



LOGISTIIKAN HALLINTA EPÄVARMUUDEN AIKANA

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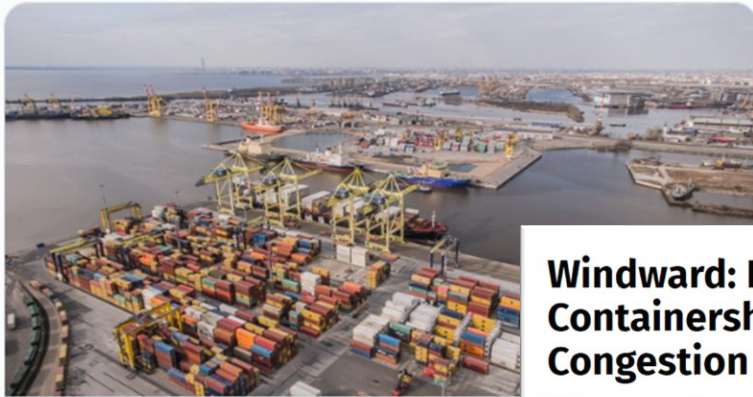
12.5.2022

Global Supply Chain Crisis Flares Up Again Where It All Began

Ports are already snarled, with the \$22 trillion trade in global goods facing months of severe disruption.

By [Brendan Murray](#), [Ann Koh](#), and [Kevin Varley](#)

Russia Faces Drop in Cargo Traffic, Container Shortage as Shipping Lines Pull Out



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Russia Faces Drop in Cargo Traffic, Container Shortage as Shipping Lines Pull Out April 13 (Reuters) – Russia is bracing for a sharp decline in cargo traffic and a deficit of containers after major international shipping lines have pulled out of the country.

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Ports face biggest crisis since start of container shipping

Pandemic highlights lack of investment as high demand and infrastructure delays



An MSC container ship arrives at the Port of Los Angeles. Shipping groups have struggled to deal with the crisis.

Gill Plimmer and Harry Dempsey AUGUST 11 2021

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INSIDER

Coca-Cola turns to bulk vessels now coal to transport manufacturing materials

Emily Walsh Oct 12, 2021, 7:55 PM



Bulk shipping vessels, which typically transport items like coal and grain, are being used by Coca-Cola to transport manufacturing materials to manufacturers.

Coca-Cola is going to great lengths to transport materials by bulk carrier.

Windward: Fifth of World's Containerships are Stuck in Port Congestion



Shanghai's lockdowns and port congestion is impacting containerships globally

PUBLISHED APR 19, 2022 9:15 PM BY THE MARITIME EXECUTIVE

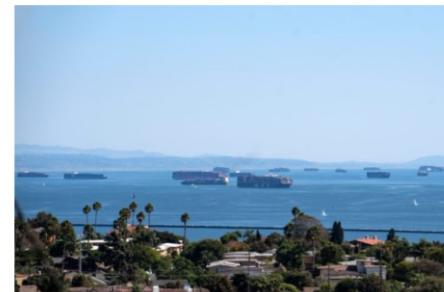
After signs of progress that the backlogs of containerships stacked up outside ports might be easing, it appears that the trend is reversing itself. With lockdowns impacting the movement of vessels at the major Chinese ports, the congestion appears to be spreading to other ports around the globe.

FREIGHT WAVES

Over \$22B worth of cargo is stuck on container ships off California

Los Angeles' average anchorage-to-berth wait time hit record-high 13 days

Greg Miller, Senior Editor



Port congestion grows as China's capital braces for Shanghai syndrome

Sam Chambers April 26, 2022

2,276 2 minutes read



"Kiinasta on tullut täysin arvaamaton" - Rahtilaivajonot kasvavat Shanghain satamassa: isku osuu koko maailman tuotantoketjuihin

