Gulf region to Europe and, ever according to SCA, this trend is likely to continue. Also, LNG tankers heading from Russia, the United States and North Africa to Asian countries have seen a “relative increase.”

The war has also resulted in a surge in dry bulk commodities being shipped from Asia and Australia to Europe – especially coal, iron and steel – due to a shortage of imports from Russia and Ukraine: the Suez Canal also benefits from these traffics.

Main impacts on the Suez Canal of the war-induced change in trade patterns

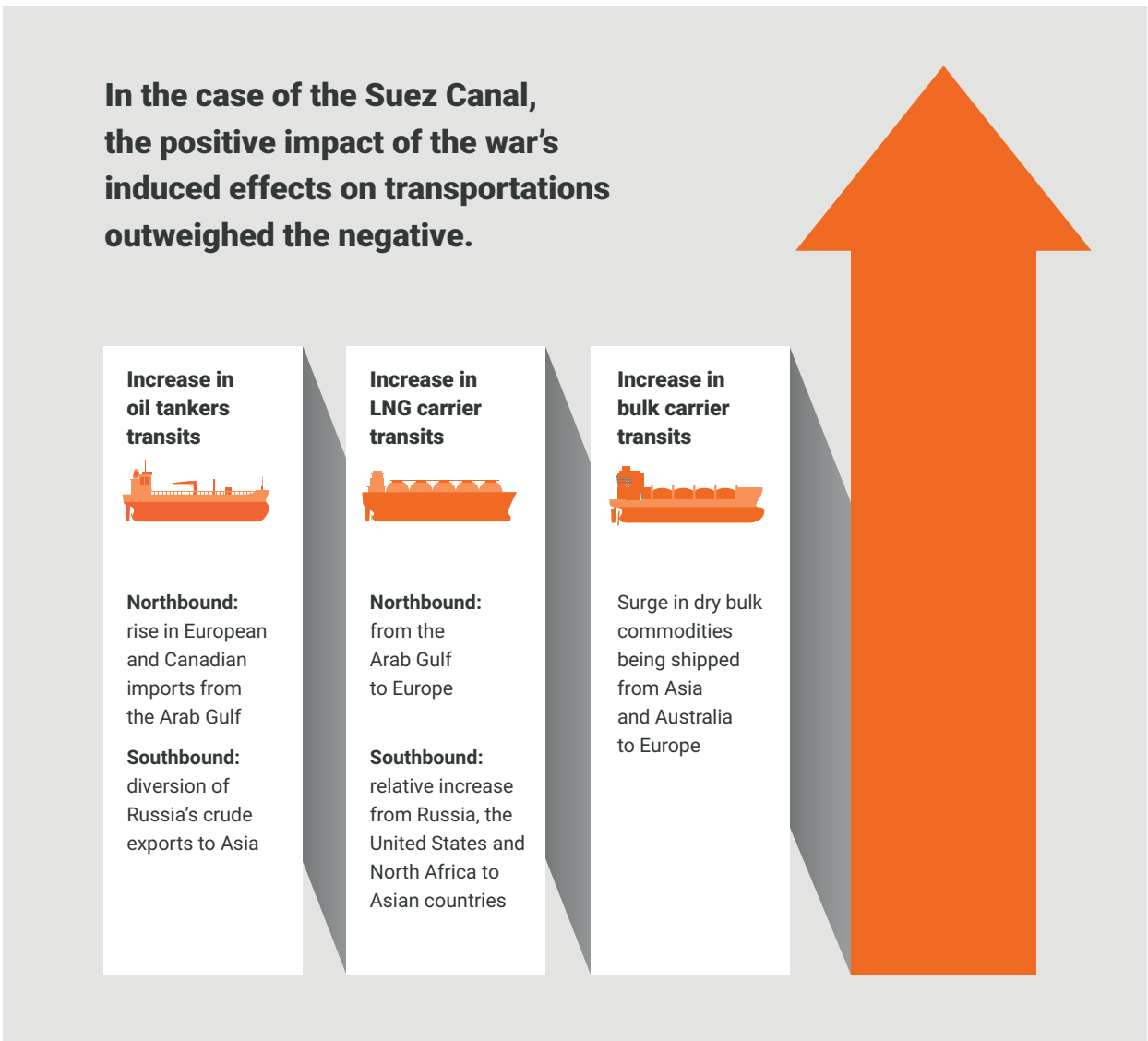


Figure 3 | Source: SRM

According to the latest data published by the State Information Service of Egypt⁷, the number of transiting ships in the Suez Canal reached 11,101 ships in the first half of 2022, compared to 9,763 ships in the first half of 2021, an increase of 13.7%. The rates of transit of various types of ships during the first half of 2022 increased significantly compared to the same period of the previous year, as the number of cruise ships increased by 82.4%, tanker ships by 20.8%, bulk ships by 16.8%, and car carrier ships by 14.1%, while the number of container ships increased by 13.6%, and general cargo ships by 3.9%.

The growth of the volume of goods passing through the Suez Canal continued despite the slowdown in the growth of the volume of global trade following the repercussions of the Ukrainian crisis. The quantity of cargo from the north to the south of the Canal amounted to 282.4 million tons in the first half of 2022, compared to 301.8 million tons in the first half of 2021, a decrease of 6.4%, and the quantity of cargo from the south to the north of the Canal amounted to 271.1 million, compared to 221.4 million tons in the first half of 2021, an increase of 22.4%. In detail, the quantity of petroleum and its products transiting the canal reached 124 million tons in the first half of 2022, compared to 92.8 million tons in the same period of 2021, an increase of 33.6%.

Ships and cargo transiting through the Suez Canal. 2011-1 half 2022

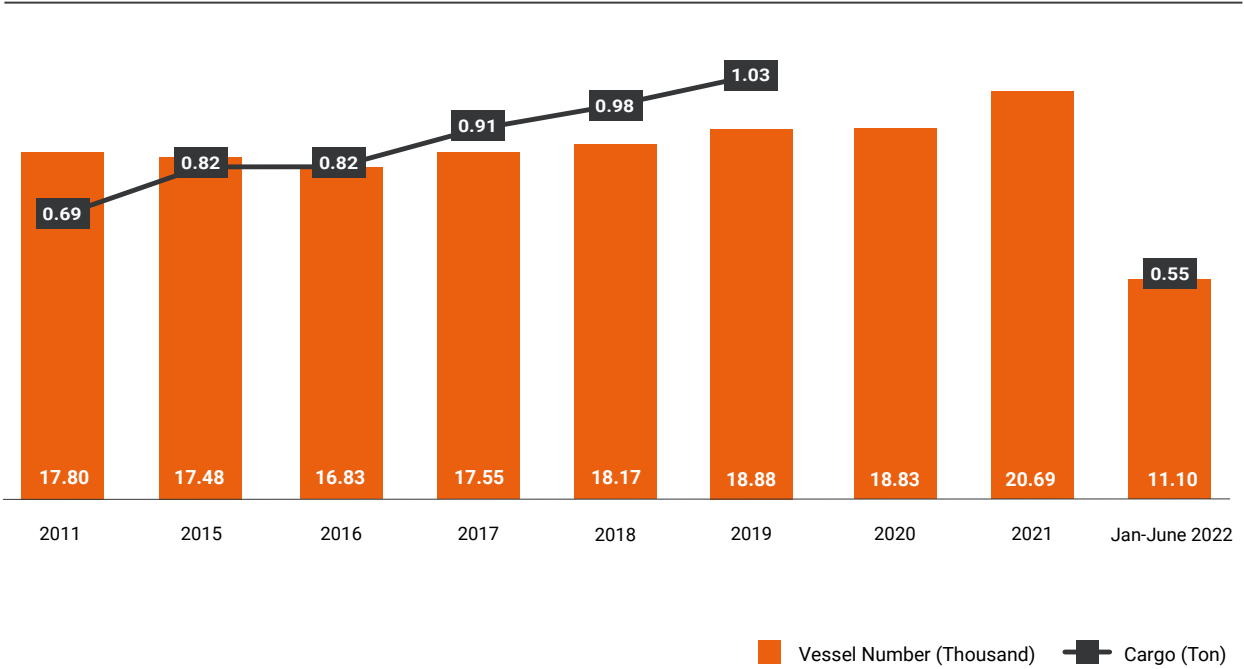


Figure 4 | Source: SRM on Suez Canal Authority and State Information Service of Egypt

⁷ State Information Service of Egypt (2022, 19 September). The international and global importance of the Suez Canal.

The latest data available say that the canal's navigation had seen the transit of 23,583 ships in 2022, a +15% compared to 2021.

The navigation movement in the Suez Canal recorded on Monday 7/11/2022 new and unprecedented records in terms of daily transit statistics, with 94 ships crossed from both directions.

In 2022 Suez Canal achieved the highest annual revenue in its history, reaching \$8 billion, a 25% growth over 2021, and hit a monthly all-time high of USD 744.8 mln in August 2022.

The crisis in Ukraine is not the only factor contributing to the increase in the canal's revenues. There's also the increase in transit fees by 6% beginning in February 2022 as well as the extra fees for transiting ships, except cruise ships, in March and again this May.

In addition, the Suez Canal Authority (SCA) will increase the transit tolls for all types of vessels by 15% and by 10% for dry bulk ships and cruise ships as of the beginning of January of 2023. Raising transit tolls is justified by increased energy prices, freight rates and daily tanker time-charter rates. The impact of the increased energy prices on the equation of tolls calculation due to the continued increase in crude oil prices over US\$90 per barrel, and the increase in the average LNG prices above US\$30 per million thermal units⁸, it materializes in a rise in the average prices of ships bunker and consequently an increase in the savings ships achieve by transiting through the Suez Canal compared to other alternative routes.

Increased transit tolls come in light the SCA's keeping up-to-date with all the market changes in the maritime transport sector which monitor the ever-increasing daily charter rates for most types of vessels that reached unprecedented levels and the forecast for next year shows a continuation in this rise.

Egypt is benefitting from the higher Canal's revenues, as this positively contributes to the country's hard currency availability, given that the fallout from the Ukraine war and the consequent volatility in global financial markets, triggered significant foreign outflows. In fact, as a result of Russia's invasion of Ukraine, in 2022 foreign investors pulled billions of dollars out of Emerging markets, including Egypt, causing a widening in Egypt's current account deficit, steering to a strong devaluation of the Egyptian Pound. The war also impacted Egypt's tourism industry, and pushed Cairo to turn to other countries, such as India for wheat, after relying massively on Russian and Ukrainian wheat for years.

The SCA is also working on expanding the southern entrance of the canal and the cost of the expansion is funded by the SCA. In May 2021, Egypt started the dredging work to enlarge the southern entrance of the Suez Canal, just a few weeks after the accident of the Panama-flagged Ever Given.

⁸ A British thermal unit (Btu) is a measure of the heat content of fuels or energy sources.

The importance of the projects of duplication, expansion and deepening, is represented in increasing the capacity potential, improving navigation movement and reducing the transit time of ships, as well as increasing the navigational safety factor in the southern region, growing the surface of the water sector, as well as reducing the navigational currents in the Canal. The project will cost 3 billion Egyptian pounds (\$191 million) and will be completed by June 2023.

In addition, the Suez Canal Container Terminal (SCCT) operated by APM Terminals (a unit of the transport and logistics division of the Danish company Maersk) in Port Said, located at the mouth of the Suez Canal on the Mediterranean, is to be expanded with a \$500 million investment. The agreement signed between the General Authority for the Suez Canal Economic Zone (SCZONE) and the Suez Canal Container Terminal (SCCT) envisages a project to expand the quay by 955 metres, from the current 2,400 metres, and by 510,000 square metres of the container handling yard, from the current 1.2 million square metres. The targeted additional volume after the expansion will reach 2 million TEUs to be added to the 4 million TEUs handled each year currently by the port. According to one estimate, once operational in 2025, the terminal will generate over 1,000 new jobs in Port Said and create new business opportunities in the entire port ecosystem. This project comes within the framework of SCZONE's support of Egypt's economic strategy, which aims to develop the Egyptian ports to maximize their role in the global maritime trade and to exploit the various investments to grow of importance as logistic center and exporting hub, while creating job opportunities.

Furthermore, in line with Maersk's corporate policy to achieve climate neutrality by 2040, the new terminal will run on clean, renewable energy based on electrical equipment.

Also, the SCA is working on changing the Suez Canal into a green maritime shipping canal by 2030. All 16 navigational monitoring stations along the Canal are currently running by wind energy, and this contributes to reducing 16 tons of CO₂ emissions per year. The authority is negotiating with international entities to use liquified gas in operating the SCA ships and other international vessels.

The SCA, to make the Canal a green shipping lane, would provide incentives to encourage the passing vessels to turn into eco-friendly ships.

Furthermore, the European Maritime sector is committed to sharing the burden and reducing overall emissions. For instance, Sulphur oxides and particulate matter emissions from shipping are projected to drop substantially up to 2050. Nevertheless, considering future trends and scenarios which suggest a continued growth of maritime transport over the next decades, additional efforts will be needed at both the EU and international levels to make the sector more sustainable.

Additionally, and in line with the European Green Deal and the Sustainable and Smart Mobility Strategy, delivering on the climate neutrality objective by 2050 will require an

80-82% reduction in emissions by the EU's international seagoing maritime transport sector by 2050 compared to 1990 levels. In this sense, onshore power supply is a promising solution to improve air quality in ports and coastal areas. Instead of using fuel, ships would recharge in ports. If electricity supply relies on clean and renewable energy sources, onshore power supply can reduce emissions at near to zero. Close to 10% of ships calling at EU ports are equipped with it, and numbers are steadily growing. Another promising solution comes from green hydrogen, which could ensure sustainable fuels for shipping at large scale. All of these solutions must comply with the European Sustainable and Smart Mobility Strategy, which indicates the zero-emission marine vessels will be market-ready by 2030, as well as zero-emissions ports.

The challenges ahead for the maritime sector are complex and intertwined. Digitalization, decarbonization, and new forms of goods delivery at a global scale must be on top of the international agenda to ensure the sector will evolve in a coordinated fashion and that it can be a central actor in an overall renovation of the way goods are designed, produced, and delivered for the wellbeing of people and the planet.

There is a great deal of concern about the successive waves of uncertainty caused over the past few years by trade wars, the pandemic, the Suez Canal temporary closure due to the Ever Given stuck, Brexit, climate change – and now, fallout from the war in Ukraine and from China's economic weakness.

The future of global shipping routes will depend on a number of factors, including geopolitical considerations, technology development, review of trade policies, and the role played by climate change and the energy transition, too. However, regardless of all these factors, geography will still matter, hence the importance of maritime chokepoints as the Suez Canal: they are here to stay and still exert influence on how goods will be shipped across the world.

Chapter 2 | **The maritime connectivity of Egypt in comparison with other MENA countries. Focus on waiting time in ports and on fleet**

Foreword. The maritime connectivity of Egypt

This chapter analyzes Egypt's features in terms of Maritime connectivity. With the ongoing of the pandemic and of Russia's invasion of Ukraine, the effects of the disruption on the global value chains increased, the digitalization becomes a necessity and the sustainability an unavoidable imperative. Thus, seaports and links among them have increased their strategic importance and came to the light of the geopolitical debate.

Historically the access to the global market is essential for a country for the development of its economy, nowadays it becomes a binding obligation. As a matter of fact, the ability to trade allows access to goods and services that increases especially when some prime materials or products are scarce. Thus, the relevance of trade depends largely on transport connectivity, especially with regards to regular shipping services that is one of primary elements for the import and export of manufactured goods. Definitively, the position of countries in maritime transport networks matters for trade and development because it impacts trade costs and competitiveness.

1. Egypt's position within global liner shipping networks. The Liner Shipping Connectivity Index (LSCI)

According to UNCTAD, a way to capture the level of connectivity of a country or a port is through an index: the Liner Shipping Connectivity Index (LSCI), that shows a country's position within global liner shipping networks.

