

The Mediterranean Sea and its Port System: Risk and Opportunities in a Globally Connected World

*Laura Basagni**

* Program Manager, GMF – German Marshall Fund of the United States

Over the past 25 years, the traditional strategic position of the Mediterranean Sea on global maps has been boosted: with a 477% growth in the amount of cargo handled by its ports between 1995 and 2018, the Mediterranean region currently serves 20% of global shipping (SRM – Studi e Ricerche per il Mezzogiorno, 2019). As of today, there is no alternative route as efficient as the Mediterranean Sea to connect Asia to Europe. Arguably, ensuring this passageway amidst ongoing security tensions in the Persian Gulf will be one of the most pressing security concerns for both continents in the years to come.

The enhanced centrality of the Mediterranean and its ports creates growth opportunities for the region and for the wider European and African markets that it connects: not only in the shipping industry but also in economic sectors that flourish around well-functioning and well-connected infrastructure. Some countries have been savvier than others in recognising this early on: within the region the case of Morocco putting its port system at the core of economic revitalisation is notable while among foreign investors, China is the most actively involved and eager to sustain long-term investments.

Yet the Mediterranean is only partially benefitting from existing economic opportunities. This is partly due to poor port development strategies by Mediterranean countries and lack of interest in investing economic resources. It also needs to be assessed against the background of developments in the shipping industry globally, particularly the increased market share of transshipment – that is the shipment of goods to an intermediate destination, then to another destination. The spike in transshipment activities has raised the strategic importance of the Mediterranean Sea (i.e. the intermediate destination) as a connecting market but tends to serve the global more than domestic market, and particularly the world's largest exporters rather than the countries where transshipment hubs are located.

This partially explains why the Mediterranean is so importantly placed within the Chinese Belt and Road Initiative (BRI). Today, growth and degrowth of maritime traffic in the Mediterranean – and the infrastructural system that sustains it – is highly dependent on sustained and robust trade flows along the East-West route. The current pandemic caused by the outbreak of the Covid-19 virus has heavily impacted it, showing the degree of vulnerability of Mediterranean ports and their dependency on international trade, and China's exports. Global container volumes are down between 8-10% since the beginning of the crisis, and imports from Asia have lowered between 10-15% (Notteboom, 2020). Further disruption in international trade flows is likely to halt, at least temporarily, the pattern of growth that Mediterranean ports have experienced in recent years.

Mediterranean Port System

The Mediterranean basin has naturally been a crossroad of moving goods and people, whose travels and encounters have created the distinct cultural and social concept identified with the word “Mediterranean”. Historically, the creation of the Suez Canal in 1869 was a turning point in the history of the Mediterranean: the Suez Canal helped to reverse the process of marginalisation that the Mediterranean had been undergoing since the 16th century in favour of the Atlantic Ocean and placed it at the core of one major trading route. The Mediterranean Sea then became the easiest and cheapest transport route between Asia and Europe.

The advent of containerisation in the shipping industry about a century after turned the region into a mandatory passage of world trade: today, between 7% and 8% of total cargo traded globally travels through the Suez Canal (Baccelli, Buonfanti, Ferrara & Zucchetti, 2015). The containerised method of moving goods and related maritime and inland transport systems have proven instrumental to globalisation, in a way that made these two processes greatly intertwined: the introduction of containerisation has made the costs of moving goods across the planet 20 times cheaper than before (Comtois & Rodrigue, 2020), thus allowing the emergence of global value chains (GVCs). In turn, trends in global trade, and the shifts and expansion of GVCs, now determine the direction of investments in transport geography, favouring the economic development of one region or another (Notteboom, 2012). The rise of Asian economies, particularly China, as global trade giants has made the trans-Pacific route, followed by the East-West route, the busiest maritime corridor in the world – the trans-Atlantic corridor comes third (SRM – Studi e Ricerche per il Mezzogiorno, 2018). Therefore, the Mediterranean region has experienced tremendous growth in investments in the maritime sector over the past two decades, becoming a logistics platform of great strategic importance for the East-West trade route – connecting Asia, Europe and the East Coast of the United States, and the linking Atlantic and Indian Oceans.

The growth of transshipment activities has been a crucial determinant in the evolution of the Mediterranean port system over the past decades. Transshipment made up for 28% of global trade in 2012, double what it was 20 years before.¹ This is closely correlated with the growth of long-distance containerised trade and with a shift in shipping companies’ business model towards gigantism, namely the use of increasingly bigger vessels to draw the greatest benefits from economies of scale. As mega ships are used to move goods across long distances (for instance the East-West route) their cargo is then unloaded and divided onto smaller ships at intermediate ports, and then proceed

¹ More recent data is unavailable, as information about transshipment activities is often not disclosed.

towards their market of final destination. Transshipment tends to occur in convenient geographical spaces (transshipment markets, also called intermediate hubs) that naturally connect multiple markets, such as the Caribbean, the Southeast China Sea, and the Mediterranean, in fact. Transshipment accounts for the majority – and at times almost the totality – of activities in several Mediterranean ports, where cargoes travelling from Asia are distributed to reach their final destinations in Europe (through gateway ports in the Mediterranean or in Northern Europe), Africa or the East Coast of the United States.

Mediterranean ports are in a strategic position to serve the sea-to-sea transshipment business, acting as a connector between global and regional markets; yet the big Northern European ports remain the most important gateways to European markets, where they hold a considerable advantage mainly due to their multimodal system of transportation.² The main limitation of Mediterranean ports remains precisely poor intermodal connectivity, which limits the opportunities to expand their hinterland and related economic benefits. Nevertheless, the growth of Mediterranean ports has caused a shift in the overall European port system: the top four ports are still Rotterdam, Antwerp, Hamburg and Bremerhaven – Antwerp is even referred to as *the biggest port in the Mediterranean* because it is often the destination of freight shipped through the Suez Canal destined to the European market. However, container ports in the Mediterranean are catching up, particularly the top four Mediterranean ports, which registered very strong year-on-year growth in the first quarter of 2019: Algeciras (+8.2%), Valencia (+12.5%), Piraeus (+24.4%), and Barcelona (+5.97%). According to recent growth projections, the Piraeus will soon overtake Bremerhaven as the fourth largest container port in Europe (Notteboom, 2019).