4.5.2022 04:30 LOGISTIIKKA AASIAN TALOUDET KANSANTALOUS KIINA DATADESKI

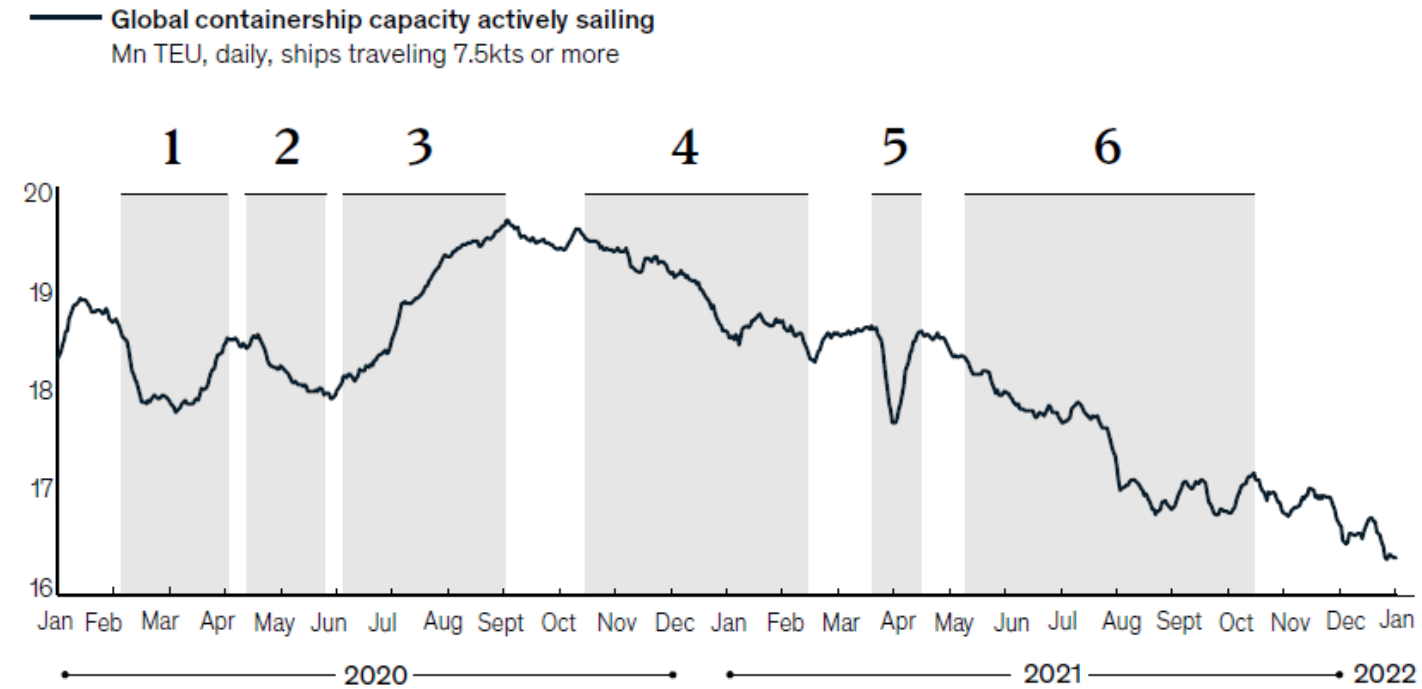


Ruuhka. Suomalaisen Mekitecin toimitusjohtaja Antti Sivula kertoo, että Kuljetukset Shanghain kautta ovat käytännössä pysähtyneet. KUVA: DING TING

Maaailman suurimman konttisataman ruuhkan purkamista hidastavat maakuljetushenkilökunnan puute ja Kiinan kovenevat toimitusajat.



Active container shipping supply has reduced due to congestion.



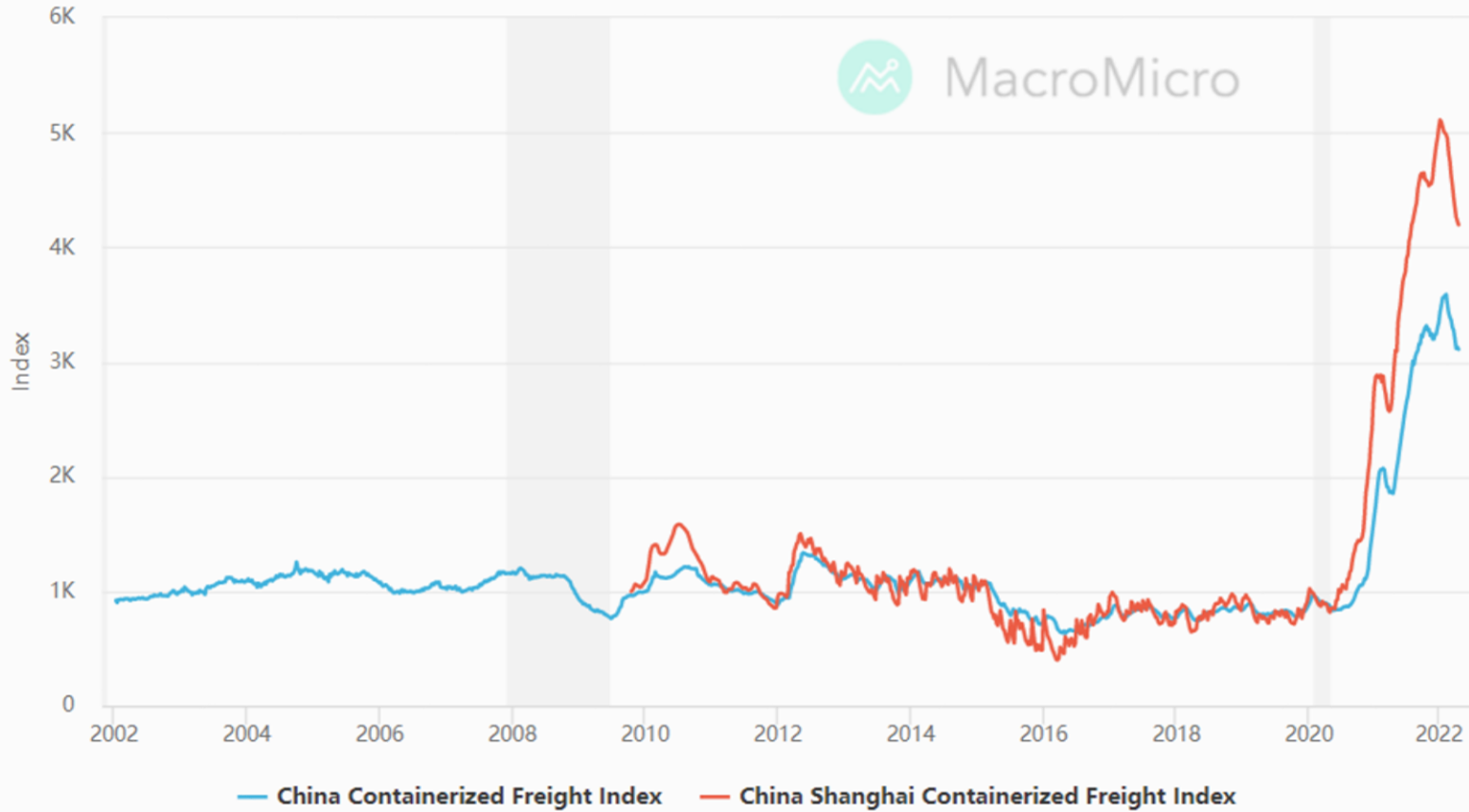
- 1** Chinese New Year factory closure and COVID-19 lockdown reduced sailing capacity annually
- 2** Liners reduced sailing capacity in response to COVID-19 disruptions
- 3** Liners added back sailing capacity as shippers looked to make up for delays and fill low inventories
- 4** Congestion started to rise in ports globally as liners sought to deliver backlog of vessels
LA/LB saw first major congestion as delayed trade compounded regular volumes and COVID-19 reduced gangs
- 5** Ever Given blocked the Suez canal
- 6** LA/LB slow down with US import boom, landside logistics bottlenecks and Chinese ports closure (eg, Yantian and Ningbo)



