

## **Container freight rates and logistics challenges in the Mediterranean**

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This chapter builds on the recent CETMO articles on maritime transport in the Mediterranean, notably [Maritime connectivity in the Western Mediterranean](#), [The effects of the Covid-19 pandemic on maritime goods transport in the Western Mediterranean](#), and [Shipping in the Mediterranean](#). It focuses on container shipping freight rates and services. Section A presents recent trends in container shipping freight rates, followed by Section B that discusses the outlook for the future. Section C briefly presents intra-regional services within the central and western Mediterranean, followed by Section D, which discusses what policy makers can do to reduce freight rates and improve maritime logistics services.

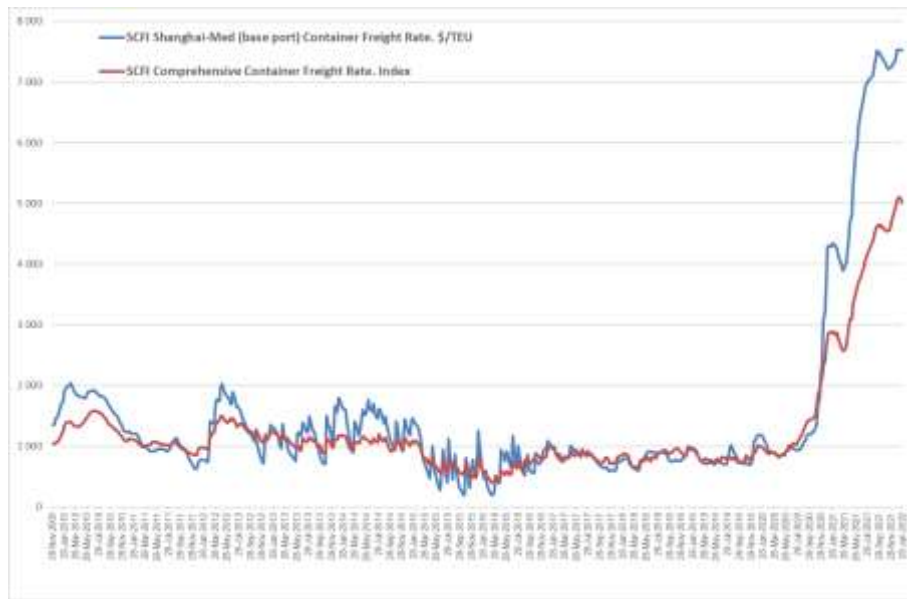
### **A. Container shipping freight rates**

The COVID-19 pandemic has caused unprecedented disruption to maritime transport, leading directly to historically high container shipping freight rates, unpredictable schedules, port congestion and supply chain bottlenecks. Since the second half of 2020, there has been a dramatic increase in container shipping freight rates, including a surge in surcharges and fees.

The main underlying cause for the high freight rates is congestion and lower handling and procedures in the world's ports, especially in the United States West Coast. Interestingly, although most of the congestion and held-up capacity is anchored or in ports in North America, freight rates have increased even more in other regions, including in the Mediterranean. Looking spot freight rates from Shanghai, the costs of moving a container from China to the Mediterranean have gone up more than the global average (Figure 1 and Figure 2).