While growth in transshipment was an opportunity for Mediterranean ports, this type of activity can hinder regional cooperation and limit the overall economic return of large investments in infrastructures. Transshipment markets are determined by a combination of geography and strategic investments: for instance, the Mediterranean is a natural passageway of trade flows between the East and West, made easily accessible by the creation of the Suez Canal. Yet the choices of individual ports to handle trade flows within the same intermediate hub vary at the discretion of shipping companies, and can shift over time. The competitiveness of a port is not only determined by geography – i.e. its proximity to the shipping trunk line – but also by the overall quality of the services offered, especially in terms of connections with other transport networks (integration between port facilities, inland terminals and multimodal corridors, among others).

The trend to use mega ships and the oligopoly of a few shipping industrial complexes active in the Mediterranean – 2M (Maersk, MSC) and Ocean Three (CMA CGM, UASC,

² Multimodal transport is the transport of the same good from origin to destination under one contract, but through more than one means of transportation, e.g. sea, rail and road.

CSCL) – push ports to compete for companies' investments. This can induce an overall improvement in infrastructure, technology and logistics in the region but also creates a dynamic of competition between ports serving the same market. These markets tend to saturate quickly, to the benefit of those who invest first. An example of the *first mover advantage* dynamic is provided by the case of Morocco in the Maghreb, which will be explored further in the next section.³ By rapidly becoming a successful transshipment hub in the Maghreb, Tanger-Med has inspired neighbouring countries to follow its example – with Libya, Tunisia and Algeria developing renovation plans for their own port systems – while at the same time leaving little appetite among foreign investors to direct their money elsewhere. Last but not least, transshipment activities that are not well integrated within the development strategy of a port hinterland tend to support offshore activities more than the country economy beyond that of the port's immediate surroundings. As shown in the next section through the cases of Tanger-Med and the New Suez Canal, an integrated port cluster strategy that includes interventions, not only in ports but also in areas such as industry and trade, is critical to maximise the benefit of large investments in infrastructure development projects.

Infrastructure Development and Industrial Strategies: The Cases of Tanger-Med and the New Suez Canal

Investments in the Southern Mediterranean have been another driving force behind the overall maritime infrastructure development of the region. In particular, the new transshipment hub of Tanger-Med and the expansion of the Suez Canal are cases worth exploring further for the considerable impact on the overall maritime architecture of the region, and the role played in the economic development of Morocco and Egypt, respectively.

Tanger-Med has been a priority project for the Moroccan government in the process of diversifying the Moroccan economy, which puts stronger emphasis on exports and its maritime economy, recipient of roughly 30% of total public investments. Located in the Strait of Gibraltar, Tanger-Med is connected to 186 ports worldwide and is home to an industrial hub of 900 companies (Tanger-Med Special Agency Website, 2019). The complex includes four export-oriented free trade zones (FTZs), where customs duties are not imposed, designed to attract investments and create new jobs: over 70,000 jobs were created thanks to the project – 6,000 at the port, and over 60,000 in the trade zone area – according to the president of the Tanger-Med Special Agency (Eljehtimi & Laessing, 2019). Today, Tanger-Med is the biggest port in Africa and one of the biggest

³ *First mover advantage* is the advantage gained by the initial significant occupant of a segment of a market.

in the Mediterranean. The creation of Tanger-Med was preceded by a broader process of economic planning, including heavy use of public diplomacy to attract deals with shipping companies – the port terminals are operated by APM Terminal, and owned by Denmark's Maersk, Germany's Eurogate, and a local firm. Relocation of production processes to the Special Economic Zone (SEZ) established around the port facilities is strongly encouraged. Renault SA relocated its entire production processes destined to serve the African and European markets to Morocco, and companies such as Peugeot SA, Siemens and Huawei have opened logistical platforms in Tangier. Therefore, when the port became officially operative in 2018, the wider economic environment around it was ripe to produce optimal benefits for the country's economy. The newest port terminals opened in June 2019.

Somewhat in contrast with the case of Tanger-Med, the renovation of the Suez Canal followed a different trajectory: the project was launched by Egyptian President Sisi in 2014, and was carried out in record time. The modernisation of the canal was completed in 2015 having taken only 11 months, doubling the capacity of the previous channel – from 49 to 97 ships able to pass through at the same time, and transit time decreased from 18 to 11 hours, with a consequent cut in operating cost by 5-10% (Baccelli, Buonfanti, Ferrara & Zucchetti, 2015). The new canal provides a convenient alternative not only to the Cape of Good Hope but also to the Panama Canal for certain routes between Asia and the East Coast of the United States: choosing the Suez Canal allows economies of scale to be exploited to the fullest by using large vessels (beyond the Panama Canal's limit of 14,500 TEUs)⁴, and to cross intercontinental hubs – such as Colombo, Dubai, Tanger-Med, Piraeus, Gioia Tauro and Algeciras, to name a few. Experts have hypothesised a direct effect of the new Suez Canal on the further growth of international trade between Asia and Europe, and the Middle East and Europe (Baccelli, Buonfanti, Ferrara & Zucchetti, 2015).