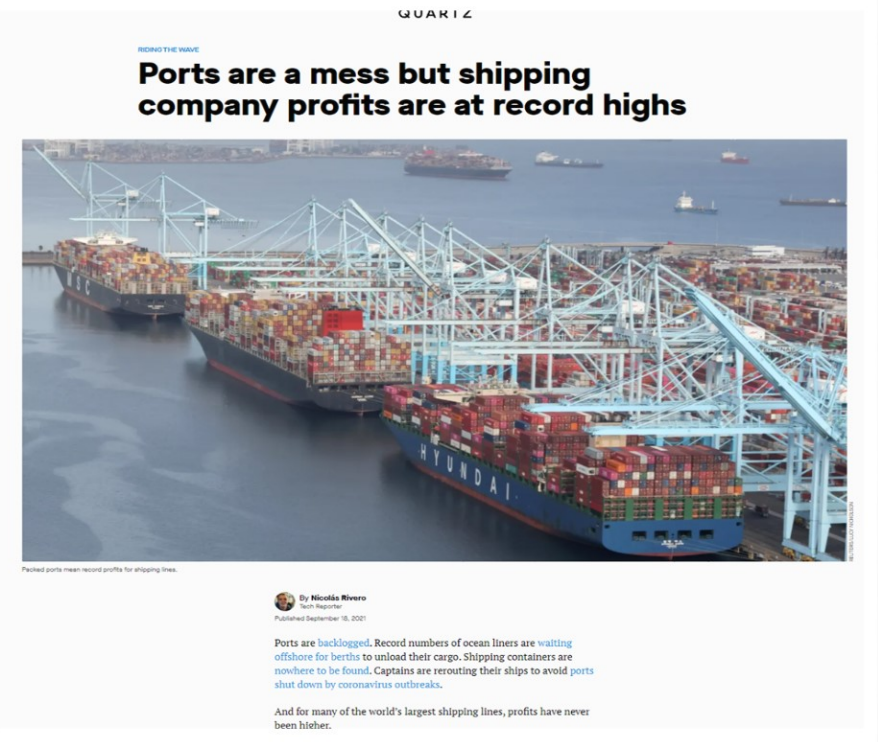
China-Global & Shanghai Export Container Freight Index