The LSCI is generated for all countries that are serviced by regular containerized liner shipping services. It is calculated by taking into account six components: number of ship calls, their container carrying capacity, number of companies that provide services, number of services, size of the largest ship and the number of countries that can be connected through direct liner shipping services, without the need for transshipment. This component is important because counting on a direct regular shipping connection has empirically been shown to help reduce trade costs and increase trade volumes.

LSCI can be considered a proxy of the access to global trade through the shipping network. “The higher the index, the easier it is to access to the maritime network and effectively participate in international trade.

Thus, LSCI can be considered as a measure of connectivity to maritime shipping and as a measure of trade facilitation”⁹.

According to this indicator, Egypt’s ranked 22nd on 176 countries in the 3rd quarter 2022 with a value of 50.82 points. (China is the best-connected country, with a score of 157.46¹⁰, followed by the Republic of Korea and Singapore), 4th among the MENA countries (behind the UAE, Morocco and Saudi Arabia) and 2nd in Africa (after Morocco).

LSCI ranking by country in III Q 2022

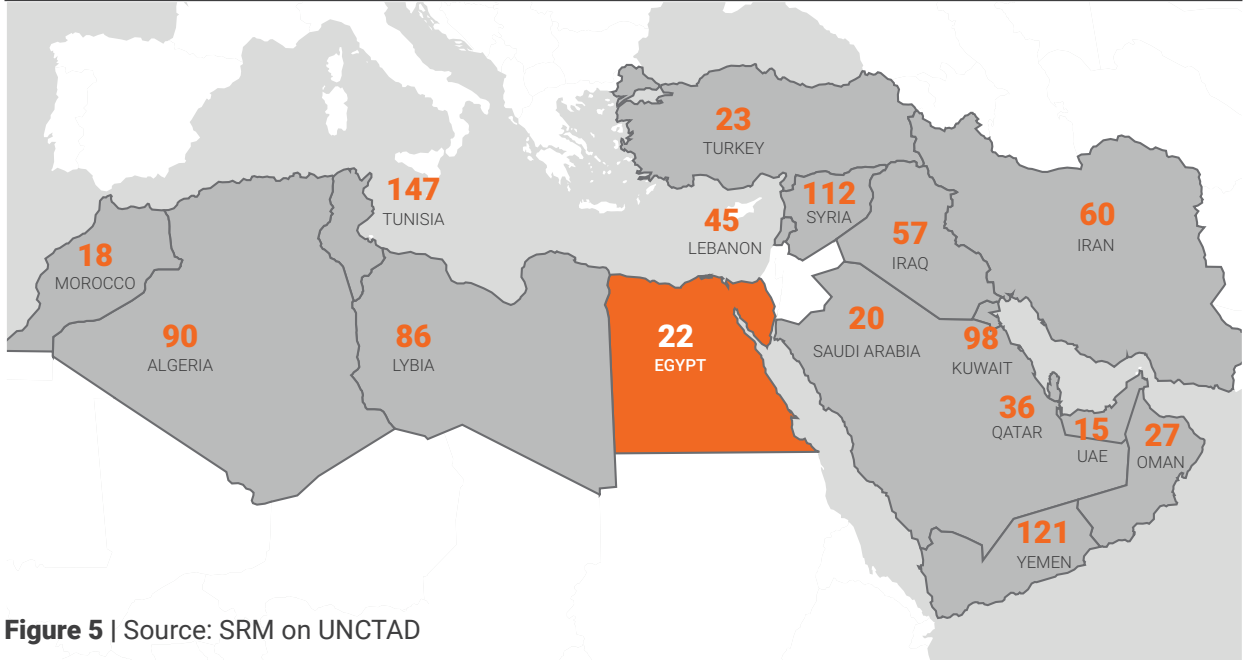


Figure 5 | Source: SRM on UNCTAD

⁹ Notteboom T., Pallis A. and Rodrigue J.P. (2022). Port Economics, Management and Policy, New York.

¹⁰ China ranked also first in 2006 with an index of 100 points (Maximum Q1 2006) and nowadays reached 175.46 points.

The countries that have the highest LSCI values are actively involved in international trade. There are economic explanations underlying the different speeds in countries' performance, the export-oriented economy of China Republic ranks first, while the Singapore transshipment hub ranking third and MENA countries such as the United Arab Emirates, Morocco and the same Egypt rank high because of the major transshipment function their ports perform.

Egypt's LSCI in Q3 2022. A comparison with MENA countries

Ranking in the boxes

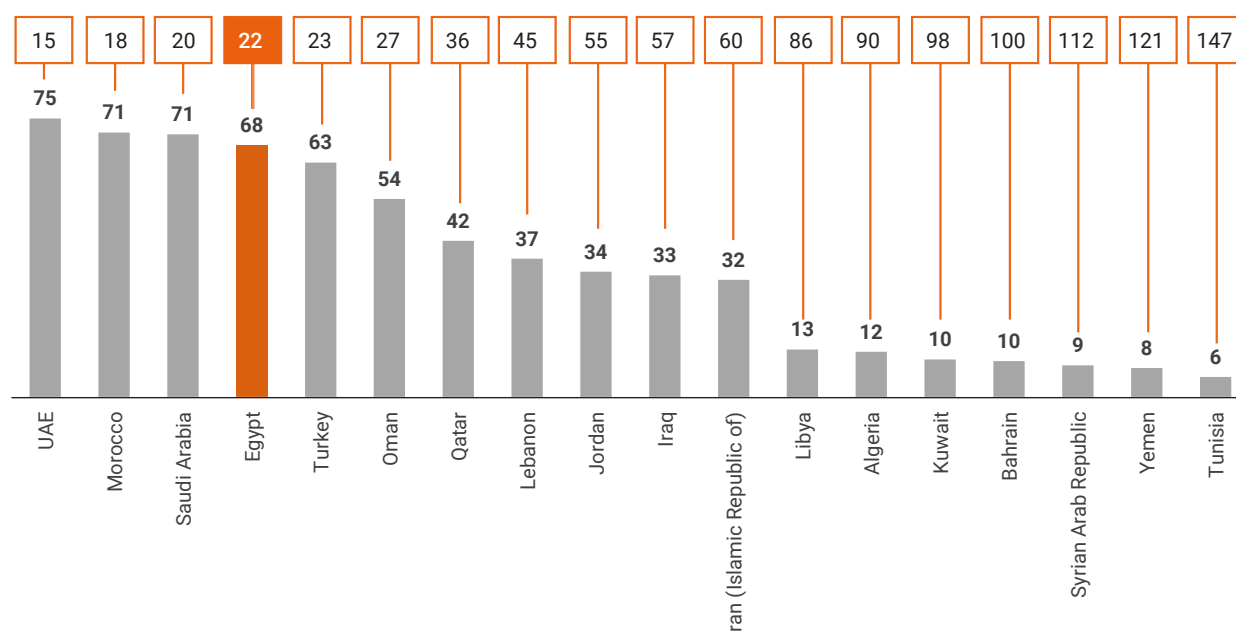


Figure 6 | Source: SRM on UNCTAD

During the 2006-2022 period, Egypt's situation has changed considerably. Investments in Port Said¹¹ and in the enlargement of Suez Canal in 2015 brought the country from 45 points in the 1st Quarter of 2006 to 68 points in the 3rd Quarter of 2022. Since 2006, the linear trend shows an increase of 2.3 points every year¹² for Egypt's LSCI. In addition, the further investment decided in the last July 2021 for an added enlargement of the Canal and in Port Said¹³ may further increase the index. Thus, the ability to connect Egypt to the world by sea, should further improve.

¹¹ In particular with a Chinese investment in 2007 of 150 million US dollars to purchase a 20 per cent equity interest in the Suez Canal Container Terminal at Port Said in Egypt. See also: Deandreis M., Panaro A. and Ferrara O. (2022). Maritime Scenario in the Mediterranean: Analysis of the Competitiveness and Investments of the Major Logistics Players, IAI Papers 22|07.

¹² Compound Annual Growth Rate (CAGR).

¹³ The Suez Canal Authority announced in August 2022 that the Danish shipping company Maersk agreed to invest \$500 million in the canal's container terminal in East Port Said [See also: <https://www.hellenicshippingnews.com/shipping-giant-maersk-to-invest-500-million-in-suez-canal/>].

Egypt's LSCI trend I Q 2006-III Q 2022

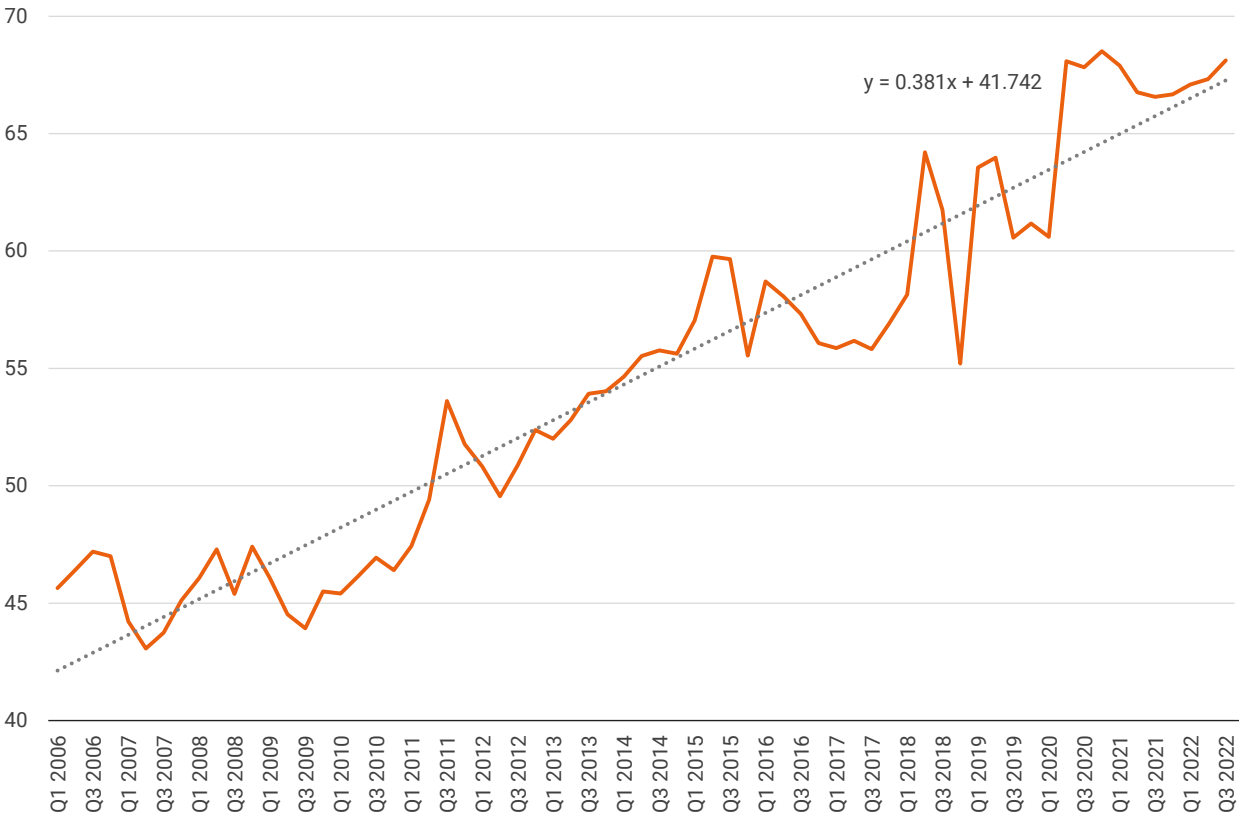


Figure 7 | Source: SRM on UNCTAD

Even the dynamic of Egypt LSCI shows an increasing trend, from 2006 to 2022, however Egypt lost positions from the 2nd to the 4th place, because of the high level of strong competition in the MENA area. Probably, the pandemic and the Covid also affected this drop in performance. At the end of these events, further improvement is likely to occur over the next years.

As Figure 8 shows, Egypt (with UAE, Morocco, and Saudi Arabia) is among the countries that simultaneously present both the best connectivity results in 2022 and also a high level of development compared to 2006 (above the average). But there are three other countries (firstly Qatar, Oman and Turkey) which, even if they are not performing as well as Egypt, can be considered "tracker" countries because they grew faster than Egypt during the analyzed period. In addition, all the other countries are far from the leading group.

Top 5 MENA countries dynamic (LSCI value)

QUARTER	Q3 2006	QUARTER	Q3 2010	QUARTER	Q3 2014	QUARTER	Q3 2018	QUARTER	Q3 2022
United Arab Emirates	48.9	United Arab Emirates	61.7	United Arab Emirates	64.3	United Arab Emirates	72.1	United Arab Emirates	75.2
Egypt	47.2	Morocco	49.0	Morocco	57.5	Morocco	64.5	Morocco	71.4
Saudi Arabia	41.2	Egypt	46.9	Egypt	55.8	Egypt	61.8	Saudi Arabia	70.9
Turkey	33.8	Saudi Arabia	44.8	Turkey	54.6	Saudi Arabia	57.5	Egypt	68.1
Iran (Islamic Republic of)	25.7	Oman	40.7	Saudi Arabia	53.9	Turkey	56.1	Turkey	63.3

Table 2 | Source: SRM on UNCTAD

Competitiveness in port connectivity in the MENA area

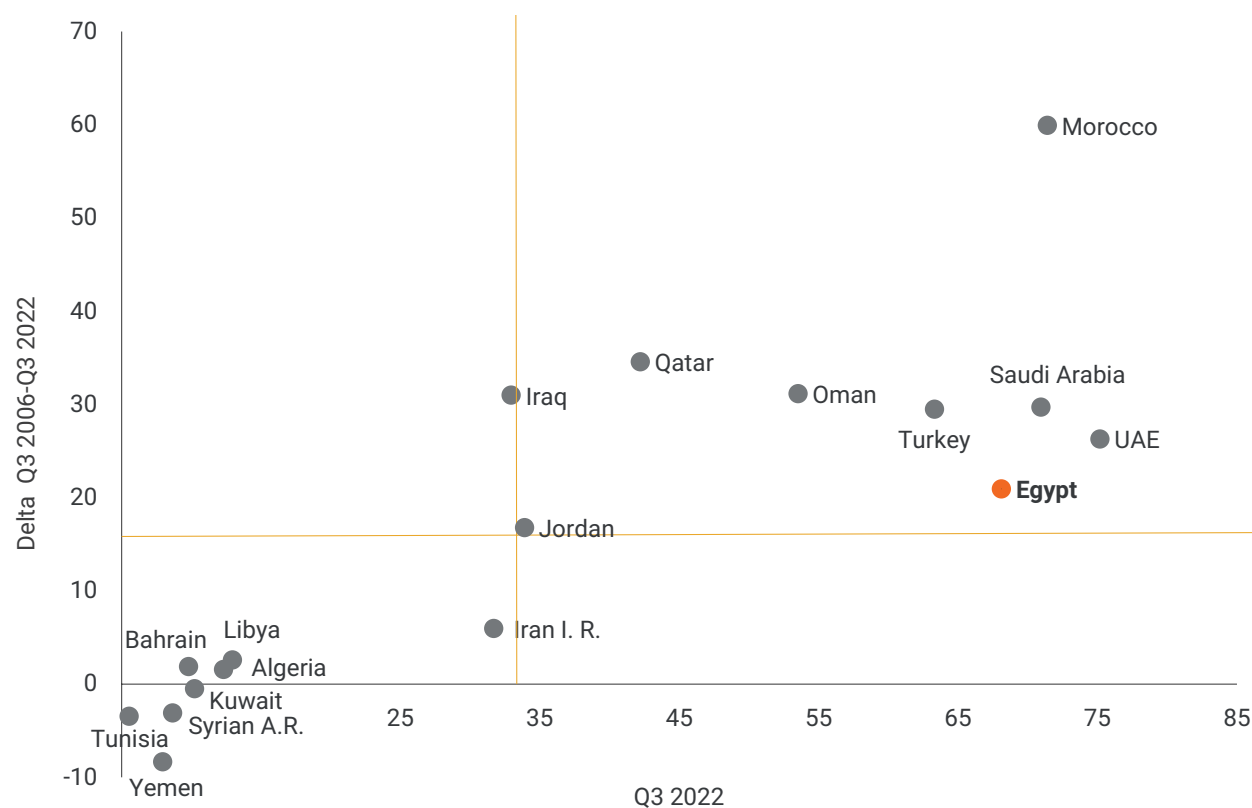


Figure 8 | Source: SRM on UNCTAD

2. Maritime relationships of the Egypt with other countries through the Liner Shipping Bilateral Connectivity Index (LSBCI)

According to the data, in 2021, Egypt is connected by sea mainly with Italy, followed by Spain and Saudi Arabia. As a matter of fact, it is interesting to underline that in the top 10 partners of Egypt, six are Med countries. It could be a signal of a shortening of global chains so that there are no interruptions in production, realizing in this way some smoothing supply chains.