Despite the potential opportunities the project opened up for increased maritime traffic, it has attracted numerous criticisms and has been included in the list of Sisi's so-called *vanity projects* (Mandour, 2019). Beyond the objective boost of the Canal's capacity to serve international trade, critics claim that current levels of growth in the global economy and trade flows are stagnant, and do not justify the mega project, when investments could have been channelled into other regions and economic sectors in the country, whose economy is struggling (Knecht, 2015). Moreover, the rapidity of the project conceptualisation and execution left little time for wider economic planning beyond the realisation of the expansion. The renovation was only afterwards followed by the conceptualisation of a bigger investment plan aimed at making the Canal region an area

⁴ TEU: twenty-foot equivalent unit, that is the unit of cargo capacity often used to describe the capacity of container ships and container terminals.

of economic development, including industrial hubs and research centres, and the Suez Canal Corridor Area project (SCZone.) The project aims to create a logistics region that would allow Suez to take advantage of being at the very core of the East-West route, and not only act as an obligatory passage point. China is one of the main foreign investors in the SCZone through a Memorandum of Understanding (MoU) signed between Egypt and China's Tianjin Municipality, for the establishment of a FTZ area following the Tianjin Economic-Technological Development Area (TEDA) example ("Suez Canal Authority", 2019). This is not an isolated case but an example of a growing presence of Chinese investments in the region, as shown in the next section.

Investment and Connectivity Strategies: Understanding the Mediterranean as a Region

Philippe Le Corre (2016) stated that the internationalisation of China and its companies is the most significant phenomenon of the early 21st century. After expanding its economic and political influence throughout Asia, Latin America and Africa, China's presence is growing in Europe, with the Mediterranean as one of the spaces in which this shift is most evident. Chinese foreign direct investments (FDI) in Europe has increased almost fifty times in eight years – from \$840 million in 2008 to \$42 billion in 2016, when Chinese investments in Europe became four times larger than European in China. While in 2016 the largest portion of Chinese FDI in Europe fell under the information and communication technology (ICT) heading (11.8%), in 2017 investments in the transport and infrastructure sectors taken together had more than doubled, representing the largest share of the total (15.3%) (Rhodium Group). In Southern Europe, China has targeted mainly countries undergoing important processes of privatisation and restructuring of national economies following the 2008 financial crisis, particularly Italy, Portugal and Greece (Zeneli, 2019). Moreover, in 2012 China created the 17+1 platform⁵ (formerly 16+1), bringing together European Union (EU) and non-EU countries for orchestrating investments in key transport routes connecting south-eastern and central Europe under the broad umbrella of the BRI (Bennis, 2019).

China's BRI has been defined as the most ambitious infrastructure project in history, with an estimated total amount spent between \$1.2 and 1.3 trillion by 2027 (Chatzky & McBride, 2019). Launched in 2013 by Chinese President Xi Jinping, the Silk Road Economic Belt and the 21st Century Maritime Silk Road – together with the BRI – are a maze of infrastructure projects stretching and connecting through and around Eurasia. The Silk Road Economic Belt comprises six economic projects and related land

⁵ The 17+1 platform includes China and 17 countries of the CEE (CEEC) – Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, North Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia. The 17+1 meet annually; summits were held in Dubrovnik (2019), Sofia (2018), Budapest (2017), Riga (2016), Suzhou (2015), Belgrade (2014), Bucharest (2013) and Warsaw (2012).

passageways connecting China with Europe. The Maritime Silk Road creates a loop around Eurasia: the southern section runs all the way through the Indian Ocean, across Southeast Asia to the Mediterranean, while the northern section connects Asia and Europe through the Northern Sea Route (NSR) across the Arctic, which China calls the Ice Silk Road. The initiative has been framed by the Chinese government as a tool to boost and sustain China's massive export economy, and foster international cooperation, while denying any more ambitious geopolitical and security ambition. The BRI includes infrastructure development projects as well as the creation of SEZs along the way, modelled after China's very own economic development strategy. Although not explicitly underlined in official declarations and documents, China looks at the Mediterranean in regional terms, as shown by the plurality of projects that are either planned or under development in virtually every corner of the Mediterranean basin. Some are branded under the BRI, particularly investments in maritime infrastructure and connectivity; others are connected to the BRI, although not directly branded, such as industrial development and ICT projects located in proximity to port facilities. The next paragraph briefly outlines significant examples. Without trying to be a comprehensive list of Chinese investments in the region, it provides an idea of the magnitude of China's growing presence in the Mediterranean.

The project that officially brought the matter into the spotlight is the acquisition of a 67% stake in the Greek port authority of Piraeus by China Ocean Shipping Company Limited, known as COSCO, the biggest and state-owned Chinese shipping and logistics services supplier company. COSCO's involvement with the port began in 2008 with a 30-year concession to manage two terminals and continued with the creation of a third terminal in 2013. Today, COSCO has full management control of the port authority and has made the Piraeus the main gateway of Chinese goods into Europe, to the point of competing for the position of fourth most active European port in terms of containerised TEUs handled per year. The aforementioned 17+1 platform aims to ensure that, once goods have entered the European market, they can travel easily throughout by land and sea (Bennis, 2019). Similarly, the MoU signed between China and Italy in March 2019 follows the same logic. Italy is the third largest recipient of Chinese FDI in Europe (after the United Kingdom [UK] and Germany) and was the first G7 country to formally adhere to the BRI. Of the 24 points of the MoU, two projects are particularly relevant in the maritime domain, namely the planned investments in the two Italian ports of Genoa and Trieste (Carli, 2019). On 9 November 2019, a follow-up agreement laid the foundation for the development of logistical platforms in China that will be directly connected with the port of Trieste, supposedly to boost export of "Made in Italy" in mainland China ("Il porto di Trieste firma un accordo", 2019). China is also developing the Marseille

International Trade City (MITC) around the port of Marseille – which, as mentioned, is one of the main gateway ports in the Mediterranean – and the Chinese multinational technology company Huawei has recently signed contracts with the Port Authority of Tanger-Med to open a logistical platform in Tangier’s SEZ (“Huawei to set up regional logistics centre”, 2018). Shanghai International Port Group (SIPG), a state-owned Chinese company, is building a new terminal in the Israeli port of Haifa, on the condition of owning the operation rights for the terminal for 25 years after the facilities enter into service in 2021 (Atli, 2019). COSCO owns a 20% stake of the Suez Canal Container Terminal (SCCT) in Port Said in Egypt under a 49-year-long concession. The remaining shares are held by APM Terminal (Maersk group) (55%), and local stakeholders⁶ (SRM, 2015).