MacroMicro.me | 財經M平方

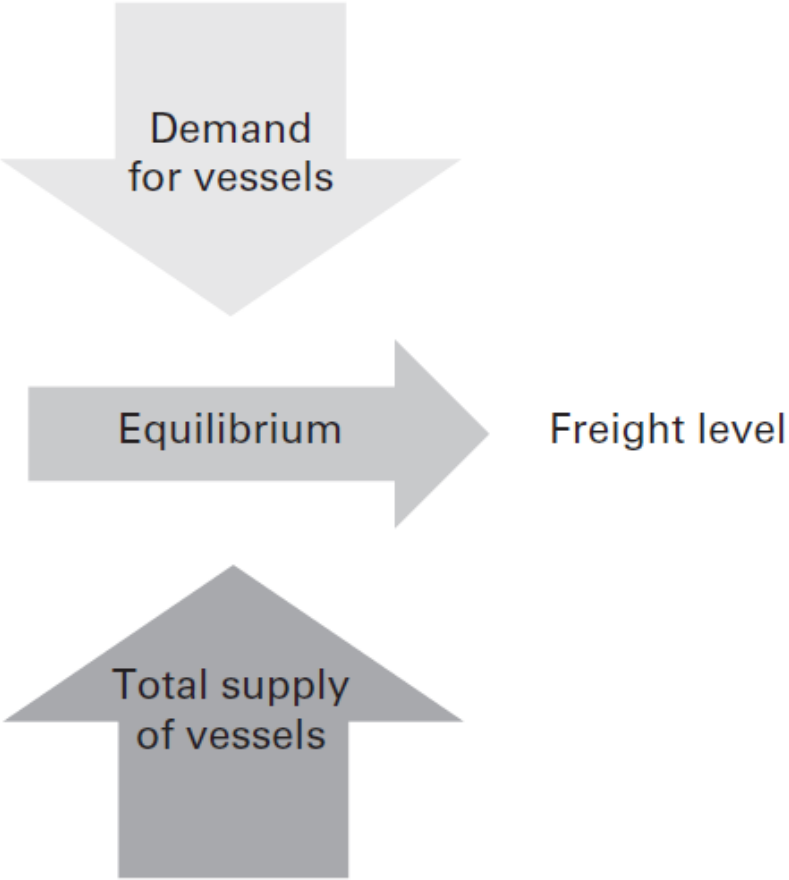
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Lähde: <https://unctad.org/news/how-cushion-consumers-high-maritime-freight-rates>



THE MARITIME TRANSPORTATION MARKET



Source: U. Tapaninen (2020).
Maritime Transport, Kogan Page

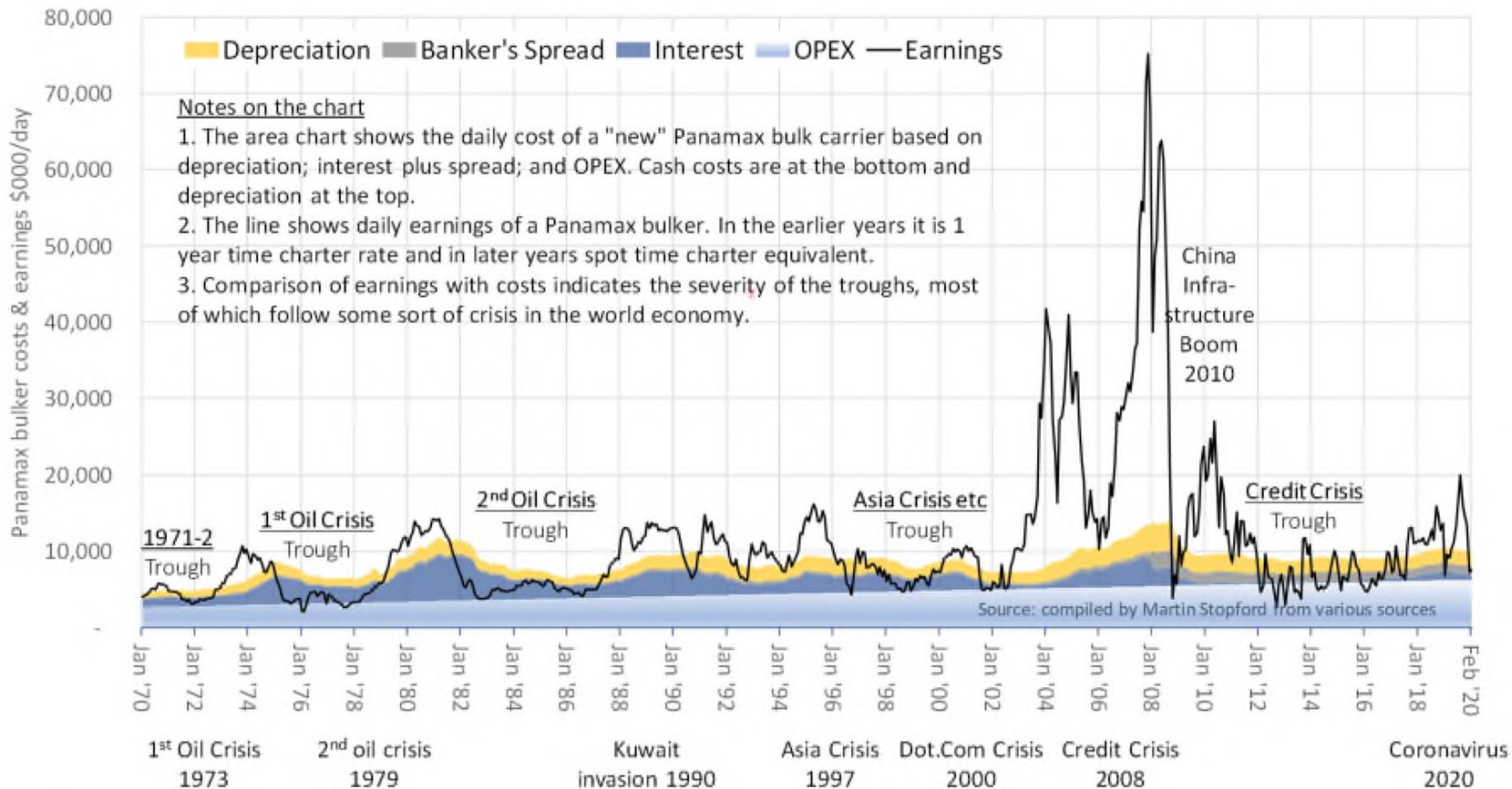
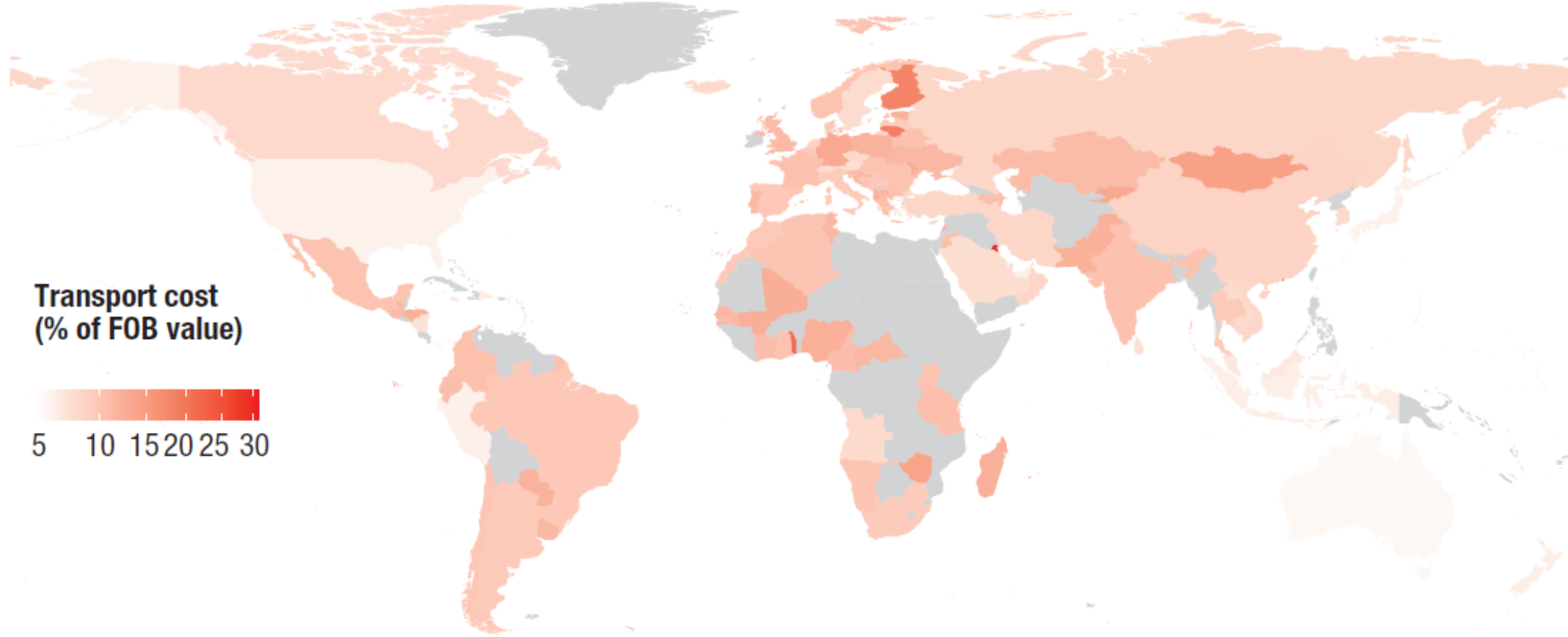