Instead, in 2006 the major connections were with China and northern Europe and only two countries of the western Mediterranean were present (Italy and Spain), however in a lower part of the classification.

Bilateral Connectivity Index Top 10 partners in Q1 2006-Q1 2021

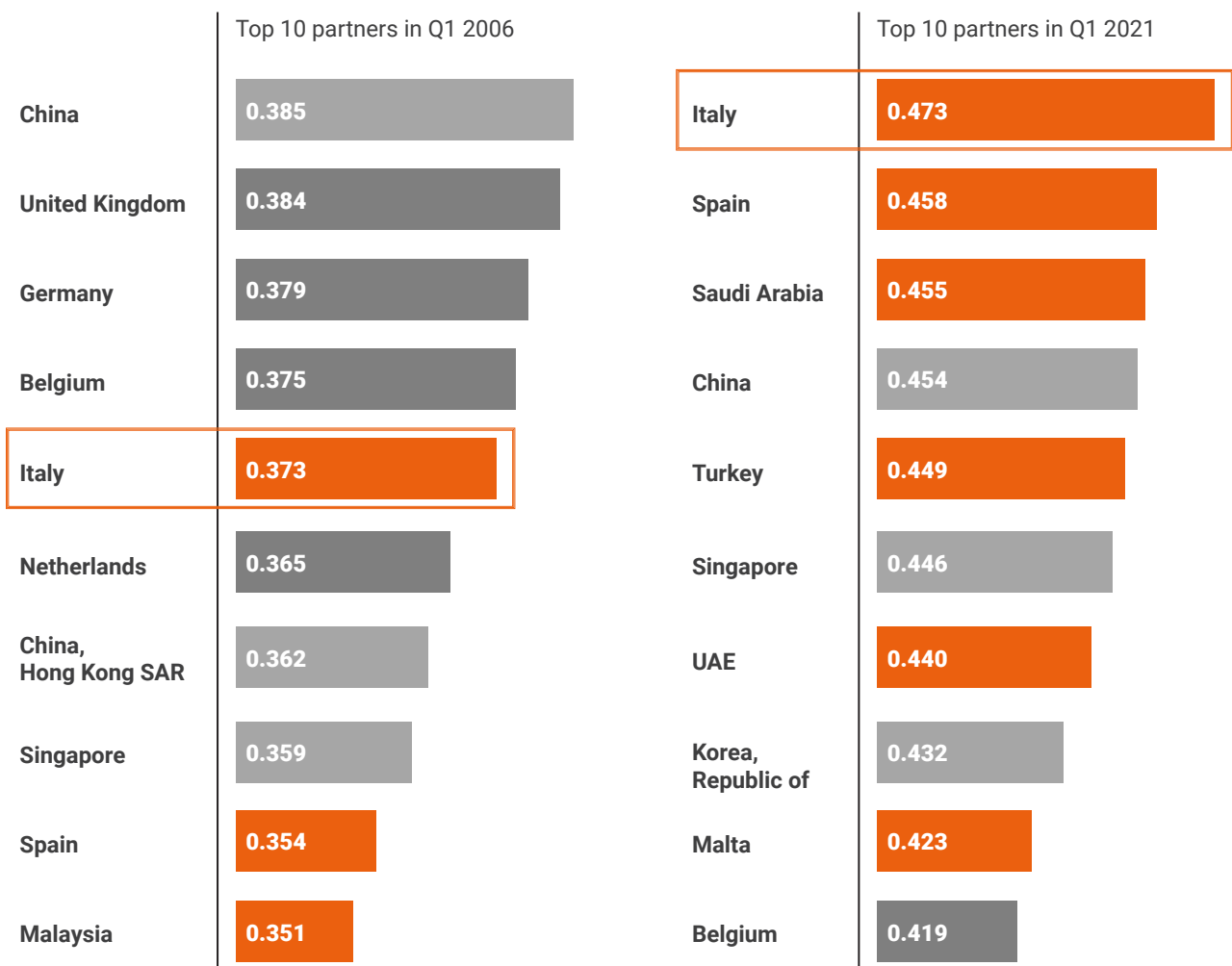


Figure 9 | Source: SRM on UNCTAD

■ Europe ■ MED and MENA ■ Others

3. Connectivity into the MENA ports: the Port Liner Shipping Connectivity Index (PLSCI)

The level of integration into the existing liner shipping network can be, also, captured through the Port Liner Shipping Connectivity Index (PLSCI)¹⁴. Rather, the port detail is interesting for deepening the reality of the single Egyptian port. As the graph shows there are five top performing ports for connectivity in Egypt. In particular, Port Said is the most connected container port. Port Said derives its brilliant performance from investments made in the port infrastructure and in the Suez Canal. The PLSCI of Port Said increased from an index of 39.6 points in III quarter 2006 to 59.6 points in III quarter of 2022. At this date, Damietta port ranked 2nd over the port of El Sokhna and Alexandria.

Port Liner Shipping Connectivity Index. Top 5 Egyptian ports. Trend QIII2006-QIII2022

Peak 2006 = 100 for China

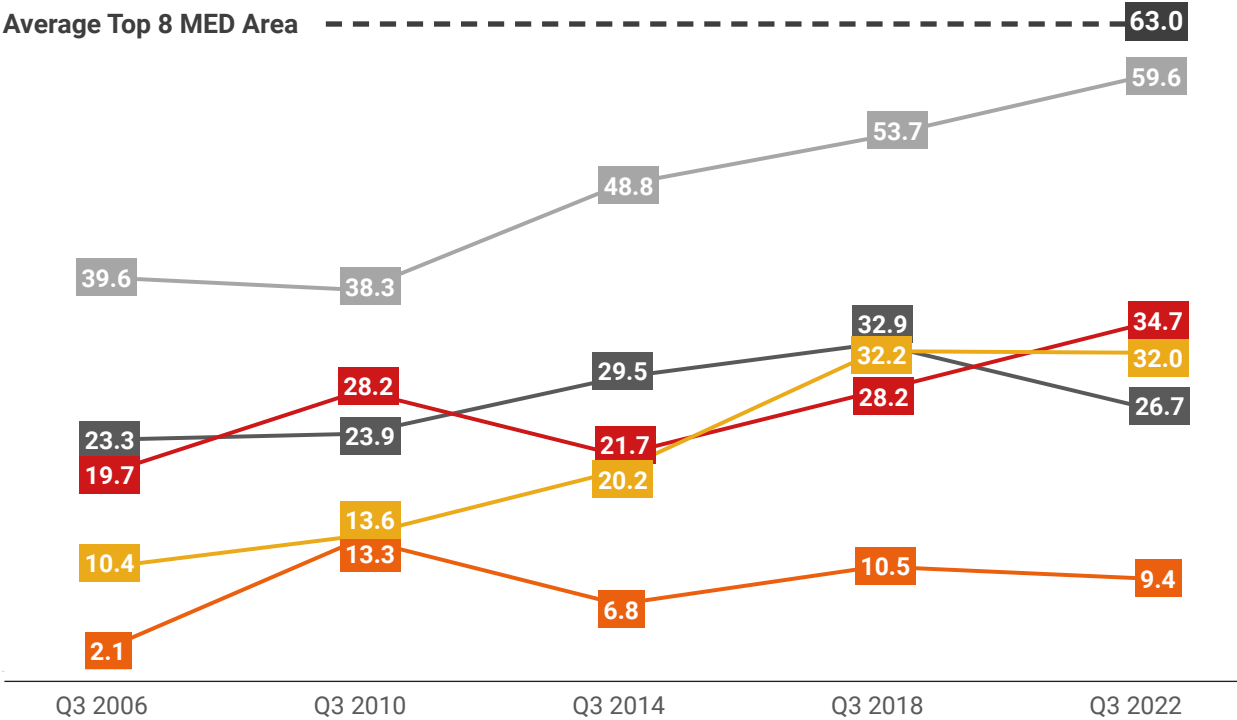


Figure 10 | Source: SRM on UNCTAD — Alexandria — Damietta — El Dekheila — El Sokhna — Port Said

¹⁴ The Port LSCI (PLSCI) reflects a ports’ position in the global liner shipping network. A higher value is associated with better connectivity. The Port LSCI is set at 100 for the highest value in the first quarter of (Q1) of 2006.

The port LSCI complements the country LSCI, using the same methodology, but applied on the port level. It was generated upon request of many users of the country LSCI who considered it useful to track the Liner Shipping Connectivity of individual ports.

Among the other ports of the MENA area Port Said ranked 3rd after Jebel Ali in the UAE and Tanger Med in Morocco. It is also the 31st ports of the world in the ranking of the III quarter 2022 PLSCI. The top three best connected ports of the world are all in Asia: Shanghai, Ningbo and Singapore, whilst the Ports of Rotterdam, Antwerp and Hamburg retain their lead in Europe.

In addition, Port Said ranked 6th in the Med Area. In the Mediterranean the top-three ranking transshipment ports are Algeciras, Piraeus and Port Said whereas the top best connected gateway ports are Valencia, Tanger Med, Barcelona. In the classification is also present the Italian transshipment port of Gioia Tauro.

Port Liner Shipping Connectivity Index. Top ports in the Mediterranean

Rank MED	Rank world	Country, Port	Index
1	21	Spain, Valencia	70.0
2	23	Spain, Algeciras	68.5
3	22	Morocco, Tanger Med	69.2
4	25	Spain, Barcelona	65.5
5	28	Greece, Piraeus	60.4
6	31	Egypt, Port Said	59.6
7	32	Italy, Gioia Tauro	57.8
8	42	Turkey, Ambarli	52.8

Table 3 | Source: SRM on UNCTAD

4. Port competitiveness according to vessel turnaround time

An essential indicator for measuring the efficiency of maritime traffic is the time spent by ships in ports, elaborated by UNCTAD.

Median time in port (days) in 2021: Egypt, main competitors and world

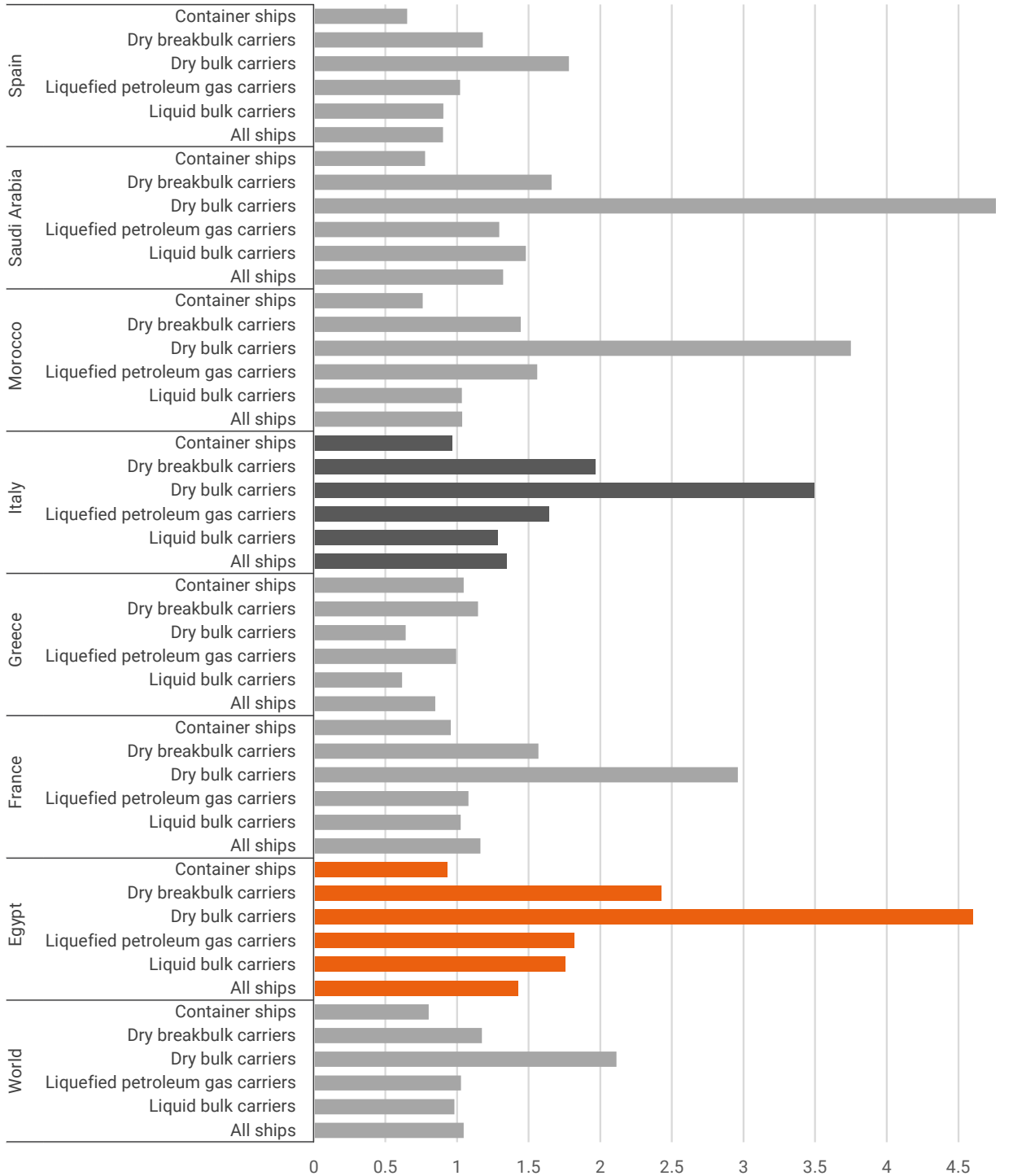


Figure 11 | Source: SRM on UNCTAD

Reduction in port time, thanks to high-quality port operations, allows improvement in the operational efficiency of a shipping service by reducing the operating costs. In other words, every hour of berth time saved by ships translates into lower port infrastructure expenses, ship capital costs for carriers, and outlays on inventory for shippers. It should also be highlighted that less time spent on the berth means less fuel consumption of a ship at sea and its resulting CO₂ emissions.

From the comparison between Egypt and the main competitors of the MENA area and Mediterranean Europe on the waiting times of the main types of ships, it emerges that in Egypt, as in the rest of the world, the loading/unloading of containerships is the most efficient activity. On the contrary, the times required by dry bulk carriers are the longest. In detail, in Egypt the median time for all ships is 1.4 day; for containerships is 0.9; for liquid bulk carriers is 1.7; for liquid petroleum gas carrier is 1.8; for dry breakbulk carriers is 2.4 and for dry bulk carriers is 4.6.

This implies for the North African country the requirement to improve the operational performance of its ports to align with the average values of the world and of the best competitors.

5. Country competitiveness according to owned fleet: comparison between Italy and Egypt

Historically, the essential key element for activity on the sea is the fleet. In fact, the maritime sector is capital intensive.