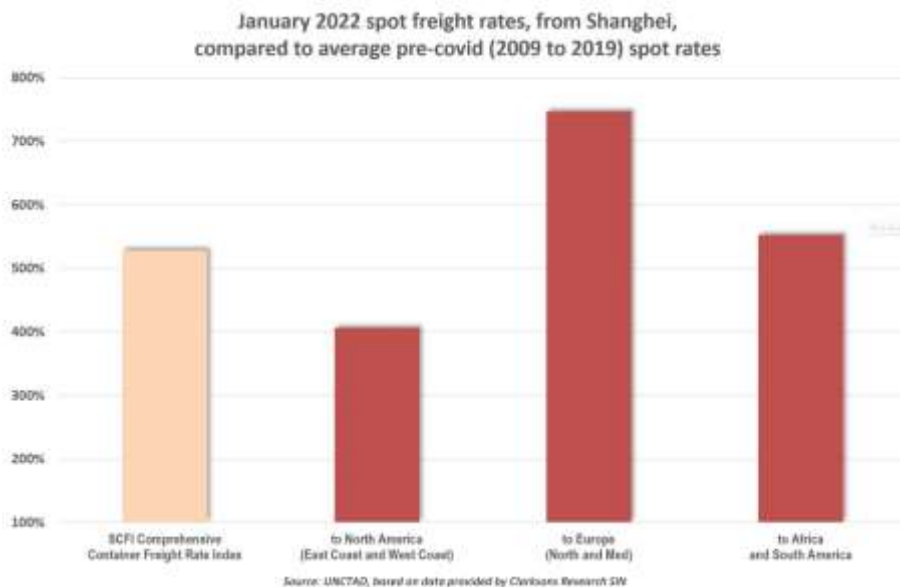
Similar to freight rates from China to Northern Europe, the Asia-Europe have over the last decades generally been more volatile than the freight rates to North America. The current peak could be considered a reflection of this higher volatility. Some of the services from China to Europe (especially the Mediterranean) continue their route to North America, i.e. connecting the East Coast of North America with Asia through the Suez Canal. This may also contribute to the higher volatility on the Asia-Europe route, as it depends on spare capacity on the services that continue to North America. Still, it remains curious to see that the freight rates to Europe increased more than to North America, if congestion and delays are higher in North America than in Europe.

**Figure 1. Selected container freight indices, 2009 to 2022**



*Source: UNCTAD, based on data provided Clarksons Research.*

**Figure 2. Change in container freight indices, January 2022 compared to 2009 to 2019**



*Source: UNCTAD, based on data provided Clarksons Research.  
Note: The regional averages are unweighted.*

Ports and intermodal transport operators found it difficult to adjust, as they had to deal with unpredictable schedules, operational container slots blocked with stacks of empty containers, and volumes peaked as Covid-19 stimulus packages kicked in and consumer spending rose. Global consumption switched from services to long-term durables, in particular computer equipment and furniture required for working from home; domestic furniture and garden items; and building materials

and tools; alongside large volumes of medical supplies and equipment. Logistics bottlenecks and soaring costs, along with an asymmetric and unpredictable recovery, are continuing to heighten uncertainty. Put differently, the rebound in trade, combined with pandemic-induced restrictions in logistics operations (including some complete shutdowns of key Chinese ports due to COVID-19 outbreaks) has led to shortages in equipment and containers, less reliable services, congested ports and longer delays and dwell times.

The soaring freight rates, along with surcharges and fees, have been a challenge especially for smaller and vulnerable economies which have less policy space to address the maritime logistics disruption. Leaders from these economies have raised concerns about increased prices, food security as well as the availability of essential products such as medicines and medical supplies, as this could develop into an existential threat if it is not managed properly and as soon as possible.

UNCTAD's Review of Maritime Transport 2021 estimates that – if sustained – the current surge in container freight rates will significantly increase both import and consumer prices. UNCTAD's simulation model suggests that global import price levels will increase on average by 11 per cent as a result of the freight rate increases. Hardest hit will be the small island developing states (SIDS), simulated to face a cumulative increase of 24 per cent with a time lag of about a year. If container freight rates remain at their current high levels, then by 2023 global consumer prices are projected to be 1.5 per cent higher than they would otherwise have been. In SIDS, the cumulative increase in consumer prices is expected to be 7.5 per cent and in the Least Developed Countries 2.2 per cent.

UNCTAD's Review of Maritime Transport also reports that some goods will be affected more than others by the surge in container freight rates. Most exposed are goods manufactured through integrated supply chains. Globalised production processes entail a greater use of shipping, with intermediate goods often crossing borders multiple times within and between regions. This is the case, for example, for East Asian goods destined for major markets in North America and Europe. For computers, and electronic and optical products, the consumer price uplift induced by the current freight rate surge could be as high as 11 per cent.

Higher shipping costs will also affect some low-value-added products: for furniture, for example, and textiles, garments and leather products, the consumer price uplifts could be 10 per cent. These increases could erode the competitive advantages of smaller economies that produce many of these goods. At the same time, these countries will find it more difficult to import the high-technology machinery and industrial materials they need to move up the value chain, diversify their economies and achieve the Sustainable Development Goals.