China’s entry into the Mediterranean maritime space, in connection with the broader BRI and the greater totality of FDI in Europe and Africa, has raised increased attention and questioning by the expert community, policy-makers and voters alike. However, while Washington has been quick to define the BRI as an economic and potentially military threat to the United States (US) and the transatlantic alliance, the EU and its member states have kept a more ambiguous position and only recently moved toward a more defined and assertive framing of Sino-European relations. In June 2019, through the High Representative of the Union for Foreign Affairs and Security Policy’s declaration on *EU-China – A strategic outlook*, the EU defined China for the first time as a “strategic competitor, [...] failing to reciprocate market access and maintain a level playing field.”

Passive scepticism and multiple short- and long-term concerns in relation to Chinese terms and conditions under the BRI pervade the European debate and are mainstream among EU policy-makers. These include but are not limited to: Chinese non-competitive economic behaviours – such as price distortion due to state subsidies, discrimination against European companies under Chinese tenders, and restricted access to the Chinese market for European companies; threats to European strategic assets, intellectual property and technological know-how; potential loss of economic leadership of European companies – in terms of maintaining the ability to create and control markets and rules of exchanges, to set prices and select business partners; and fears around broader normative and political ramifications of Chinese investments, particularly in relation to environmental, labour and human rights standards. In February 2019, following pressures from Germany, France and Italy, the EU introduced a new regulation to ensure harmonisation and encourage cooperation among national screening mechanisms of FDI in EU member states. Although this regulation provides a useful framework to support EU countries in identifying potential “risks to security or public order” that could be

⁶ Suez Canal Port Authority (10.3%), National Bank of Egypt (5%), Egyptian private investors (9.7%).

inherent to foreign investments, it does not introduce new competencies at the EU level in connection with investments policy, nor is legally binding in any way, and of course does not apply to the EU neighbourhood.

Beyond being an indisputable source of competition, China's investment policy can produce incentives for increased cooperation across the Mediterranean region, especially north-south and east-west, and a greater role for the EU in addressing the existing need for infrastructural development in the region. The European niche of expertise grounded in technological advantage, investments in innovation and rules-based regulations for sustainable growth is key to ensure that European member states keep control of their markets and strategic assets. This concept is in fact at the root of the 2018 EU strategy for "Connecting Europe and Asia – Building Blocks for an EU strategy". The strategy is the closest existing thing to a response to the BRI and aims to lay the ground to address the identified investment gaps in Eurasia, estimating that Europe and Asia will need 1.5 and 1.3 trillion EUR, respectively, in the period 2021-2030 (High Representative of the Union for Foreign Affairs and Security Policy, 2018). The EU plan is to contribute to enhanced connectivity between the two continents by prioritising three areas: building common ground for efficient connections and networks; establishing bilateral and multilateral partnerships grounded in shared rules and common standards; and mobilising public and private sector resources. The strategy is a good starting point to define the EU posture and intentions: moving forward, the EU will need to mobilise enough resources under the Multiannual Financial Framework (MFF) 2021-2027, and streamline its policies concerning connectivity and strategic assets, such as maritime infrastructure, throughout its internal and external actions.

A regional perspective in addressing connectivity will be key to success, especially in the maritime world, which serves a global network of trade routes, and where borders are harder to define than on land. The EU can provide financing to catalyse additional public and private capital to infrastructural projects and can use its experience of the Trans-European Transport Network (TEN-T) to offer technical assistance, and mobilise resources to sustain investments beyond its borders, to its eastern and southern neighbour states. Steps in this direction are the Sofia Declaration of the May 2018 EU-Western Balkans Summit for a sustainable increase in connectivity in transport, energy, and digital and human capital; the suggestion included in the EU-Asia connectivity strategy to "extend the mandate of the EU TEN-T corridor coordinator(s) to the Enlargement and Neighbourhood region within the envisaged review of the TEN-T regulation which needs to be completed by 2023" and the Commission's proposal for an investment framework for external action, building on the current European Fund for

Sustainable Development, which is part of the EU's External Investment Plan and applies to Africa and the Neighbourhood. The latter does not refer to the Mediterranean in regional terms but can provide a useful starting point for future approaches to the region.

Ensuring Passage: Security Concerns Coming from the Gulf

Beyond the physical limits of the Mediterranean basin, two straits essential for the East-West trade route are playing a dangerous role in the escalating tensions in the Persian Gulf: Bab el-Mandeb and Hormuz. Secure navigation through these straits is essential for the global economy, given that Bab el-Mandeb is a crucial access point to the Suez Canal, and Hormuz is the passageway for the majority of oil travelling from the Persian Gulf towards Asia. The 30 km wide strait of Bab el-Mandeb is located in the Red Sea, and represents the shortest route connecting the Indian Ocean, the Mediterranean Sea and the Atlantic Ocean. Divided by the Perim Island into two channels, it has been an active trade route for centuries. Bab el-Mandeb increased in relevance after the construction of the Suez Canal and further with the export of oil from the Arabian Peninsula and the Persian Gulf. In 2018, an estimated 6.2 million barrels per day of crude oil and refined petroleum products flowed through the strait in both directions, toward Europe, the US and Asia (Barden, 2019). It also handles most of the EU trade with China, Japan and Asia en route through Suez. Ships carrying oil from the Persian Gulf to Europe and North America can avoid the Bab el-Mandeb by travelling around the southern tip of Africa, but the increased distances would add to shipping and fuel costs and disrupt supplies. A voyage from Saudi Arabia to Rotterdam takes about 22 days via the Bab el-Mandeb and Suez Canal, compared with 39 days around Africa (Lee, 2018). The Bab el-Mandeb region has been one of the most likely to come under threat from pirate attacks and use of the strait was suspended in 2010 at the peak of the Somali piracy crisis. Saudi Arabia temporarily halted the use of the strait in 2018 after two tankers were attacked by the Yemeni Houthi militia (Blas, 2018).