Merchant fleet by country of ownership, 2014-2022

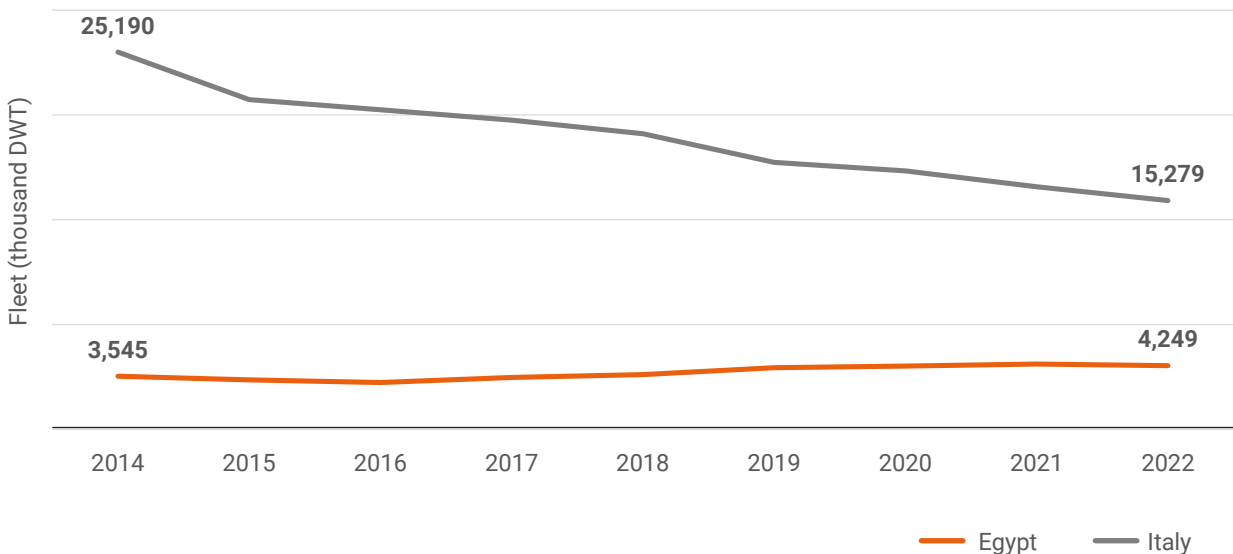


Figure 12 | Source: SRM on UNCTAD

From the comparison with Italy, it can be seen that Egyptian investments in the fleet grew in the period examined. The tonnage referred to the North African country from 2014 to 2021 increased by 20% while in Italy it decreased by about 40%.

Chapter 3 | **International trade of Egypt: partners, main goods and relationships with European Union and Italy**

1. Egypt trade relations: goods and main partner

This chapter analyzes Egypt's trade relationships with other countries and especially with the European Union. As a matter of fact, the EU is Egypt's main trading partner.

Egypt indicated that the balance of payments remains in favor of the EU, with a gap still widening, highlighting the need to move towards more sustainable levels. Egypt informed that despite the liberalisation of tariffs, access to the EU market remains challenging. Egypt continues to experience difficulties in the access to the EU market, mainly due to Sanitary and Phytosanitary (SPS) requirements.

There are agreements between Egypt and the EU to promote joint interests and to guarantee long-term stability on both sides of the Mediterranean. Trade relations between Egypt and the EU intensified in the 1980s following the signing of a set of agreements establishing a framework for economic cooperation. For example, the EU-Egypt Association Agreement has been in force since 2004. It creates a free-trade area between the EU and Egypt by removing tariffs on industrial products and making agricultural products easier to trade.

Another agreement on agricultural, processed agricultural and fisheries products entered into force on 1 June 2010.

In addition, the EU and Egypt began talks about a Deep and Comprehensive Free Trade Area in June 2013. Negotiations are currently on hold. The 25th anniversary of the Barcelona Process in November 2020 was an opportunity to strength relations between Europe and the Southern Mediterranean countries. Following consultations with partners, this reflection resulted in a Joint Communication by the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy on 'A renewed partnership with the Southern Neighborhood – A new Agenda for the Mediterranean' and the annexed 'Economic and Investment Plan for the Southern Neighbors' in February 2021.

Since the early days of the creation of the EU in 1993 there has been a trading relationship with Egypt that continues nowadays.

In 2021 Egypt trade valued about €97 bn (of which €62.4 in import and €34.4 in export). The relevance of the EU for Egypt is explained by the fact that EU is the biggest trading partner of the country, covering about 1/4 of the entire Egypt's total trade volume. In 2021 Egypt's main trade partners in terms of exports were the EU, Turkey, India, the US, and Saudi Arabia. These countries combined accounted up to 51% of total exports. As for imports, Egypt's trade partners were the EU, China, Saudi Arabia, the US and Turkey. These countries combined accounted up to 54.5% of total imports.

Import-export of Egypt to areas and countries 2021

% on Value

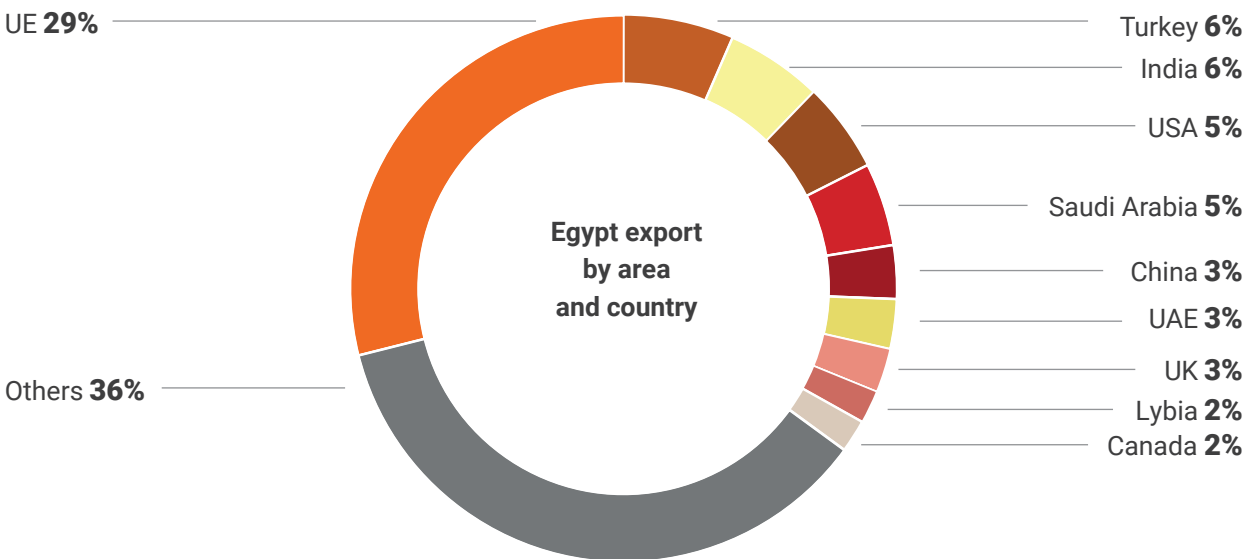
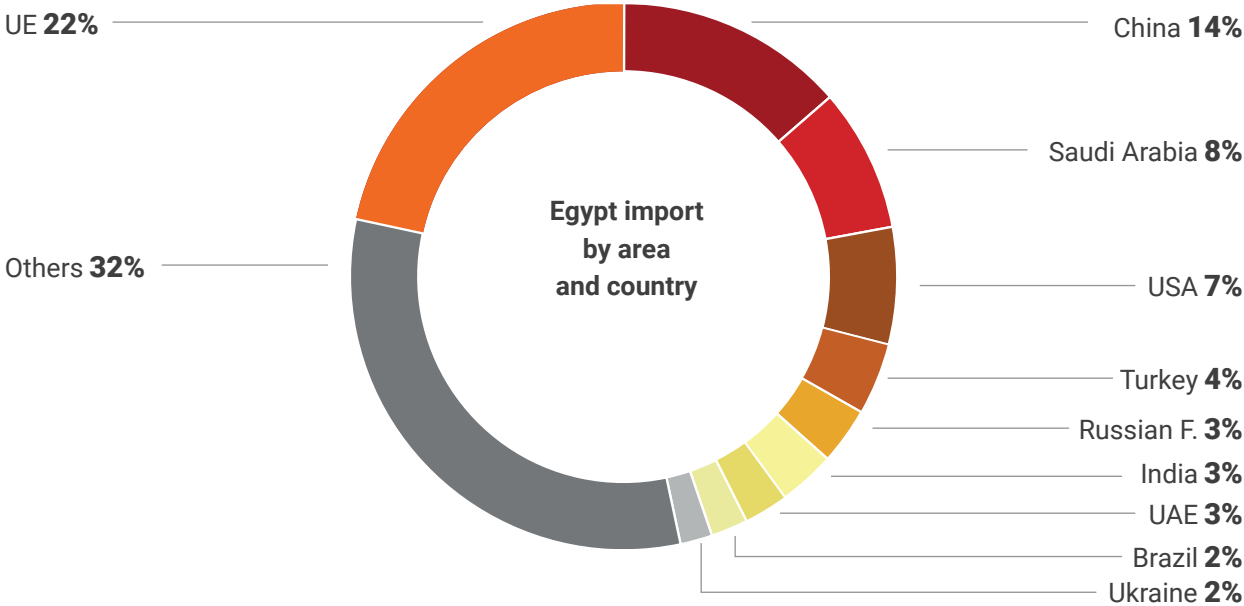


Figure 13 | Source: SRM on UNComtrade Database

Considering these as main countries of trade origin/destination with Egypt, we can assume that they are predominantly linked by sea through deep and medium/short routes. China ranked first as deep sea connection while Saudi Arabia as medium distance connection.

Deep and medium/short sea routes of Egypt

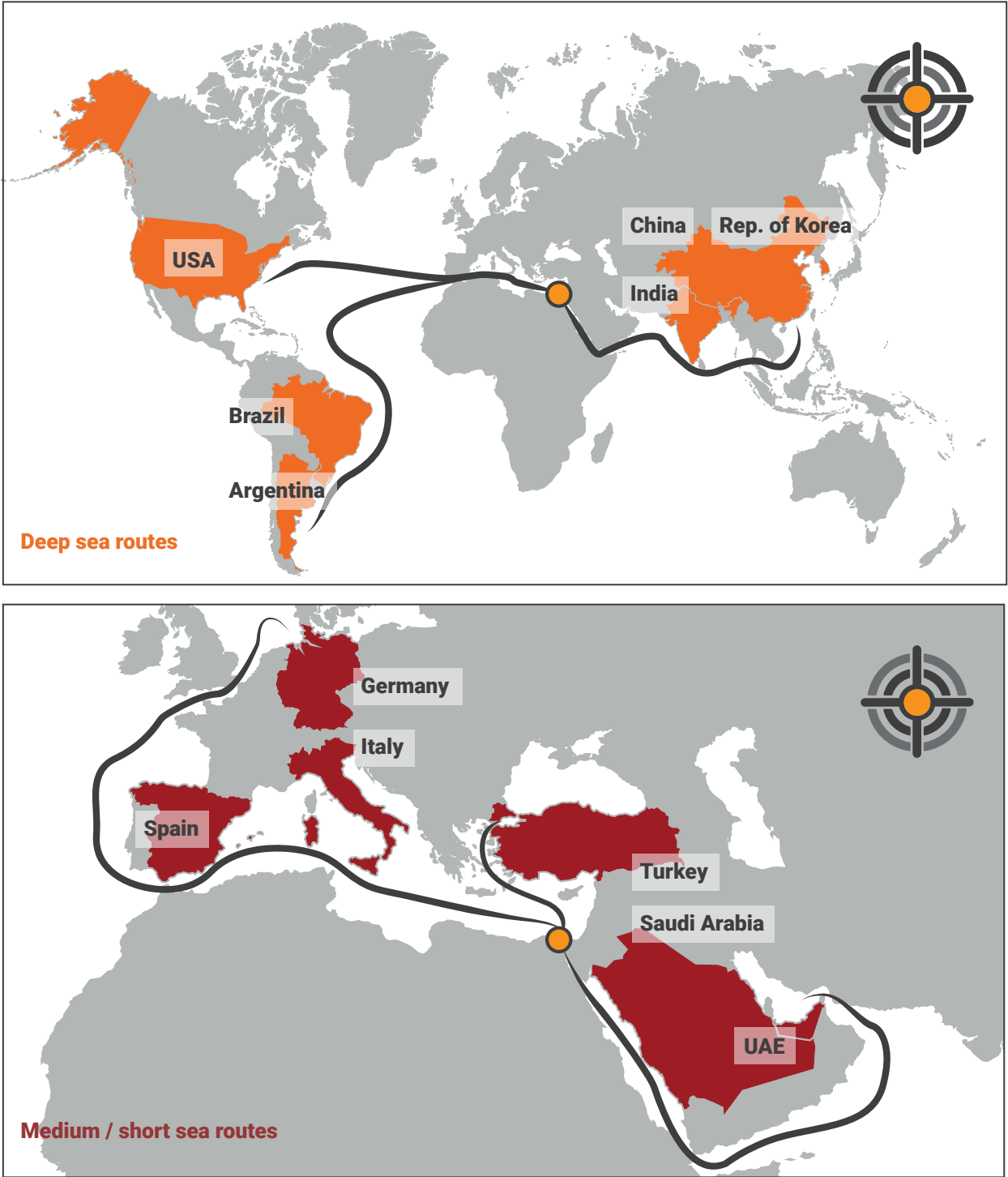


Figure 14 | Source: SRM

Regarding to the EU's point of view, Egypt is the EU's 28th largest trading partner, representing 0.7% of the EU's total trade in goods with the world in 2021. The EU is also 24th largest export market for goods. Total trade in goods between the two areas accounted to € 30.7 billion in 2021. The EU's imports from Egypt amounted to €9.1 billion while the EU's exports to Egypt reached €21.5 billion. According to data, there has been a progressive growth of traffic between the two entities.