Figure 1 Panamax bulk carrier shipping market cycles, comparing costs and revenues 1970-2020

Figure 3.14 Transport costs heatmap for importing goods, all modes of transport, 2016, percentage of FOB value



Source: UNCTAD calculations based on the GTCGIT developed by UNCTAD, the World Bank, and Equitable Maritime Consulting (accessed 24 June 2021).

Note: Grey colour indicates countries where import transport costs data are not available.

Transport costs are aggregated by importing country. Importers' maritime transport costs are summed up over all commodities and trading partners and, divided by the corresponding sum of the trade value (in FOB), for commodities and country pairs for which both maritime transport costs and FOB values are available.

We spent decades getting rid of the body fat in supply chains. Making them super-complex and just-in-time in every way. Now we are building less efficient supply chains.

Geopolitical risk will ultimately push more supply chains out of China.

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If globalization is really over, what happens to supply chains?

The future of global supply chains is in flux. The pandemic was a game changer. Then came the war.

TAUSTA: MUUTOKSIA TOIMITUSKETJUISSA

- Suomalaisen yhteiskunnan ja elinkeinoelämän riippuvuus tuontituotteista, -puolivalmisteista ja raaka-aineista on lisääntynyt huomattavasti viimeisten vuosikymmenten aikana. Samaan aikaan **kykymme hallita toimitusketjuja on vähentynyt.**

Muutokset voidaan jakaa kolmeen ryhmään:

- Tuotantoa on siirtynyt yhä kauemmas halvan tuotannon maihin, kauemmas Suomen kontrollista.
- Tuotteet koostuvat yhä useammin osista ja komponenteista, joita jokaista voidaan tehdä eri maassa erilaisista raaka-aineista. Minkä tahansa osan tai komponentin puute voi pysäyttää koko monimutkaisen toimitusketjun.
- Just-in-time -ajattelun mukaan tuotannoista on viilattu turhat varastot pois, eli kokonaisista toimitusketjuista on tullut häiriöille herkempiä.