The Strait of Hormuz is the main maritime route through which Persian Gulf exporters (Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates [UAE]) ship their oil to external markets. Only Iran and Saudi Arabia have alternative access routes to maritime shipping lanes. The US Energy Information Administration (EIA) estimates that approximately 17 million barrels of oil per day – about 35% of all seaborne oil exports – pass through the strait. This path is also the most efficient and cost-effective route through which these producers can transport their oil to East Asia. Persian Gulf countries depend heavily on revenue from these exports: they are a leading oil-producing

region, accounting for 30% of global supply. Meanwhile, East Asia is a major oil-consuming region: it accounts for 85% of the Persian Gulf's exports (Barden, 2019). The Strait of Hormuz is the only sea route out of the Gulf. A Saudi pipeline goes to the Red Sea but its capacity is limited to about five million barrels of oil a day ("Iran tanker seizure", 2019).

Disruptions could take place when countries threaten to deny each other passage through these straits. Iran has threatened to close the Strait of Hormuz multiple times, while Saudi Arabia and its allies have conducted naval drills to show their willingness and ability to retaliate should Iran follow through. Alliances to counterbalance Iran often involve the US. In June 2019, explosions were reported on two oil tankers in the Gulf of Oman, off Hormuz (Borger & Wintour, 2019). The episode took place about one month after a separate attack on four tankers in May. At the time, investigations conducted by the UAE found that the mines used to perpetuate the attack suggested the involvement of a state-like actor (Versi, 2019). The US claimed Iran's involvement was almost certain, while Iran insists that these are attempts to frame them and escalate tensions.

Rising tensions, in addition to increasing discrepancies globally within traditional security alliances, call for more attention to be paid by the EU to the security of navigation in the Persian Gulf. Any plan for sustainable connectivity that aims to be effective must take security concerns into account. The EU-Asia connectivity strategy does explicitly state the need to step up its engagement, together with partners, to ensure freedom and security of navigation between Europe and Asia. However, concrete steps are yet to follow through. In the immediate aftermath of the June attack, the then British foreign secretary Jeremy Hunt proposed the creation of a multinational maritime task force to protect and ensure freedom of navigation in the Persian Gulf (Wintour, 2019). The initiative, although not intentionally excluding the US, would have existed as an alternative to the US-led Operation Sentinel. This was an attempt to distance European states from the US economic strategy of maximum pressure against Iran, which is widely criticised by the EU and its member states, together with the US decision to withdraw from the Joint Comprehensive Plan of Action (JCPOA). Although the EU has been present in the region since 2008 with anti-piracy operations Atlanta and UNAVFOR, the plan did not go through, amidst resistance from European states as well as Iran, leading to the UK joining Operation Sentinel after all (Wintour, 2019). Saudi Arabia also joined in September 2019, following an attack on its largest oil processing facility in the same month, claimed by Yemeni Houthi rebels but attributed to Iran by both Saudi Arabia and the US ("Saudi Arabia joins US maritime operation", 2019).

Beyond the Mediterranean: Alternative Routes

Security in the region is also of utmost importance because no alternative route to the Mediterranean is as yet economically viable. The two main alternative routes to the Suez Canal connecting Europe and Asia that have the potential to become accessible in the long-term are the multimodal corridor of the Silk Road Economic Belt, and the NSR across the Arctic. However, both alternatives have been dismissed by scholars and stakeholders alike in the short-term. Although progress has been made to develop a railway connection between North China and northern Europe, this option would only be convenient for a limited number of routes. Moreover, the organisational complexity which derives from balancing the interests of many railway companies involved and the technical limitations of land transport would drastically halt the competitiveness of this alternative route. As of today, land transport remains much more expensive than any other means of transportation: measured in value, 70% of the trade goes by sea, over 25% is carried by air, while rail remains relatively marginal (United Nations Conference on Trade and Development, 2018).

The NSR, connecting the Atlantic and Pacific Oceans through the Arctic, is perhaps the strongest existing competitor to the Southern Sea Route (SSR). As human-made climate change induces an incremental melting of ice caps in the Arctic Ocean, this previously impossible route is becoming more and more accessible to navigation. With 13,000 km to separate East Asia from Europe, against the 21,000 km through Suez, the NSR has the potential to cut navigation time by two weeks. In August 2018, Denmark's A.P. Moller-Maersk Group sent its first container ship through the NSR (Noack, 2018). Earlier the same year, Russia's Novatek, the country's largest private gas company, shipped its first ever liquid natural gas (LNG) cargo through the NSR on a special LNG tanker to China. COSCO has also used the NSR to transport heavy parts of industrial components using multi-purpose vessels (Milne, Foy, 2018). Temperatures in the Arctic have reached up 30 degrees Celsius: similar temperatures for a prolonged stretch of time would allow container ships to navigate the Arctic Ocean without the expensive icebreakers that are now necessary to clear paths for them. Bekkers, Francois and Rojas-Romagosas (2015) in the scientific paper *Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route* anticipate "remarkable shifts in trade flows between Asia and Europe, diversion of trade within Europe, heavy shipping traffic in the Arctic and a substantial drop in Suez traffic."

Despite the sizeable estimated cut in transport time, and the increasing interest shown by countries such as Russia and China as well as a few private actors in the NSR,

stakeholders from the shipping industry are still sceptical regarding its viability and profitability in the short term. The NSR could not be used throughout the whole year: the extreme weather conditions that characterise the Arctic region would make it almost impossible to maintain the degree of predictability of transit logistics necessary, a disadvantage that rebalances the gains of the decrease in transit time in favour of the SSR, at least for the foreseeable future. Limitations on the size of ships that can cross the NSR add another layer of complication, even more so as shipping companies gravitate towards gigantism and actively seek opportunities to take advantage of economies of scale. Moreover, the much lower density of markets and population centres along the NSR suggests that, although it could become commercially viable over the next 10 to 20 years, it is unlikely to substitute the SSR as the main East-West passageway.

Conclusions

Exponential growth in domestic and foreign investments in the Mediterranean port system, spurred by a spike in trade flows between Europe and Asia, has transformed the Mediterranean basin from an obligatory passageway into a strategic crossroad of global trade in the span of 25 years. While alternative routes such as the NSR or the Silk Road Economic Belt might increase their viability over the next couple of decades, the navigation route through the Suez Canal is likely to remain the busiest connection for energy and traded goods on the East-West route.