Import-export between EU and Egypt 2002-2021

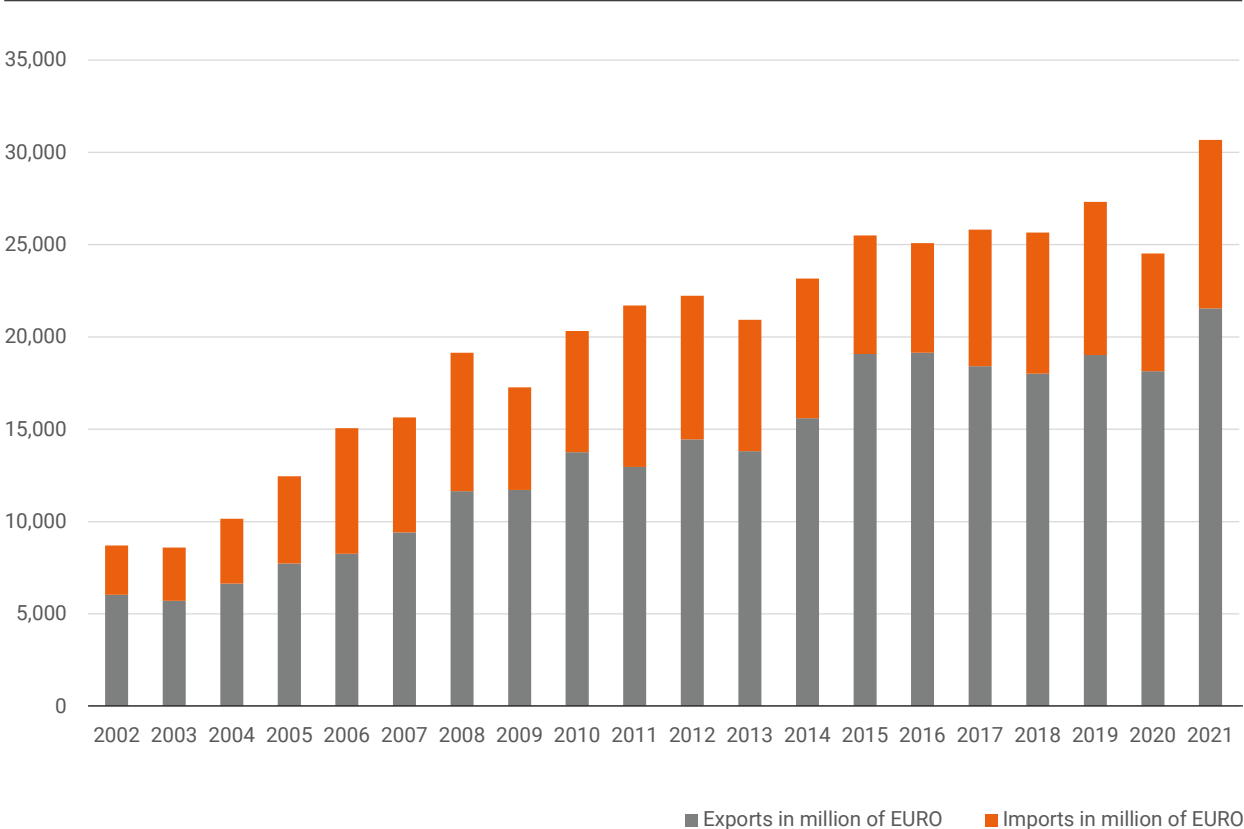
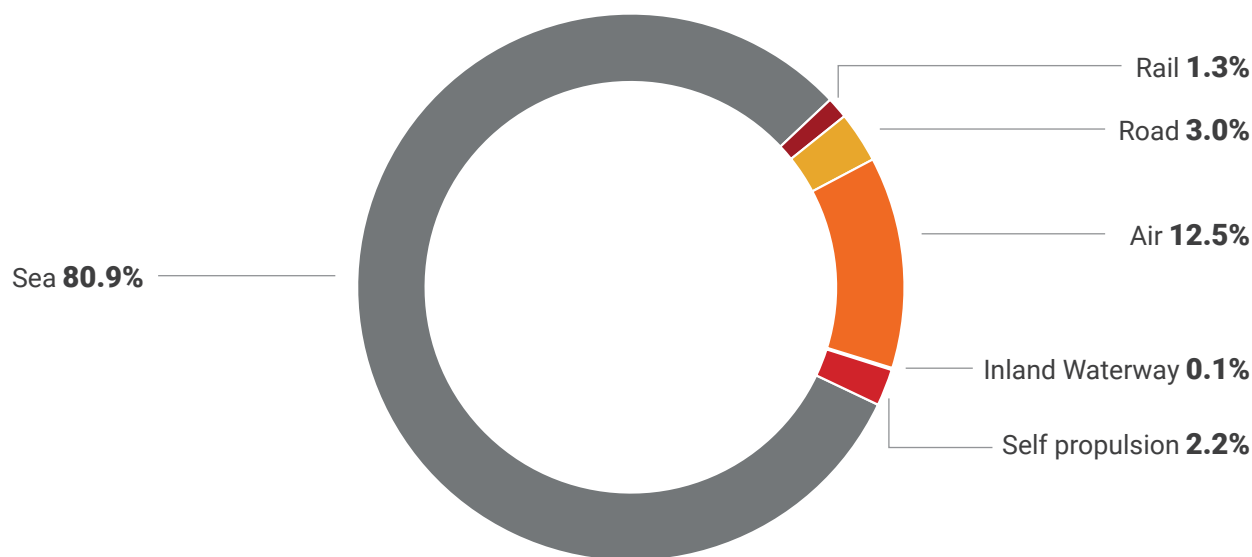


Figure 15 | Source: SRM on Eurostat

Traffic in value between EU and Egypt travels mainly by sea (80.9%), followed by air (12.5%) while in volume the maritime traffic reached 98% (about 31 million of tonnes). The importance of maritime traffic is a clear sign of the economic hub that Egypt represents. Let's not forget that Egypt through Suez connects investors from both emerging and mature markets.

Import-export between EU and Egypt by mode of transport

Value



Volume

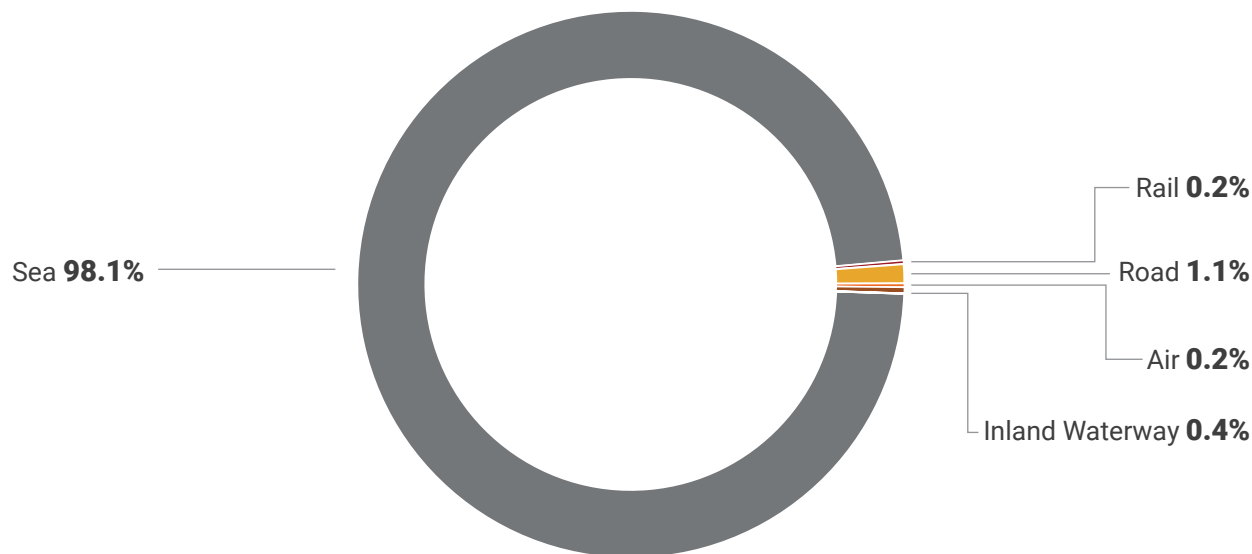


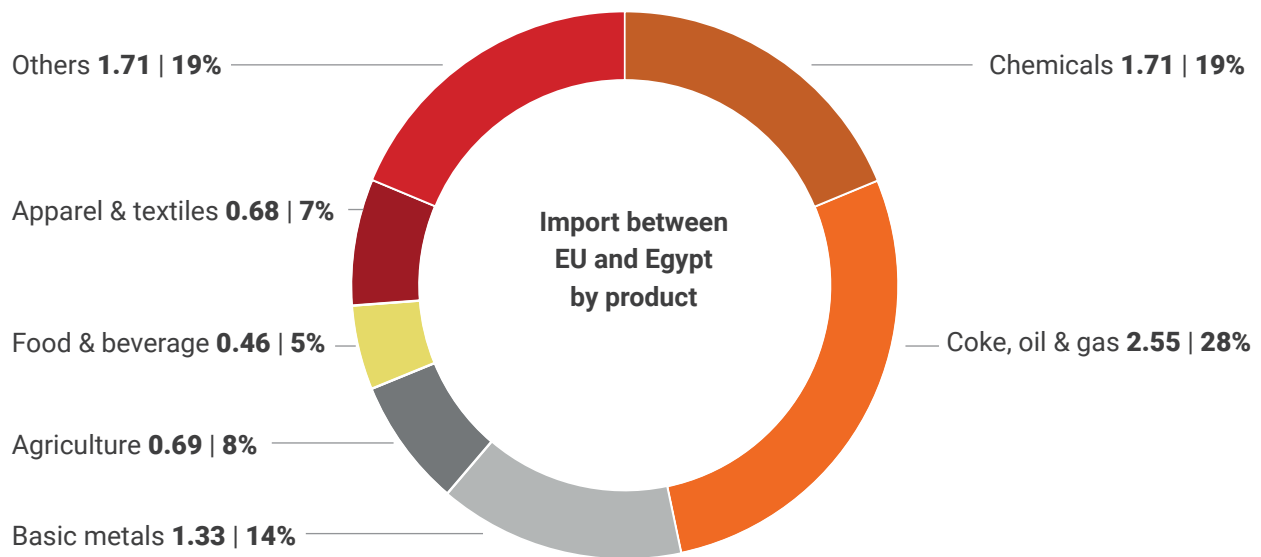
Figure 16 | Source: SRM on Eurostat

In 2021, the EU's import value from Egypt was led by fuel and mining products (€2.55 billion, 28%), chemicals (€1.7 billion, 19%), metals (€1.33, 14%) agriculture, food and beverage as well as textiles and clothing.

In 2021, the EU's export value versus Egypt was dominated by chemicals and pharma (€3.4 billion, 17%), machinery and transport equipment (€2.98 billion, 15%), motor vehicles (2.19, 11%) agriculture as well as fuel and mining products and electrical equipment and metals.

Import-export between EU and Egypt by products

Value



€ bn and %

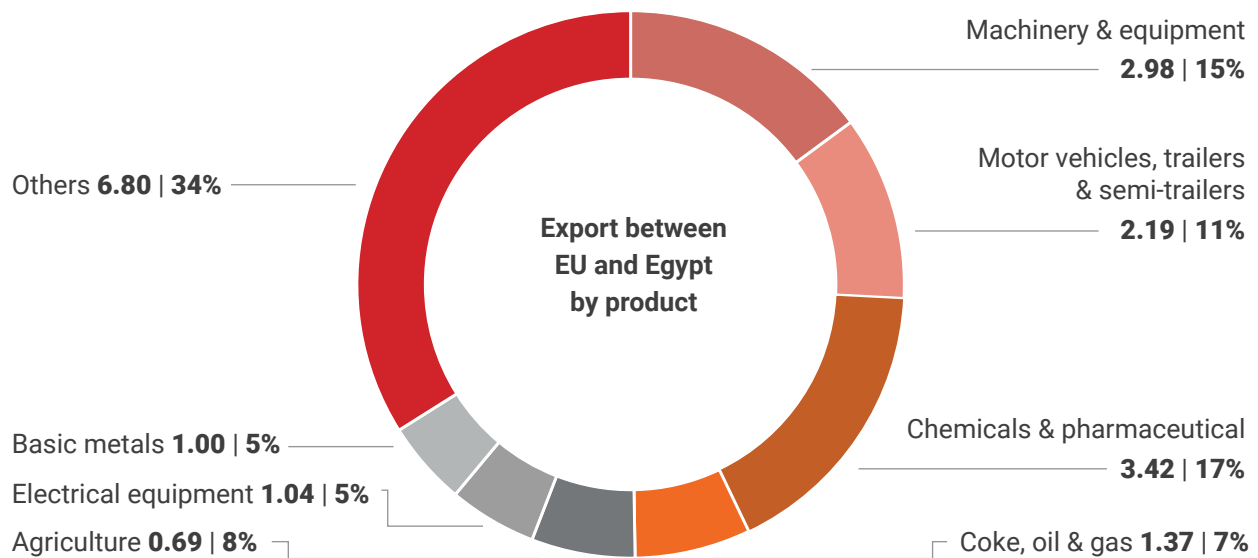


Figure 17 | Source: SRM on Eurostat

Egypt has well established links with other MENA Countries.

Recently, on June 15th 2022, an MoU was signed between Egypt, the EU and Israel. Under the agreement, Israel will increase its gas exports to Egypt through two existing pipelines. Egypt will then process the gas at its plants at Damietta and Idku, near Alexandria, and ship it to Europe as LNG. The EU would also help Egypt and Israel increase gas production and exploration in their respective territorial waters.

Gas from Egypt and Israel will not solve all Europe's problems in the near term, but Egypt could still help Europe decreasing its reliance on Russian pipeline gas. According to Bloomberg forecasts, Egypt will export 8.2 million tons of LNG this year. In addition, on May 10th, the European consortium between Eurogate, Hapag-Lloyd, and Contship Italia signed an agreement with Egypt to build and manage a new container terminal at Damietta port, starting with a USD 500 mln investment in the first phase of the project. Damietta's LNG terminal reopened last year after being idled for eight years, bringing Egypt's total capacity to some 12.5 million tons.

2. Italy-Egypt trade relations: investments, companies and import-export

Italy is Egypt's first European trading partner and fifth in the world, after China, Saudi Arabia, the United States and Turkey¹⁵.

The Italian presence in the country is well-established with the volume of Italian net direct investments in Egypt estimated in 2021 at €8.1 billion¹⁶ and nearly 1,200 Italian companies that are operating in the Egyptian market in the fields of energy, industry, agriculture, transport, logistics, tourism, construction, information technology and financial services¹⁷.

Among these, Italian group ENI, the leading foreign oil operator in Egypt that works in the field of exploration, extraction, and production of hydrocarbons and liquefaction of natural gas, followed by Edison, partner in a joint venture with Egyptian Petroleum Company to exploit the gas and oil deposits at Abu Qir. There is also the presence of many other large Italian companies: just to mention a few, Maire Tecnimont (construction of a fertilizer plant in Aswan of about \$500 million); Ansaldo Energia (supply of turbines and construction of power plants); Danieli (steel mills); Cottonificio Albini e Filmar (production of yarns and fabrics); Mapei (through its subsidiary Vinavil Egypt, produces vinyl acetate polymers, concrete additives and epoxy and polyurethane resin-based products for the building industry); Technip Italia, which in 2020 finalized a contract for the expansion of the Midor refinery for 1.7 billion dollars, thus strengthening the Group's role in the country.

Particularly significant is the activity of Eni: the Italian energy company has a 50% stake in Zohr, which is the giant offshore gas field in the area near the Egyptian coast. Zohr is estimated to have a reserve of 30 trillion cubic feet of natural gas, the largest in the

¹⁵ UN Comtrade Database [<https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=X&CommodityCodes=TOTAL&Partners=0&Reporters=818&period=2021&AggregateBy=none&BreakdownMode=plus>].

¹⁶ The Italian Ministry of Foreign Affairs and International Cooperation. Economic Observatory Summary Sheet: Egypt.

¹⁷ Egypt State Information Service (2021, 10 December) [<https://www.sis.gov.eg/Story/160461/Trade-exchange-between-Egypt%2c-Italy-up-to-3.6-billion-euros-in-8-months?lang=en-us>].

Mediterranean. Zohr is one of the big businesses – likely the biggest – in Egypt today. It has already created more than 40,000 direct and indirect jobs in the development. Zohr began its initial production with 350 million cubic feet per day and when development of the field will be complete, Egypt should save \$2.5 billion on natural gas per year.

ENI discovered and developed the field, investing in it about \$12 billion. Recently it sold 30% of its shares (worth \$1.250 billion) to Russian Rosneft and 10% (worth \$375 million) to the UK’s BP. Furthermore, ENI owns 50% of the SEGAS Holding, which is the owner of the LNG plants in Damietta. This Egyptian infrastructure will be key for eventually exporting Eastern Mediterranean gas to the European and Asian markets.

Italy has a vested interest in the Mediterranean region, due to longstanding cultural and historical ties. Countries such as Libya, Algeria and Egypt provide Italy with the fundamental energy supply that it needs. On the other, these Mediterranean states can benefit from Italian companies’ expertise in extracting their resources and building infrastructures.