## **B. Outlook on freight rates**

There are number of reasons that suggest that freight rates will remain higher of the coming decade than they were during the decade pre-COVID.

### 1. The COVID related challenges will take time to be resolved

Equipment shortages and waiting ships in Los Angeles and Yantian, on top of the earlier delays in Suez, are the immediate cause of the current high freight rates. The COVID-19 pandemic had already earlier led to containers being left in the wrong places, and still today the slow-down in ports and intermodal connections makes a container spend about 20% longer in the system. For the time being, this is not getting better but rather worse.

Over the last decades, year after year, ports have improved their efficiency and all available data suggests that container ports recorded a long-term trend towards lower turnaround times. In times of the COVID-19 pandemic, however, things turned for the worse.

Between the first semester of 2019 (i.e. pre-COVID) and the first semester of 2021, the global median time a containership spent in port increased by 11.8%, from 16.3 hours in S1 2019 to 18.6 hours in S1 2021. While we had hoped that things would start to improve during the year, unfortunately latest data indicates that times went up even further during the second half of 2021, reaching a median time of 19.9 hours in S2 of 2021 – i.e. 19.8% higher than in S1 of 2019.

The COVID 19 pandemic has led to slower processes in ports and intermodal connections, resulting from lock-downs, port personnel on sick-leave, and frictions caused by the need for social distancing.

The time a ship spends in port is determined by a number of variables, including the efficiency of operation and procedures of government agencies. For example, in some ports, operations still only start after Customs and other officials have physically visited the ship for some paperwork.

To improve turnaround times, the solutions are not rocket science. Empirically, infrastructure investments, private sector participation in the operations, digitalization, and in general trade and transport facilitation solutions have all shown to help. But a lot of these investments take time.

### 2. Carriers have learned not to lose out any longer

Although the current order book is growing again, it takes time to build these ships. Container ships may grow a little more in size, but in my view a max TEU will be reached soon. Today's largest container ships are of the same order of magnitude as the largest oil tankers and dry bulk carriers, which have reached their maximum several years ago. Once marginal costs are no longer below long-term average costs, the cut-throat rate war should not resume.

### 3. Fewer carriers than before

We see a continued process of consolidation. For decades, ships got bigger, while competition and choices for shippers went down. Although carriers within the same Alliances still compete for price, the options to manage capacities and port calls has improved, from the carriers' perspective.

For more than a decade, liner shipping companies have confronted very low freight rates. In order to survive (except for Hanjin), unit costs needed to be reduced. To reduce unit costs, carriers invested in ever bigger (economies of scale) and newer (more fuel efficient) ships. The problem was that the older ships were not scrapped, and the overcapacity remained, or rather, got worse.

### 4. Decarbonization of shipping: Internalizing the external costs

UNCTAD's recent comprehensive impact assessment of the IMO short-term decarbonization measure confirmed that the measure will lead to slightly higher freight rates and slightly lower speeds. While these increases in maritime logistics costs are small when compared to the daily volatility of freight rates, they will be relevant for many years to come, until we have achieved the energy transition in shipping. Note: these cost increases do not really mean additional costs – it just means that (finally) we are moving to a situation where in future the polluter also pays, rather than only those who have so far paid the price for climate change.

### 5. Will the ships be built?

Trade keeps growing, while ships are slowing down. With ships waiting to unload in Los Angeles and Yantian (short-term) and going slower to reduce CO2 emissions (medium- and long-term), we will need more ships. And these ships need to be built. At the same time, confronted with an energy transition and uncertainty about in what ships to invest, ship owners may wait a little longer than usual before placing a new order. The demand/ supply balance may tilt further towards unmet demand for container carrying capacity. And as we just saw during the covid pandemic, a little shortage of containers or ships can have a high impact on freight rates.

### 6. The risk premium

As freight rates have become more volatile, in any financial market, investors would demand a higher rate of return on investment than in times of stable revenues. On the clients' side, too, shippers who are confronted with delays and a shortage of capacity will be willing to pay more, especially for longer term contract rates, to ensure that they get access to the transport capacity they require.