Infrastructure projects such as the New Suez Canal, the transshipment port of Tanger-Med and multiple investments promoted under the BRI are creating momentum for the region, and bringing forward the strategic importance of ports; while security concerns emerging from rising tensions in the Persian Gulf call for a rethinking of available maritime security mechanisms, and enhanced cooperation between Europe and Asia to protect the freedom and safety of global trade flows.

As more attention is paid to maritime infrastructures as strategic assets, it is important to assess what the conceivable long-term consequences of FDI in the Mediterranean port system are, for the system itself and the region as a whole. More complete and detailed data is needed to move this analysis forward, not just about the quantity but also the duration and conditions of existing agreements for acquisitions and concessions, including information on their environmental and social sustainability, which have not been adequately analysed in the existing literature.

It is also important for regional actors – including the EU – to identify investment gaps in the Mediterranean port system in order to develop successful port development strategies that allow the region to draw maximum benefits from transshipment activities. Moreover, using a regional lens would help to develop platforms that enable multi-stakeholder governance across borders, sectors and institutions, thus limiting competition in favour of cooperation.

The EU is well placed to build upon its current strategies to contribute to the sustainable growth of maritime infrastructure in the region, boost private-public partnerships and improve multi-stakeholder cooperation across the Mediterranean, by facilitating cooperation with port authorities, and national and local governing bodies. It can also foster a coordinated effort internally, across multiple Directorates-General (DGs) and respective public policies, such as DG Mobility and Transport (MOVE), DG Environment (DG ENV), DG Maritime Affairs and Fisheries (MARE) and DG Internal Market, Industry, Entrepreneurship and SMEs (GROW); as well as DG Neighbourhood and Enlargement (NEAR), DG Development and Cooperation (DEVCO), and the European External Action Service (EEAS). Trade, investment and connectivity policies can be more strategically and regularly leveraged within the EU foreign policy toolkit to create incentives for cooperation and convergence across the Mediterranean.



References

- ARVIS, J., VESIN V., CARRUTHERS, R., DUCRUET, C., & DE LANGEN, P.** (2019). *Maritime networks, port efficiency, and hinterland connectivity in the Mediterranean*. The World Bank Group. Retrieved from <http://hdl.handle.net/10986/30585>
- ASSOCIATED PRESS.** (2019). Major Saudi Arabia oil facilities hit by Houthi drone strike. *The Guardian*. Retrieved from <https://www.theguardian.com/world/2019/sep/14/major-saudi-arabia-oil-facilities-hit-by-drone-strikes>.
- ATLI, A.** (2019). China, Israel, and the geopolitics of seaports. *The Diplomat*. Retrieved from <https://thediplomat.com/2019/07/china-israel-and-the-geopolitics-of-seaports/>.
- BACCELLI, O., BUONFANTI, A., FERRARA, O., & ZUCCHETTI R.** (2015). The new Suez Canal: economic impact on Mediterranean maritime trade. *SRM – Studi e Ricerche per il Mezzogiorno*. Retrieved from <https://www.srm-maritimeconomy.com/p/the-new-suez-canal-economic-impact-on-mediterranean-maritime-trade/>.
- BARDEN, J.** (2019, August 27). The Bab el-Mandeb Strait is a strategic route for oil and natural gas shipments. *U.S. Energy Information Administration*. Retrieved from <https://www.eia.gov/todayinenergy/detail.php?id=41073>.
- BARDEN, J.** (2019, June 20). The Strait of Hormuz is the world's most important oil transit chokepoint. *U.S. Energy Information Administration*. Retrieved from <https://www.eia.gov/todayinenergy/detail.php?id=39932>.
- BEKKERS, E., FRANCOIS J., & ROJAS-ROMAGOSA, H.** (2015). Melting ice caps and the economic impact of opening the Northern Sea Route. *CPB Netherlands Bureau for Economic Policy Analysis*. Retrieved from <https://www.cpb.nl/sites/default/files/publicaties/download/cpb-discussion-paper-307-melting-ice-caps-and-economic-impact-opening-northern-sea-route.pdf>
- BENNIS, A.** (2019). China's inroads into the Balkans. *The World Today (June-July 2019)*. Retrieved from <https://www.chathamhouse.org/publications/twt/china-s-inroads-balkans>
- BLAS, J.** (2018). Saudis suspend oil shipments via Bab el-Mandeb after attack. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2018-07-25/saudis-halt-oil-shipments-via-bab-el-mandeb-strait-after-attack>.

BORGER, J., & WINTOUR, P. (2019). Two oil tankers attacked in Gulf of Oman. *The Guardian*. Retrieved from <https://www.theguardian.com/world/2019/jun/13/oil-tankers-blasts-reports-gulf-of-oman-us-navy>.

BUCK, T., ENGLAND A., MOUNT, I., & WRIGHT, R. (2019). UK calls for European alliance to guard Gulf shipping. *Financial Times*. Retrieved from <https://www.ft.com/content/76d2c140-ac77-11e9-8030-530adfa879c2>.

CARLI, A. (2019). Italia-Cina, i contenuti del Memorandum e i 29 accordi per (almeno) sette miliardi di euro. *Il Sole 24 Ore*. Retrieved from <https://www.ilsole24ore.com/art/italia-cina-contenuti-memorandum-e-trenta-accordi-almeno-sette-miliardi-euro-ABPvc3gB>

CARTWRIGHT, G. (2019). Tanger-Med: economic bridge between Europe and Africa. *EUToday*. Retrieved from <https://eutoday.net/news/business-economy/2019/tanger-med-economic-bridge-between-europe-and-africa>.