HUOLTOVARMUUDEN UUDISTAMINEN

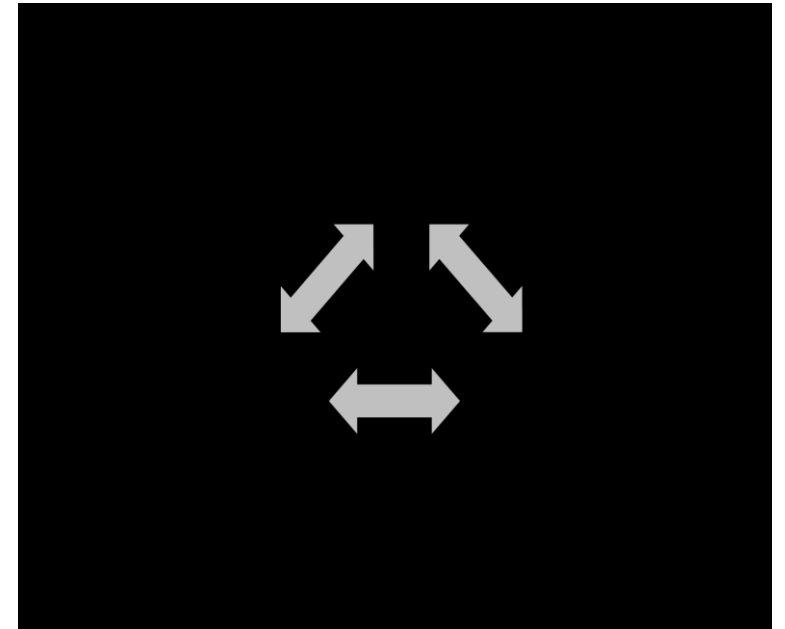
- Suomen lipun alla olevan tonniston tukeminen huoltovarmuusnäkökulmasta on jo pitkään ollut riittämätön ja tehoton toimenpide, sillä mahdolliset toiminnan häiriöt tapahtuvat yhä useammin kaukana merialueistamme ja koskevat vain pientä osaa tuotteista. Tonniston hallinta ei auta, jos tuotetta ei ole saatavilla.
- Mahdollisissa poikkeusoloissa kaikkien tuotteiden toimitusketjujen täydellinen hallinta on turhaa. **Tavoitteeksi tulee laittaa vain kriittisten tuotteiden ja komponenttien saatavuus.**
- Toimitusketjujen osien analysointi yritystasolla, mikä on kriittistä ja mikä ei, ja toimenpiteiden kohdistaminen juuri kriittisiin tuotteisiin, tulee olla uuden huoltovarmuuden peruspilari.

Table 1 Mitigation strategies towards supply chain vulnerability

<i>Mitigation strategy</i>	<i>Measures</i>
Avoidance	Avoiding specific products/geographical regions/suppliers/customers/traffic modes
Control	Vertical integration (upstream and downstream) Increased stockpiling, buffer inventories Excess capacity Contracts
Cooperation	Joint efforts to improve supply chain visibility and understanding, e.g., vendor managed inventory (VMI) Information sharing and communication, e.g., electronic data interchange (EDI), forecasting Continuity plans
Flexibility	Flexible delivery schedules Multiple sourcing/flexible supply base Localised sourcing
Postponement	Form and time

MITÄ TULISI TEHDÄ?

- Tuotekohtaista huoltovarmuutta voidaan varmistaa monilla tavoilla. Perinteisesti toimitusvarmuutta on lisätty isoilla varastoilla.
- Lisäksi voimme myös vähentää riippuvuutta esim. *muuttamalla kulutustottumuksia, käyttämällä useampia alihankkijoita, suunnittelemalla vaihtoehtoisia tuotteita, ennustettavuudella, tilauspisteen siirtämisellä mahdollisimman viime hetkeen ja hävikin vähentämisellä.*
- Muita työkaluja toimitusketjujen hallintaan ovat *kapasiteetin joustot, aikataulutuksen muutokset ja aikapuskurit sekä tiedonkulun nopeuttaminen kysynnästä tuotantoon.*
- Merenkulussa huoltovarmuuden varmistamiseksi laivaston osalta voidaan miettiä myös kriisiaikojen sopimusjärjestelyjä varustamoiden kanssa.
- Avain on yritysten omat toimintamallit.



“In the next 20 years the maritime industry must rebuild its cargo fleet. If this is done with the radical technologies now available, it will lead to the biggest change in ship design since steam replaced sail in the 19th century.”