### In the long run

The current historical highs in freight rates are largely driven by pandemic-induced shocks and unexpected upward swings in shipping demand. But in the longer term, shipping and port prices are

driven by structural factors such as port infrastructure, economies of scale, trade imbalances, trade facilitation, and shipping connectivity – all of which have lasting impacts on maritime transport costs and trade competitiveness.

The pandemic has accelerated the growing demand from e-commerce, and at the same promoted further digitalisation. Technological advances have been aimed at helping the shipping and ports industry to continue operations while minimising interaction and physical contact. The future demand/supply balance will also be impacted by regulatory requirements to drive the decarbonisation of shipping, the cost of which will inevitably translate into higher shipping rates for shippers and, ultimately, consumers.

In the very long run, transport costs will go down. Once we have managed the energy transition in maritime transport, with successfully transferring renewable “power to X”, thus reducing the marginal costs of energy per tonne-mile, shipping will become cheaper than ever before. Ships will go faster, and as a consequence we will need fewer ships for a given volume of trade.

### **C. Intra-regional shipping services in the Mediterranean**

While Sections A and B have discussed global and inter-regional freight rates, data for freight rates for individual intra-regional containerized trade lanes is not available. Knowing that economies of scale, trade facilitation, and better connectivity can all help to reduce freight rates (see [Chapter 3 of the latest Review of Maritime Transport](#)), looking at the number of carriers providing services from/to different Mediterranean countries it can safely be assumed that freight rates for the major European countries in the Mediterranean will be lower than for the Northern African countries.

**Figure 3. Direct liner shipping services between 10 selected Mediterranean countries**



*Source: UNCTAD, based on data provided by MDS Transmodal.*

*Notes: The thickness of the lines is proportional to the number of companies providing direct services between the country pair. The size of the circle is proportional to total number of companies providing direct services from/ to the country.*

Figure 3 depicts the liner shipping connections between ten Western and Central Mediterranean countries, showing the number of companies that provide direct services between two countries. Countries without direct connections between each-other (such as Tunisia – Egypt, or Morocco – Libya) need to trade with each-other making use of transshipment services. The best-connected countries in the Mediterranean, both, to the rest-of-the-world and with each-other are France, Italy and Spain.

#### **D. What can policy makers do to improve maritime logistics and reduce freight rates?**

The global record-breaking levels of freight rates are beyond the reach of national policy makers. However, in the medium and longer term there are three key [policy areas recommended for action](#).

##### 1. Trade facilitation and digitalization for resilient supply chains.

To alleviate port and intermodal transport congestion, classical trade and transport facilitation solutions are more important than ever. Border agency officials, port workers and transport operators have recognized the need to reduce physical contact, while at the same time keeping ships moving, ports open and cross-border trade flowing. The trade facilitation [solutions proposed by UNCTAD](#) contribute to achieving the objective of facilitating trade and transport while at the same time protecting the population from the virus. Many of the measures depend on the digitalization of trade procedures, including in maritime transport. Important progress has been made during the pandemic, and it is now important to lock in the progress made during lockdown.

##### 2. Tracking, tracing, and forecasting

The recent shortage in containers and maritime equipment took stakeholders by surprise. Monitoring of port calls and liner schedules, along with better tracing and port call optimization, are among the issues covered by the growing field of maritime informatics. Policymakers need to promote transparency and encourage collaboration along the maritime supply chain, while also ensuring that potential market power abuse is kept in check or prevented.

When planning and funding large-scale financial stimulus packages, it is important to assess if the national port and intermodal transport system is capable of handling the additional volumes of foreign trade that will be generated by the newly induced demand from consumer spending.

##### 3. Competition in maritime transport

Carriers have earned record high rates of return during the pandemic, with double-digit operating profits for some container carriers in 2020 and 2021. Shippers have emphasized that they do not have access to empty containers for exports and face blank sailings, as well as high freight rates, and competition authorities are investigating potentially abusive behaviours.

While there are several reasons that may explain the shortage in containers and ship supply capacity, including the disruptive nature of the pandemic and associated restrictions, it is also important to ensure that national competition authorities can monitor freight rates and market behaviour. It remains important for policymakers to continue to strengthen national competition authorities in the area of maritime transport and ensure that they are prepared to provide the requisite regulatory oversight.