CHATZKY, A., & MCBRIDE, J. (2019). China's Massive Belt and Road Initiative. *Council on Foreign Relations*. Retrieved from <https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative>

CINA, UNA DELEGAZIONE DEL PORTO DI GENOVA IN VISITA A SHENZHEN E GUANGZHOU. (2019). *Il Secolo XIX*. Retrieved from <https://www.ilsecoloxix.it/economia/2019/09/20/news/cina-una-delegazione-del-porto-di-genova-in-visita-a-shenzhen-e-guangzhou-1.37489802>

COMTOIS, C., & RODRIGUE, J. (2020). *The geography of transport systems*. Routledge.

D'AMELIO, D. (2019). Porto di Trieste e Cina: priorità all'export in Asia. Spunta il nome di Suning. *Il Piccolo*. Retrieved from <https://ilpiccolo.gelocal.it/trieste/cronaca/2019/10/14/news/porto-di-trieste-e-cina-priorita-all-export-in-asia-spunta-il-nome-di-suning-1.37743065>.

DUCHATEL, M., & DUPLAIX, A. (2018). Blue China: navigating the Maritime Silk Road to Europe. European Council on Foreign Relations. Retrieved from https://www.ecfr.eu/publications/summary/blue_china_navigating_the_maritime_silk_road_to_europe

EGYPT TO INJECT \$55 BILLION INTO SUEZ CANAL ZONE DEVELOPMENT. (2019). *CGTN Africa*. Retrieved from <https://africa.cgtn.com/2019/07/16/egypt-to-inject-55-billion-into-suez-canal-zone-development/>.

EL BAKRI, F. (2019). World largest vessel passes through Suez Canal. *Egypt Today*. Retrieved from <https://www.egypttoday.com/Article/1/68901/world-largest-vessel-passes-through-Suez-Canal>.

ELJECHTIMI, A., & LAESSING, U. (2019). Morocco's Tangier port to become Mediterranean's largest. *Reuters*. Retrieved from <https://www.reuters.com/article/us-morocco-economy-ports/tangier-port-to-become-mediterraneans-largest-idUSKCN1TR2G0>.

EUROPEAN PARLIAMENT AND EUROPEAN COUNCIL. (2019). REGULATION (EU) 2019/452 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for the screening of foreign direct investments into the Union. Official Journal of the European Union. Retrieved from <https://eurlex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R0452&from=EN>.

FOY, H., & MILNE, R. (2018). Maersk launches container ship on Arctic route. *Financial Times*. Retrieved from <https://www.ft.com/content/fb38b6ac-a484-11e8-8ecf-a7ae1beff35b>.

GODEMONT, F., PAVLICEVIC, D., KRATZ, A., VASSELIER, A., RUDOLF, M., & DOYON, J. (2017). China and the Mediterranean: open for business? European Council on Foreign Relations. Retrieved from https://www.ecfr.eu/publications/summary/china_and_the_mediterranean_open_for_business.

GURIOLI, E. (2009). Gigantism in the Mediterranean. *Times of Malta*. Retrieved from <https://timesofmalta.com/articles/view/gigantism-in-the-mediterranean.287201>.

HANEMANN, T., HUOTARI, M., & KRATZ, A. (2019). Chinese FDI in Europe: 2018 trends and impact of new screening policies. Rhodium Group (RHG) and the Mercator Institute for China Studies (MERICS). Retrieved from <https://www.merics.org/en/papers-on-china/chinese-fdi-in-europe-2018>.

HIGH REPRESENTATIVE OF THE UNION FOR FOREIGN AFFAIRS AND SECURITY POLICY & EUROPEAN COMMISSION. (2018). *Connecting Europe and Asia - Building blocks for an EU Strategy*. JOIN(2018) 31 final. Retrieved from https://eeas.europa.eu/sites/eeas/files/joint_communication_-_connecting_europe_and_asia_-_building_blocks_for_an_eu_strategy_2018-09-19.pdf.

HIGH REPRESENTATIVE OF THE UNION FOR FOREIGN AFFAIRS AND SECURITY POLICY & EUROPEAN COMMISSION. (2019). *EU-China – A strategic outlook*. Retrieved from <https://ec.europa.eu/commission/sites/beta-political/files/communication-eu-china-a-strategic-outlook.pdf>.

HOROWITZ, J. (2019). A forgotten Italian port could become a Chinese gateway to Europe. *The New York Times*. Retrieved from <https://www.nytimes.com/2019/03/18/world/europe/italy-trieste-china-belt-road.html>.

HUAWEI TO SET UP REGIONAL LOGISTICS CENTRE IN TANGER-MED PORT. (2018). *PortSEurope*. Retrieved from <https://www.portseurope.com/huawei-to-set-up-regional-logistics-centre-in-tanger-med-port/>.

IL PORTO DI TRIESTE FIRMA UN ACCORDO CON LA CINA PER LO SVILUPPO DEL MADE IN ITALY. (2019, November 9). *Trieste Prima*. Retrieved from <https://www.triesteprema.it/cronaca/porto-trieste-cina-made-Italy.html>.

IRAN TANKER SEIZURE: WHAT IS THE STRAIT OF HORMUZ? (2019). *BBC*. Retrieved from <https://www.bbc.com/news/world-middle-east-49070882>.

JOHNSON, K. (2018). Why is China buying up Europe's ports? *Foreign Policy*. Retrieved from <https://foreignpolicy.com/2018/02/02/why-is-china-buying-up-europes-ports/>.

KNECHT, E. (2015). Egypt opening Suez Canal expansion to high hopes and some doubts. *Reuters*. Retrieved from <https://www.reuters.com/article/us-egypt-suezcanal-idUSKCN0QA24720150805>.

LE CORRE, P. (2016). Chinese investments in European countries: experiences and lessons for the "Belt and Road" Initiative. Carnegie Endowment for International Peace. Retrieved from <https://carnegieendowment.org/files/RethinkingtheSilkRoad.pdf>.

LEE, J. (2018). 'Gate of Tears': why a narrow waterway linking Saudi oil to Europe is spooking traders. *Financial Post*. Retrieved from <https://business.financialpost.com/commodities/energy/gate-of-tears-why-a-narrow-waterway-linking-saudi-arabia-to-europe-is-spooking-oil-markets>.