Coronavirus, Climate Change & Smart Shipping

THREE MARITIME SCENARIOS

2020 – 2050

Inventory of GHG Emissions from International Shipping 2012-2018

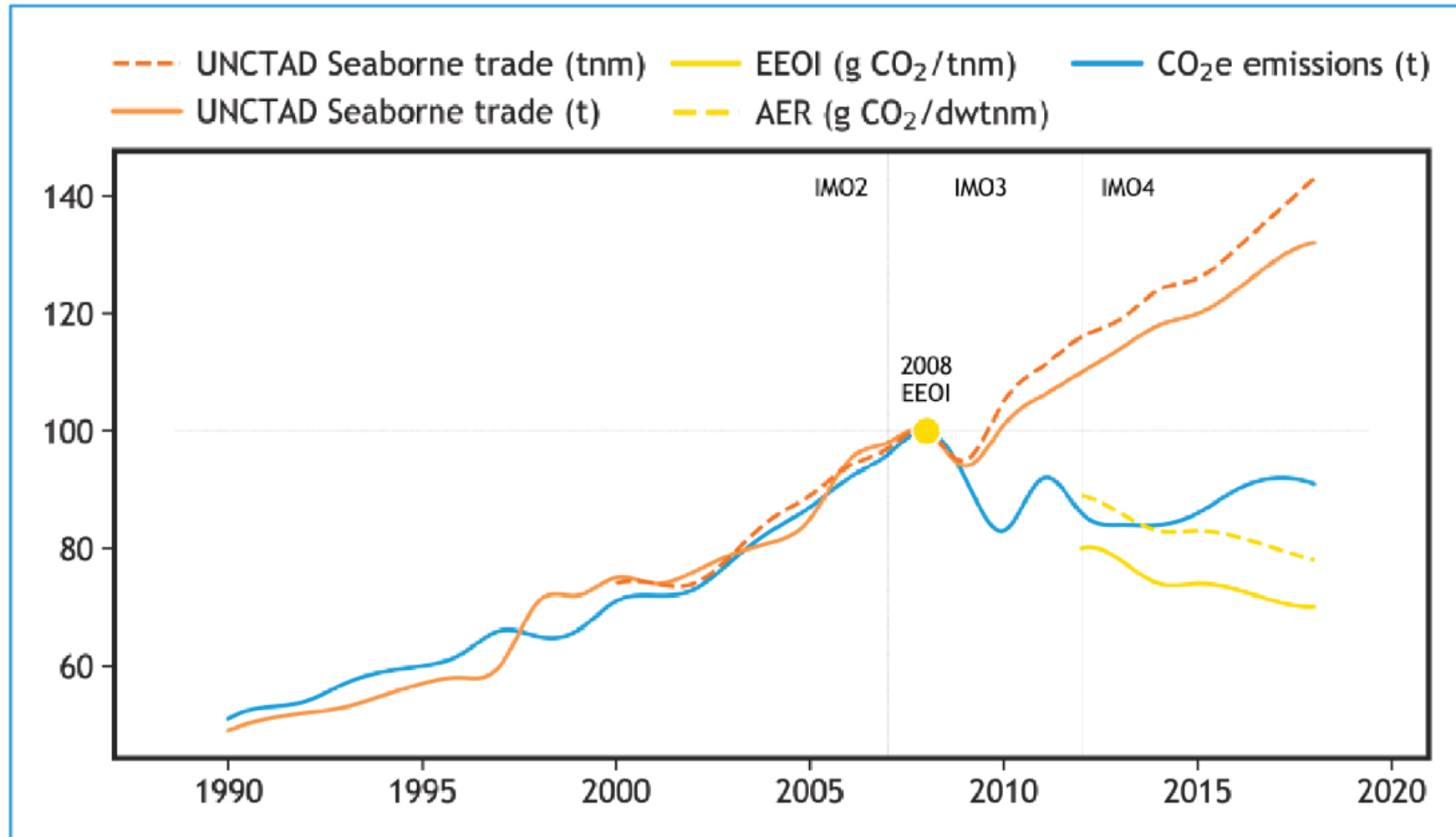
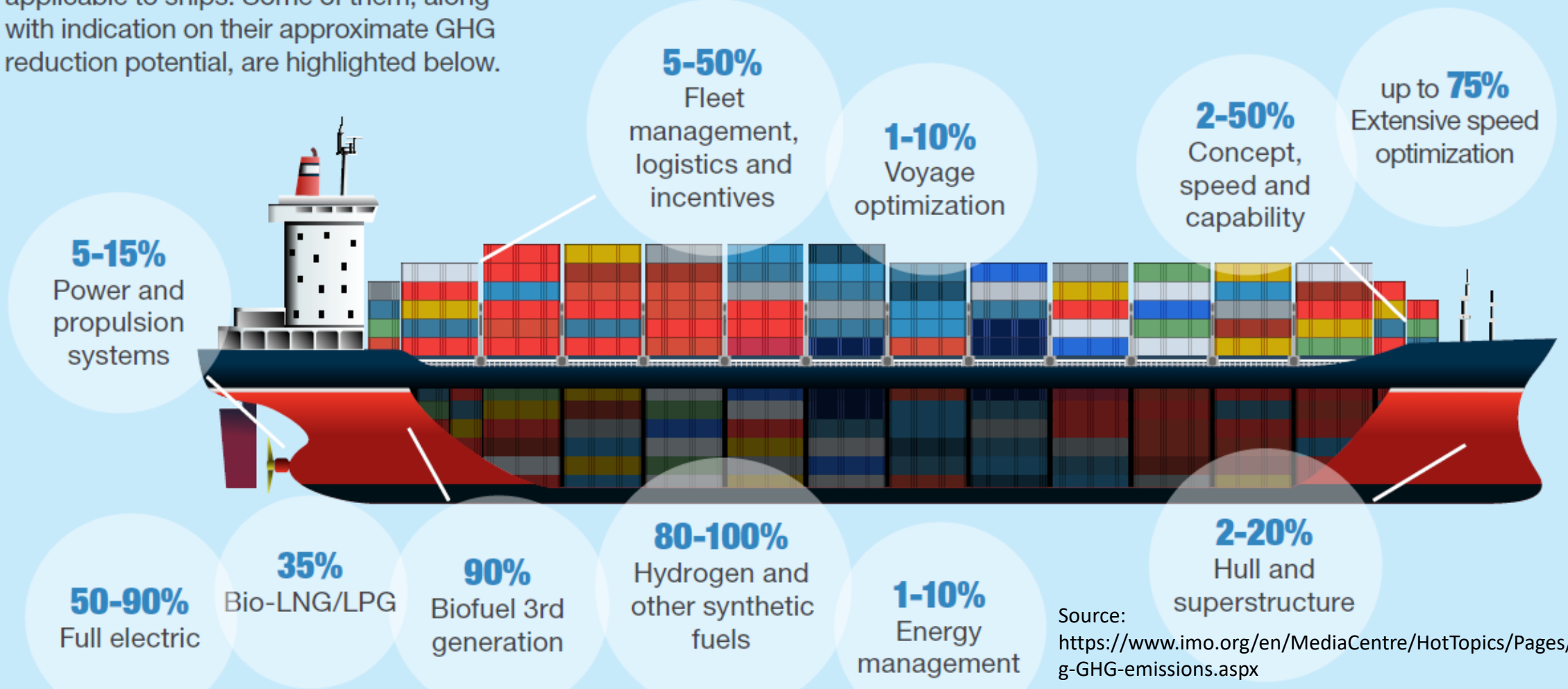