Italy’s trading partners in North Africa

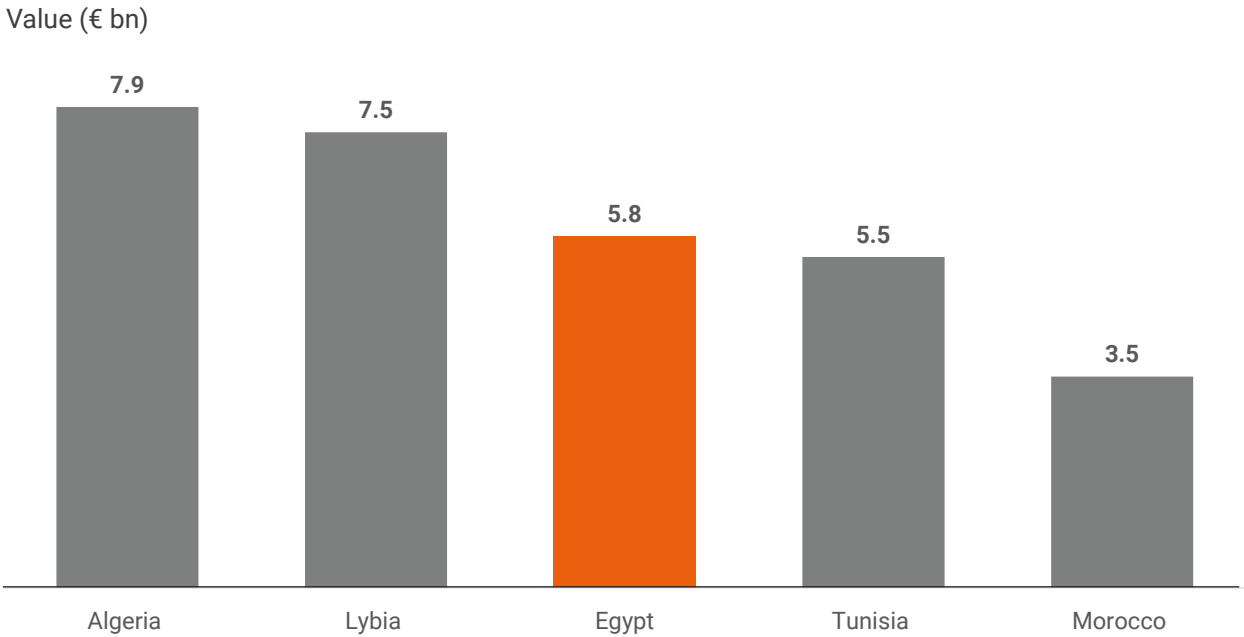


Figure 18 | Source: SRM on Coeweb – Istat

According to 2021 data, Egypt is the third Italy's trading partner in the Northern Africa. Italy's import-export trend with Egypt shows a trade balance in surplus and it was stable even in the difficult year of the pandemic. In 2021, exports equal to €3.8 bn register +23% and imports accounting for €2 bn, +25%.

Italy's import-export to Egypt. Trend 2018-2021

Value (€ bn)

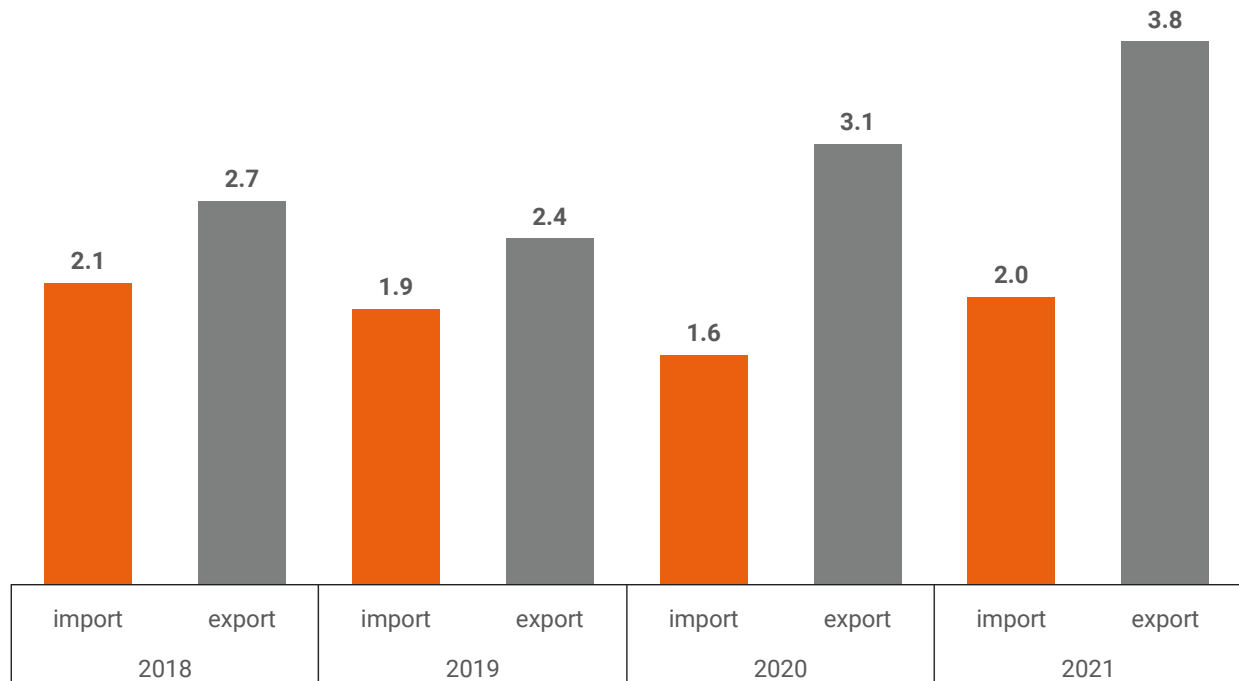


Figure 19 | Source: SRM on Coeweb – Istat

Over time, however, Italy has established an important role among the suppliers to Egypt. In 2021, Italy was the no. 8 supplier with a 3.54% market share, second in Europe only to Germany (4.89%). Interesting is that Italy ranks second as Egypt's export destination with a 6.7% market share.

Sea is the main mode of transport for import-export with Egypt in value, the only one in volume.

Import-export Italy-Egypt 2021 by mode of transport

Value (€ mln)



Volume (tonnes)

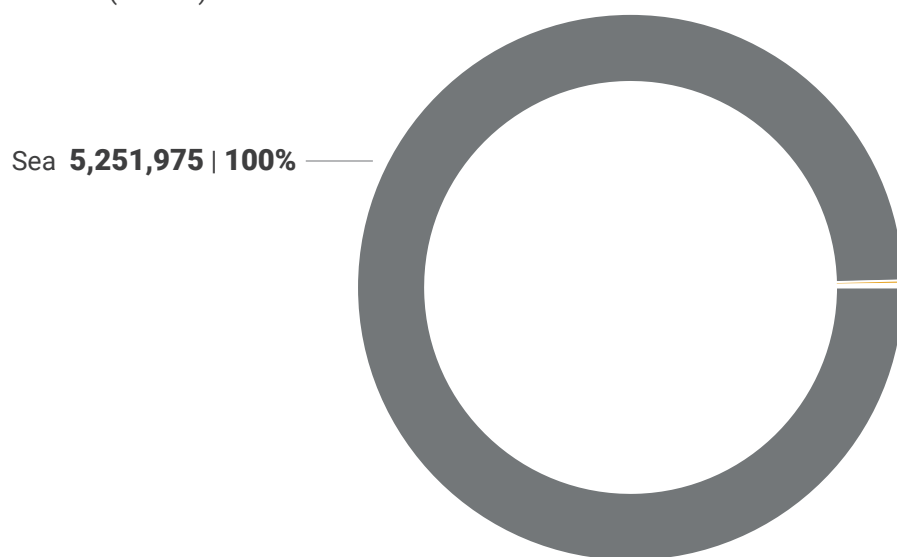


Figure 20 | Source: SRM on Eurostat

In the first nine months of 2022, Italian trade with Egypt was €4.6 bn, an increase by 10% on the same period of 2021. This growth is entirely attributable to the rise in Italy's imports from Egypt (+50.4% for a value of €2.1 billion) in relation to the need to find new energy suppliers due to the sanctions imposed against Russia. There was a surge in the purchases of minerals, oil refined products and chemicals. It should be specified that high fuel prices are behind the strong increase in the value of trade in the energy sector.

The Italian exports to the country decreased by 10.4% versus the same period of 2021 and amounted to €2.5 bn. There was a sharp decline in the sales of transport equipment, computer and electrical and electronic equipment, machinery. Performance was positive for oil refined products and chemicals.

Italy-Egypt. Top 5 imported and exported products (€ value) in January – September 2022 and chg.% on the same period of 2021

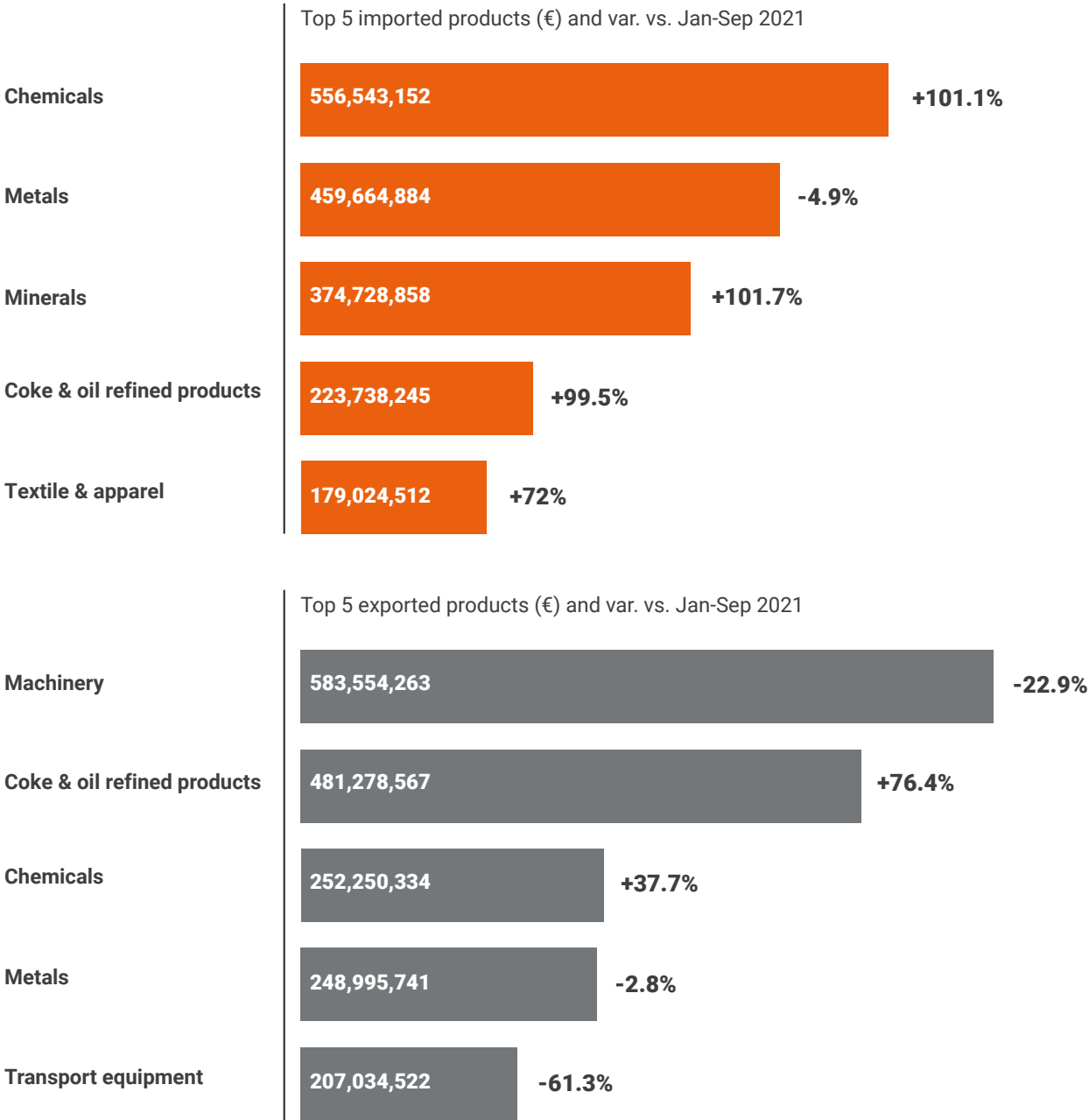


Figure 21 | Source: SRM on Coeweb – Istat

An analysis of Egypt’s imports reveals that the strongest sector of Italian exports is machinery, which alone accounts for 23% of the total. Specifically, Italy exported pumps and compressors, equipment for refrigeration and ventilation, taps and valves. Trade in crude oil and derivatives is important, too. Imports of refined petroleum products accounted for 19% of the total import from Italy, demonstrating the country’s structural energy gap. In the period Jan-Sep 2022, the strongest sector of Italian imports from Egypt was chemicals, which alone accounted for 27% of the total, in the detail plastics and fertilizers. Among minerals, 52% of Italian imports to Egypt consisted of natural gas (€295 million), shipped back to its origin in the form of refined energy and chemical products (€ 481 million and € 252 million, respectively).

The strong trade relations between Italy and Egypt are also confirmed by the existence of regular shipping services linking the two countries.

The Italian shipowner Grimaldi Group operates on Ro-Ro connections between Italy and Egypt with 3 services that perform 1 or 2 return trip each week. It should be emphasized that the ships used are car carriers and that the Italian ports touched by the routes are Leghorn, Civitavecchia, Venice, Monfalcone and Salerno.

RO-RO services between Italy and Egypt

Shipping Liner	Service	Weekly frequency	Port of call	
			Egypt	Italy
Grimaldi Group	Adriatic Service	1	Alexandria	Monfalcone, Venice
	Euro-Med Service	1	Alexandria	Salerno
	Euro-Aegean Service	2	Alexandria	Civitavecchia, Leghorn, Salerno

Table 4 | Source: SRM on Grimaldi Group and europeantransportmaps

RO-RO cargo shipping describes a vessel transporting wheeled cargo, including cars, trucks, buses, trailers or industrial vehicles. This kind of ships have built-in ramps on their bow or stern to make the loading and unloading of the wheeled cargo much easier than if it was done with a crane.

In the wave of nearshoring, many companies would diversify their supply chains in search of local suppliers, so fast, direct and high-quality container services are intensified. Related to this, in May 2022, the shipping company Zim launched a new intra-Mediterranean line that connects ports in Egypt and the Adriatic Sea. This regular connection renamed Adriatic Egypt Service Line (Ade) and served by ships with a capacity of 1,400 TEUs calls at the ports of Haifa, Alessandria, Koper, Venice, Ravenna, Port Said and again Haifa.

This container liner service between Egypt and Italy is in addition to the one activated again in 2022 by MSC between the port of Trieste and the same North African country. In that case, the renamed Adriatic to Egypt line added to the already existing connection with Alexandria El Dekheila, the port of Damietta, an important point of reference for refrigerated traffic and more.

Recently, also Marfret launched a regular Egypt-Italy container service, the Egypt-Italy Express service, between Genoa and Salerno in Italy and Alexandria in Egypt.

In addition, Ocean Alliance, comprising CMA CGM, COSCO, Evergreen and OOCL, one of the three big alliances in the world, announced its service network for 2023 confirming the weekly line Asia-Adriatic Sea (AAS) with calls in: Shanghai – Ningbo – Pusan – Shekou – Singapore – **Alexandria** – Koper – **Trieste** – Rijeka – **Port Said West** – Jeddah – Port Kelang – Shekou – Shanghai.

3. The business opportunities arising from the development of short sea links through RO-RO services

To ensure more efficient, sustainable and profitable trade relations between the north-western and south-eastern shores of the Mediterranean basin, Motorways of the Sea (MoS) through RO-RO services could act as a catalyst for economic and social development of the region as a whole, as well as for regional integration.