MANDOUR, M. (2019). Sisi's vanity projects. Carnegie Endowment for International Peace. Retrieved from <https://carnegieendowment.org/sada/79625>.

MEMORANDUM D'INTESA TRA IL GOVERNO DELLA REPUBBLICA ITALIANA E IL GOVERNO DELLA REPUBBLICA POPOLARE CINESE SULLA COLLABORAZIONE NELL'AMBITO DELLA "VIA DELLA SETA ECONOMICA" E "DELL'INIZIATIVA PER UNA VIA DELLA SERA MARITTIMA DEL 21° SECOLO." *Italian Government official documents*. Retrieved from http://www.governo.it/sites/governo.it/files/Memorandum_Italia-Cina_IT.pdf.

MINELLA, M. (2019). Miliardi e appalti: ma la Via della Seta parla solo cinese. *La Repubblica*. Retrieved from https://rep.repubblica.it/pwa/generale/2019/08/25/news/miliardi_e_appalti_ma_la_via_della_setta_parla_solo_cinese-234242687/.

MOHAN, G. (2018). Europe's response to the Belt and Road Initiative. The German Marshall Fund of the United States. Retrieved from <http://www.gmfus.org/publications/europes-response-belt-and-road-initiative>.

NOACK, R. (2018). Climate change cuts the shipping route between China and Europe by 5,000 miles. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/world/2018/08/24/climate-change-cuts-shipping-route-between-china-europe-by-miles/>.

NOAMAN, K. (2014). Egypt's mega projects from rhetoric to reality. OpenDemocracy. Retrieved from <https://www.opendemocracy.net/en/north-africa-west-asia/egypts-mega-projects-from-rhetoric-to-reality/>.

NOTTEBOOM, T. (2012). *The Blackwell companion to maritime economics*. Blackwell Publishing Ltd.

NOTTEBOOM, T. (2019). PortGraphic: are the Med ports breaking the hegemony of the top 4 north-European container ports? *PortEconomics*. Retrieved from <https://www.porteconomics.eu/2019/05/16/portgraphic-are-the-med-ports-breaking-the-hegemony-of-the-top-4-north-european-container-ports/>.

NOTTEBOOM, T. (2020). APH-WPSP Port Economic Impact Barometer for Week 19: European ports impacted more by reduced cargo vessel calls. *PortEconomics*. Retrieved from <https://www.porteconomics.eu/2020/05/08/iaph-wpssp-port-economic-impact-barometer-for-week-19-european-ports-impacted-more-by-reduced-cargo-vessel-calls/>.

SABBAGH, D. (2019). UK joins US in mission to protect oil tankers in Gulf. *The Guardian*. Retrieved from <https://www.theguardian.com/uk-news/2019/aug/05/uk-joins-us-in-mission-to-protect-oil-tankers-in-gulf>.

SAUDI ARABIA JOINS US MARITIME OPERATION IN PERSIAN GULF AFTER OIL ATTACKS. (2019). *Deutsche Welle*. Retrieved from <https://www.dw.com/en/saudi-arabia-joins-us-maritime-operation-in-persian-gulf-after-oil-attacks/a-50469817>.

SAVELLI, F. (2019). La Cina fa rotta sul porto di Genova: così Pechino vuole investire sulle grandi opere in Liguria. *Corriere della Sera*. Retrieved from https://www.corriere.it/economia/19_marzo_10/cina-fa-rotta-porto-genova-cosi-pechino-vuole-investire-grandi-opere-liguria-e3587a6e-435c-11e9-9709-cc10f0c9377f.shtml.

SRM – STUDI E RICERCHE PER IL MEZZOGIORNO. (2018). The Suez Canal after the expansion. Analysis of the traffic, competitiveness indicators, the challenges of the BRI and the role of the Free Zone. Retrieved from https://www.srm-maritimeconomy.com/wp-content/uploads/2018/12/srm_alexbank_suez_2018.pdf

SRM – STUDI E RICERCHE PER IL MEZZOGIORNO. (2019). *Annual report: Italian maritime economy*. Retrieved from <https://www.srm-maritimeconomy.com/p/6th-italian-maritime-economy-report-new-scenarios-in-the-mediterranean-suez-and-china-the-strategies-of-big-carriers-new-technologies-and-energy-routes/>

SUEZ CANAL AUTHORITY, CHINA'S TIANJIN TO DEVELOP 2ND PHASE OF TEDA INDUSTRIAL ZONE. (2019). *PortSEurope*. Retrieved from <https://www.portseurope.com/suez-canal-authority-chinas-tianjin-to-develop-2nd-phase-of-teda-industrial-zone/>.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT. (2018). Review of maritime transport. Retrieved from https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf.

VERSI, J. (2019). UAE says tanker attacks likely carried out by state actor. *Al Jazeera*. Retrieved from <https://www.aljazeera.com/news/2019/06/uae-tanker-attacks-carried-state-actor-190607015218237.html>.

WINTOUR, P. (2019a). Iran rejects UK's proposal for European-led maritime force. *The Guardian*. Retrieved from <https://www.theguardian.com/politics/2019/jul/23/jeremy-hunts-plan-of-european-led-maritime-force-in-gulf-hits-opposition>.

WINTOUR, P. (2019b). UK to seek European maritime mission to counter Iran's 'illegal acts of piracy'. *The Guardian*. Retrieved from <https://www.theguardian.com/world/2019/jul/22/uk-to-see-european-maritime-mission-to-counter-irans-piracy>.

XIAOYI, G. (2018). The Belt & Road Initiative and the role that Mediterranean region should play. SRM – Studi e Ricerche per il Mezzogiorno. Retrieved from <https://www.srm-maritim-economy.com/p/the-belt-road-initiative-and-the-role-that-mediterranean-region-should-play/>

ZENELI, V. (2019). Mapping China's investments in Europe. *The Diplomat*. Retrieved from <https://thediplomat.com/2019/03/mapping-chinas-investments-in-europe/>.