The strong sea trade relations between Egypt and Italy suggest the opportunity to develop intermodal goods transport services with the aim of increasing import/export exchanges and improving maritime transport co-operation. Offering a new high frequency port-to-port RO-RO services combining Short Sea Shipping with other modes of transport (road and rail) could also benefit other Med countries.

The new services are expected to have considerable environmental benefits from the transfer of an important part of road traffic to maritime traffic (generating relevant savings in congestion, air pollution and road safety), as well as from the shift from road to rail (using the Italian railway system for the goods loaded/unloaded in the Italian ports to shift a considerable number of trucks from the congested motorways to the railway system).

RO-RO services will not only connect the Eastern, Southern and Northern shores of the Mediterranean, they will also reinforce, complement and create synergies with the existing Mediterranean transport system, in serving to connect the Trans-European Transport Network to the Trans-Mediterranean Transport Network, thus facilitating exchanges between the two rims of the Mediterranean. Moreover, they will optimize freight transport and logistics chains and integrate the maritime transport in global logistics chain to contribute to strengthening the global competitiveness of the Mediterranean.

These connections should also encourage Italian businessmen to establish factories in Egypt in order to benefit from its promising investment climate. Italy, moreover, has first-rate Ro-Ro services (it is recalled that it is first in Europe in Short Sea Shipping in the Mediterranean) with shipowners of excellence that can support Egyptian companies and the Egyptian maritime system in the development of the sector and the routes between these two countries.

FOCUS

The European "Carbon Border Adjustment Mechanism" (CBAM) and the potential impact on trade relations with Egypt

On 13th December 2022, the European Parliament and the Council reached a political agreement on the imposition of a carbon tariff on imports of polluting goods as a key part of a wider decarbonization strategy¹⁸.

Known as the "Carbon Border Adjustment Mechanism" (CBAM), it is designed to ensure that countries and regions that are curbing their greenhouse gas emissions are not penalised by the transfer of industrial production to other locations. This mechanism put a price on the carbon emitted during the production of carbon intensive goods that are entering the EU, and encourage cleaner industrial production in non-EU countries¹⁹.

The CBAM constitutes a supplementary measure to the European Emissions Trading System (ETS), the EU's internal carbon pricing system, introduced in 2005, and one of its major instruments for achieving the net greenhouse gas (GHG) emissions reduction target of 55% by 2030 (compared with levels in 1990).

The gradual introduction of the CBAM is aligned with the phase-out of the allocation of free allowances to support the decarbonisation of the EU industry.

Although economically and ecologically sound, the European ETS could create distortions in trade with third countries that do not have a comparable carbon pricing system in place. The fact that EU producers bear the cost of the EU-internal carbon pricing whi-

¹⁸ Council of the EU (2022, 13 December). EU climate action: provisional agreement reached on Carbon Border Adjustment Mechanism (CBAM) [<https://www.consilium.europa.eu/en/press/press-releases/2022/12/13/eu-climate-action-provisional-agreement-reached-on-carbon-border-adjustment-mechanism-cbam/>]; and European Parliament (2022, 13 December). Deal reached on new carbon leakage instrument to raise global climate ambition [<https://www.europarl.europa.eu/news/en/press-room/20221212IPR64509/deal-reached-on-new-carbon-leakage-instrument-to-raise-global-climate-ambition>].

¹⁹ Plus Iceland, Liechtenstein and Norway.

le foreign producers remain unaffected may result in EU producers losing international competitiveness in emission-intensive industries.

The EU's increasingly stringent climate policy faces a dual challenge. First, to ensure a level playing field and prevent a loss of EU competitiveness in view of the additional costs caused by the ETS. Second, to encourage its trade and investment partners to adopt similar emission-reduction measures, thus bringing them into the 'climate club'.

This is where the CBA mechanism comes into play. It has two main objectives, both of which are linked to the European ETS. The first objective is to counter '**carbon leakage**', which describes a situation where carbon-intensive industries take place in other countries with less stringent carbon reduction policies²⁰. Furthermore, the law will incentivise non-EU countries to increase their climate ambition. Once third countries link their national carbon pricing systems to the ETS, third-country exporters would no longer face CBAM payments.

By imposing a particular tariff on EU imports, known as '**Carbon Border Tax**' (CBT) or '**carbon tariff**', the size of which depends on the carbon intensity of the imported product, the CBA mechanism will reduce (and in the ideal case eliminate) the existing asymmetries in CO₂ costs between the EU and third-country producers in the Single Market. In this way the CBA mechanism can improve the competitiveness of EU companies by restoring a level playing field.

The CBAM will initially apply to imports of certain goods whose production is carbon intensive and at most significant risk of carbon leakage: cement, iron and steel, aluminium, fertilisers, electricity and hydrogen; as well as of some selected "precursors" (such as cathode active materials) and a limited number of so-called "downstream products," such as screws and bolts.

With this range of goods covered by CBAM, this mechanism will eventually – when fully phased in – capture more than 50% of the emissions in ETS covered sectors. Under the political agreement, the CBAM will enter into force in its transitional phase between October 2023 and January 2026. Before the end of the transition period the Commission shall assess whether to extend the scope to other goods at risk of carbon leakage, including organic chemicals and polymers, with the goal to include all goods covered by the ETS by 2030. They shall also assess the possibility to include more downstream products.

During the phase-in period, in practice the importers will be obligated to provide limited reporting emissions data to the EU but will not be required to pay the tariff. The aim is to collect data.

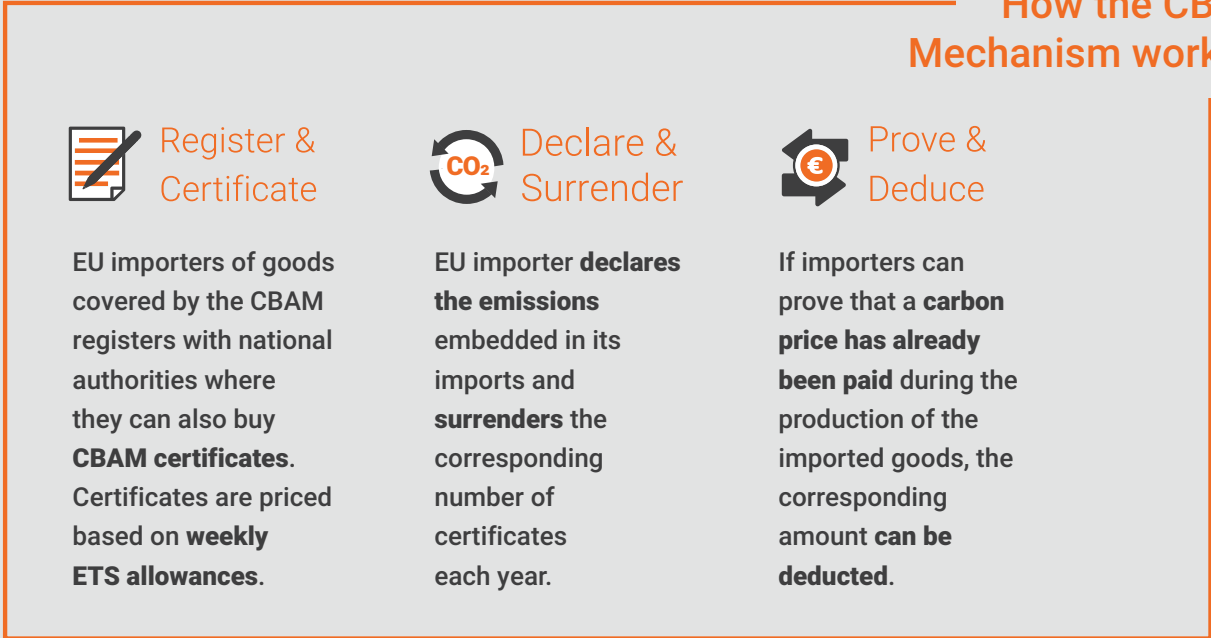
²⁰ An operational definition of carbon leakage is the ratio between the increase in CO₂ emissions in foreign countries that do not adopt policies for decreasing emissions, and the decrease in CO₂ emissions in countries that do implement emission-reduction policies.

Once the permanent system enters into force on 1 January 2026, importers must register with the applicable governmental authority and declare each year the quantity of goods imported into the EU in the preceding year and their embedded GHG. If these exceed the European standard, they must acquire an "emission certificate" at the price of CO₂ in the EU²¹.

The phasing-out of free allocation under the EU ETS will take place in parallel with the phasing-in of CBAM in the period 2026-2034.

By confirming that a price has been paid for the embedded carbon emissions generated in the production of certain goods imported into the EU, the CBAM will ensure the carbon price of imports is equivalent to the carbon price of domestic production, and that the EU's climate objectives are not undermined. The CBAM is designed to be compatible with WTO-rules.

How the CBA Mechanism works



Source: SRM on European Commission

There are some indications suggesting that a CBAM could be treated as a good opportunity for the introduction of protectionist measures or be perceived by trading partners as such.

Even Egypt is working on the green policies. Its renewables potential should give it a leg up: many projects – MoUs for 28 GW of new projects have been signed at COP27 alone

²¹ The price of the certificates will be calculated depending on the weekly average auction price of EU ETS allowances expressed in €/tonnes of CO₂ emitted.

– put local industries in a stronger position to green their exports, because companies in Egypt can create clean products at greater efficiency and lower cost than those in other countries.

Undoubtedly the introduction of the carbon tariff will have a significant impact also on trade between Egypt and Europe. The EU is Egypt's biggest export destination so the tariff will impact several Egyptian industries that export heavily to the EU if companies don't take actions to decarbonize their products. Although Egypt accounts for less than 1% of global emissions, the carbon intensity of its economy as of 2019 – 884 grams CO₂ per USD – was almost 56% higher than global levels, making its industries more exposed to the impact of the tariff.

In detail, the EU is the biggest overseas customer for the local fertilizer and metal industries. In 2021, 60% of Egypt's fertilizer exports headed across the Mediterranean, according to UN data, volumes which according to the Chemical and Fertilizers Export Council tripled y-o-y in the first 10 months of 2022 amounting to EUR 1.5 bn worth. Egypt has taken Russia's role as one of Europe's key fertilizer suppliers due to the spillover effects of Russia's invasion of Ukraine. Europe's fertilizer industry has been forced to cut production due to surging natural gas prices, while an import ban on Russian fertilizers has sent countries in search of new suppliers.

Similarly, two-thirds of Egypt's aluminum exports and more than 60% of its overseas sales of iron and steel went to Europe last year.

The fertilizer and chemical industries could lose up to 4% of export revenues due to the EU's climate policies, including the CBAM, according to World Bank projections²².

²² World Bank Group (November 2022), Country Climate and Development Report: Egypt.

Chapter 4 | **The evolving investment climate in Egypt and the Suez Canal Economic Zone**

1. The investment climate in Egypt - Evolution

Egypt has been adopting a comprehensive reform plan to structurally develop its economy, and lately a new strong impulse to drive the economy towards a more sustainable path has been adopted, aiming at furtherly support the promotion of investments, either domestic or foreigner in the country. The program, supported by the **International Monetary Fund (IMF)**, includes several pillars, amongst which:

- 1.** Adoption of a **flexible exchange rate regime** and improvement of the effectiveness of adopted **monetary policies**.
- 2.** Reduction or exit of the state footprint across several well identified economic sectors and facilitated private-sector-led growth through:
 - a.** Issuing the **“State Ownership Policy Document”** that charts a roadmap for expanding the private sector’s role in several economic activities.
 - b.** Pledging to sell shares in state assets to attract **USD40 billion** in investment over four years (**Egypt has announced a detailed plan to offer stakes in 32 state companies**).
 - c.** Launch of the **“golden license”** system which grants investors approval to operate projects without the need to deal with multiple government bodies.
 - d.** Approving the main framework of a new five-year initiative worth **EGP150 billion** to provide for a subsidized lending scheme aimed at supporting projects in the industrial and agricultural sectors with loans at a rate currently set at **11%**.

Egypt’s aim is to become a more dynamic economy to affirm as an **export hub** for domestic and international players, supported by its geographic and logistic positioning within the strategic **maritime connections**, its improved infrastructures, its strong achievements and further commitments in the development of **green energy** production.

Egypt can be a gateway to access millions of customers around the world, particularly in Africa, as it has signed **16 preferential trade agreements** with major economic blocs

worldwide, covering almost 107 countries²³, which supports the country's aim. Egypt's main 5 trade agreements:

- **European Union (EU):** Egypt-EU Association Agreement.
- **Arab Countries:** Pan Arab Free Trade Area (PAFTA).
- **Latin America:** Mercosur.
- **United States and Israel:** Qualified Industrial Zones (QIZ)
- **Africa:** the latest African Continental Free Trade Area (AfCFTA), extremely significant being currently already ratified by 44 African countries.

Egypt's net FDIs has soared 155% yoy to almost USD9 billion during 9M 2022, due to the rise in both the proceeds of selling local entities and net greenfield investments & capital increases of existing companies²⁴. **Egyptian Startups came third**, after UAE and Saudi Arabia, in terms of funds received in the MENA region during 2022, acquiring 17% of total funds channeled to the region.

2. The Suez Canal Economic Zone

Suez Canal Economic Zone (SCZone) is a world-class trade hub built along the banks of the newly expanded Suez Canal. It is strategically located on the main trade route between Europe and Asia, where almost 10% of global trade passes every year.

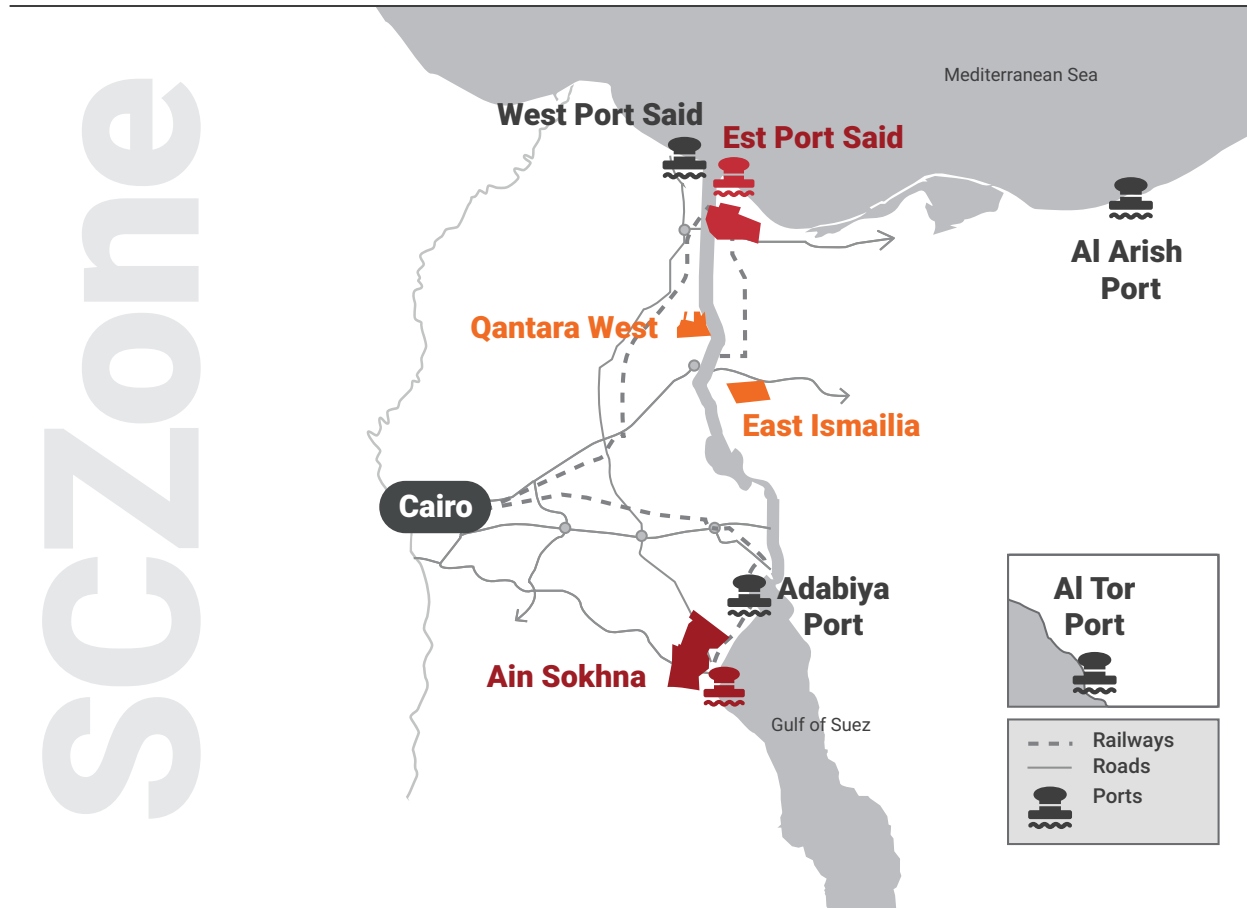
The zone's total area is almost 461 km², consisting of:

- (1) Two integrated areas (Industrial Zone + Port),
- (2) Two development areas (allocated for residential communities and tech. industries),
- (3) Four ports.

²³ Alexbank-SRM (2018), Egypt: a potential hub for commercial activities in Africa and the middle east [https://www.alexbank.com/document/documents/ALEX/Retail/Research/Other/EN/Egypt-A-Potential-Hub-For-Commercial-Activities-In-Africa--The-Middle-East_Jun18.pdf].

²⁴ It's worth mentioning that Egypt has been partnering with the Italian energy group "Eni" in exploring the Mediterranean over the past years, where a new major gas discovery was made in an Egyptian offshore field (Nargis-1) in December 2022. The successful partnership goes back to 2015, when Eni discovered the largest ever natural gas field in the Mediterranean (Zohr). Egypt plans to be a regional energy hub and to that end, it has initiated the East Mediterranean Gas Forum, along with by Cyprus, Greece, Jordan, Palestine, Israel, Italy and France, to consolidate efforts in this regard.

The Suez Canal Economic Zone



2 Integrated areas [Industrial Zone + Port]



Ain Sokhna

East Port Said

2 Development areas



Qantara West

East Ismailia

4 Ports



West Port Said

Adabiya Port

Al Tor Port

Al Arish Port

14 Industrial Developers

18 USD bn Investment cost

250 Operating enterprises

Geographical Position

Access to Large Markets

Skilled & Affordable Labor

Business Friendly Process

Infrastructure and Logistics

Supportive Legal Framework

Figure 22 | Source: SRM on SCZone

2.1 Infrastructure projects

Developing Ain Sokhna Port

- **Developer:** The Egyptian Ministry of Transport
- **Dates:** Completion of the first phase in March 2023.
- **Estimated cost:** EGP20 billion
- **Description:** The construction of:
 - New berths (12 km in length and 18 m in depth),
 - Trading yards (5.6 million m²),
 - Commercial and logistical areas (5.3 km²), that would be served by a network of railway lines connected to the Electric Rapid Train.

Developing Al Arish Port

- **Developer:** SCZone, Suez Canal Authority, and the Armed Forces Engineering Authority
- **Dates:** To be delivered by 2023.
- **Estimated cost:** EGP4 billion
- **Description:** Developing the port will enable it to receive ships carrying up to 20-30K tons, after deepening the draft for 12 m. These ships would be carrying exports from Sinai such as cement, sand, salt and marble.

2.2 Industrial & logistical projects

Establishing a new logistics service zone

- **Developer:** Dubai Ports World-Sokhna (DP World-Sokhna)
- **Dates:** Operations of the first phase of this project will start by the end of 2023
- **Estimated cost:** USD80 million
- **Description:** Establishing a new 300K m² logistics service zone.

A bulk grain terminal

- **Developer:** Roots Commodities and Rosa Grains
- **Estimated cost:** EGP2.2 billion
- **Description:** The establishment of a bulk grain terminal at East Port Said. It aims at handling 1.5-7.2 million tonnes of grains per year. The terminal will be established over an area of 267K m² and at a length of 500 m.

Production of methanol and ammonia

- **Developer:** The international company for methanol and its derivatives
- **Estimated Cost:** first phase (USD1.6 billion), second phase (USD1 billion dollars)
- **Duration:** 3 years
- **Description:** the establishment of an integrated industrial complex for the production of methanol and ammonia (The international company for methanol and its derivatives). The complex will be established in the industrial zone of Ain Sokhna. It will be built on an area of 2 million m², in addition storage spaces in Sokhna port with an area of 50K m².

A Polish industrial zone in Egypt

- **Developer:** Katowice Special Economic Zone in Poland
- **Description:** The Polish economic zone in Ain Sukhna is planned to be established on an area of 400K-1000K m² targeting food industries, electronic industries and auto spare parts in Ain Sokhna.

Logistical services for ships

- The SCZone will offer new services to ships including fueling and catering starting 1Q 2023 at Port Said and Suez.

2.3 Egypt focuses on green hydrogen

“Green hydrogen is produced by using clean energy from surplus renewable energy sources, such as solar or wind power, to split water into two hydrogen atoms and one oxygen atom through a process called electrolysis”

Background

- Egypt is working on increasing the supply of electricity generated from renewable sources to 20% by 2022 and 42% by 2035, with wind providing 1%, hydropower 1.98%, photovoltaic (PV) 21.3%, wind 14%, concentrating solar power (CSP) 5.52%, and conventional energy sources 57.33% by 2035.
- Electricity Minister Mohamed Shaker has designated 2022 as “the year of green hydrogen.”

- The production, storage and export of green hydrogen and its product, green ammonia, have been recognized within the state’s economic development strategy, and green hydrogen and green ammonia projects are going to benefit from a wide range of state support.

Sources of electricity production. Year 2022

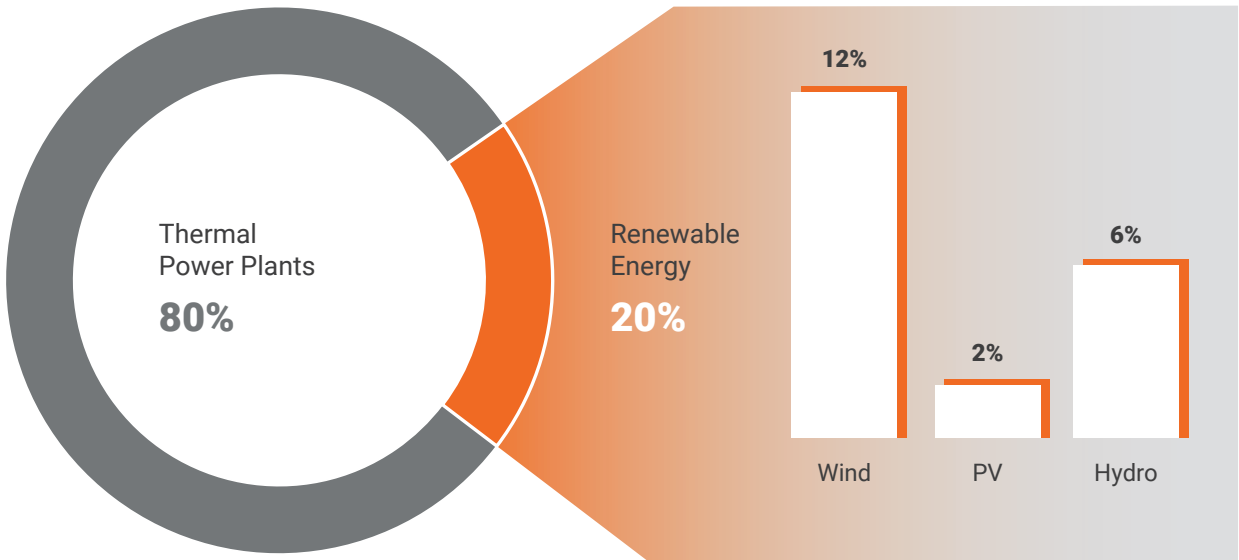


Figure 23 | Source: SRM on New & Renewable Energy Authority (NREA)

Sources of electricity production. Year 2035

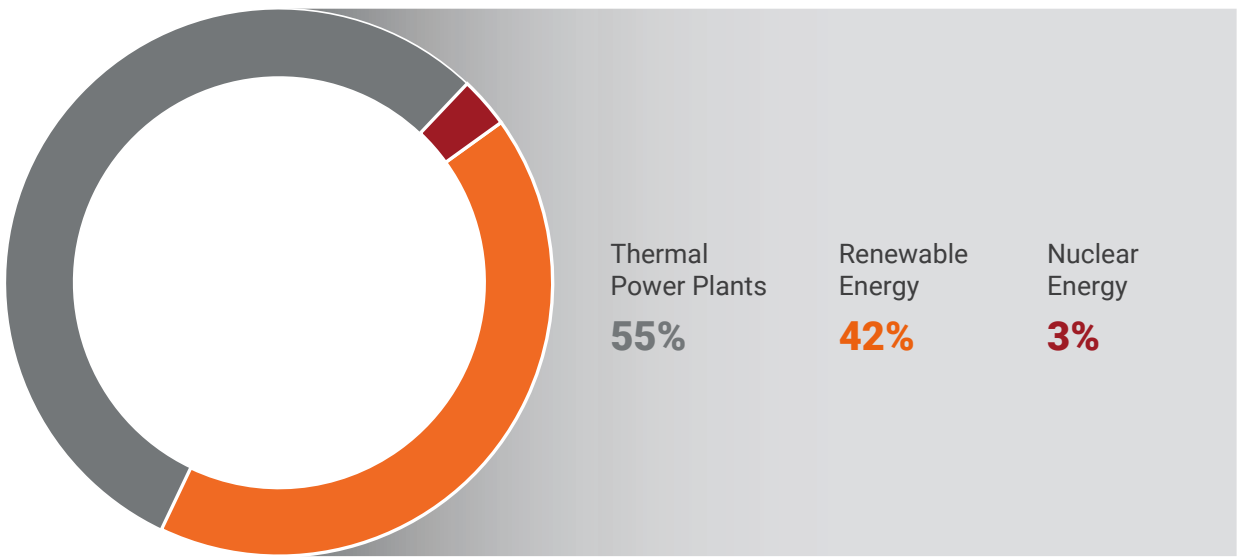


Figure 24 | Source: SRM on New & Renewable Energy Authority (NREA)

Projects

- The Egyptian government has also signed a number of MOUs and preliminary agreements with international companies to establish multiple plants in the SCZone to produce green hydrogen, with an estimated investment cost of USD30 billion.

List of projects in the SCZone

	Company	Nationality	Production Capacity	Estimated Cost (USD bn)	Comment
1	Scatec and Fertigllobe *	Norwegian	100 MW	NA	The Sovereign Fund of Egypt (SFE), Scatec, and Fertigllobe have partnered to establish and operate green hydrogen plant in Ain Sokhna
2	Fortescue Future Industries (FFI)	Australian	9.2 GW		-
3	EDF	French	350K (ton/year)		The consortium is led by EDF and the UAE based Zero Waste. The agreement aims at securing carbon-free fuel for ships, vessels and tankers crossing the Suez Canal
4	ACME Group	Indian	2.2 million (ton/year)		-
5	Globaleq	British	2 million (ton/year)		-
6	Al Fanar	Saudi	500K (ton/year)		-
7	Alcazar	Emirati	230K (ton/year)		-
8	K & K	Emirati	230K (ton/year)		-
9	Actis	British	200K (ton/year)		-
10	Demi	Belgian	NA		-
11	Masdar	Emirati	480K (ton/year)		-

* Jointly owned by OCI NV (Orascom Construction's Netherlands-based parent company) and Abu Dhabi National Oil Company (ADNOC).

Table 5 | Source: SCZone

Highlights

- The SCZone's affiliated ports have achieved a remarkable growth in their performance in 2022.

SCZone's affiliated ports performance. Jan-Aug 2021-2022

	Aug-21	Aug-22	
Number of Ships	East Port Said	130	139
	West Port Said	47	75
	Adabiya	35	36
	Ain Sokhna	35	34
	Al Arish	3	14
	Total	250	298

	Aug-21	Aug-22	
Tonnage	East Port Said	2,900	3,500
	West Port Said	305	381
	Adabiya	454	700
	Ain Sokhna	1,500	1500
	Al Arish	13	57
	Total	5,172	6,138

	Aug-21	Aug-22	
Number of Containers	East Port Said	295,625	315,068
	West Port Said	26,198	47,008
	Adabiya	6,234	7,503
	Ain Sokhna	74,217	81,537
	Total	402,274	451,116

Table 6 | Source: SCZone

- The SCZone has proved its resilience against global crises, with solid financial results.

SCZone's financial results. 2021-2022

EGP bn

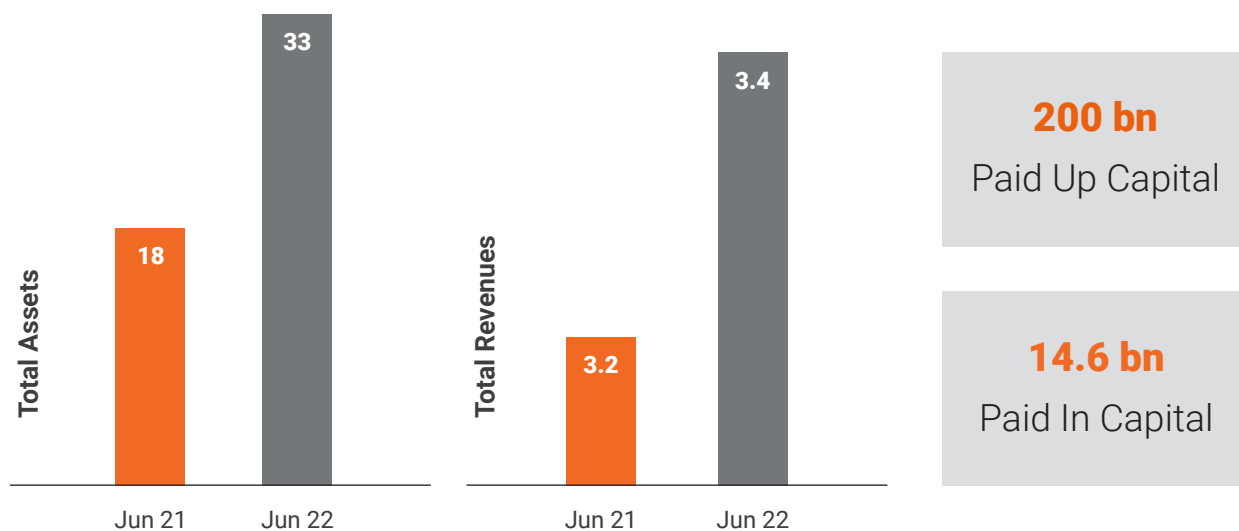


Figure 25 | Source: SCZone

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SRM is a Research Center for Economic Studies related to Intesa Sanpaolo Group, specialized in the analysis of regional economic dynamics with a European and Mediterranean vision in mind.

SRM's experience in the field of economic research about port and logistic infrastructure has resulted in the creation of the **permanent observatory on maritime transport and logistics** which is currently a point of reference for the whole cluster in this sector, both nationally and internationally.

Annual reports, papers and surveys represent the result of regular and thorough monitoring of the economic dynamics regarding shipping and the main sectors or territories where the maritime economy plays a key role.

For its scientific project, the 'Maritime Economy Observatory' of SRM avails itself of the support and of the technical and operational contribution of national and international player from the logistics/ maritime industry.

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The background of the image consists of several broad, expressive brushstrokes in shades of orange and brown. The strokes are layered, with some appearing more prominent than others, creating a sense of depth and movement. The colors range from a bright, warm orange to a darker, more muted brown. The overall effect is that of a hand-painted or textured surface.

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