Figure 2 – International shipping emissions and trade metrics, indexed in 2008, for the period 1990-2018, according to the voyage-based allocation¹ of international emissions²

Source: Fourth IMO GHG Study 2020

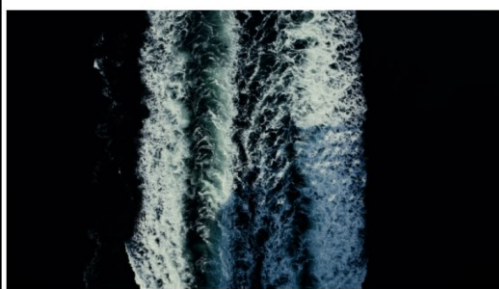
A wide variety of design, operational and economic solutions

Achieving the goals of the Initial IMO GHG Strategy will require a mix of technical, operational and innovative solutions applicable to ships. Some of them, along with indication on their approximate GHG reduction potential, are highlighted below.



Source:
<https://www.imo.org/en/MediaCentre/HotTopics/Pages/Cutting-GHG-emissions.aspx>

Industry Leaders Collaborate to Develop Ammonia Shipping Fuel Guidance



PUBLISHED APR 17, 2021 3:05 PM BY THE MARITIME EXECUTIVE
 This week, Lloyd's Register's Decarbonization Hub, A.P. Moller-Maersk, MAN Energy Solutions, Mitsubishi Heavy Industries, NYK Line, Total and the Mærsk McKinney Møller Center for Zero Carbon Shipping are joining forces in a new project with the purpose of guiding safe use of ammonia as a fuel for shipping.

marine insight
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 You are here: Home > Shipping News > World's First Liquid Hydrogen-Powered Ship Delivered
 World's First Liquid Hydrogen-Powered Ship Delivered
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 Engineering and design services provider LMG Marin has confirmed that HYDRA, the world's first liquid hydrogen-powered ship, has been delivered to Norway's ferry operator Norled.

Image Credit: LMG Marin

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 August 24, 2021

Copenhagen, 26 November 2020
 Partnership aims to develop hydrogen ferry for Oslo-Copenhagen
 DFDS and its partners have applied for EU support for development of a ferry powered by electricity from a hydrogen fuel cell which only emits water.

VESEL PERFORMANCE OPTIMISATION
 New concept design for ammonia-fuel ready LNG-fuelled ship
 SHIP DESIGN SEPTEMBER 9, 2021

Check out the Netherlands' first electric – and it's got swappable batteries
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 April 7, 2021

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Wind-assisted, LNG-electric containership Trade Wings 2,500 wins BV's AIP
 BUSINESS DEVELOPMENTS & PROJECTS
 May 17, 2021, by Fatima Bahtic
 The 2,500 TEU vessel, which has been designed jointly by VPLP Design, Alwena Shipping, SDARI and AYRO, received an Approval in Principle (AIP) from the classification society Bureau Veritas.
 With an overall length of 197 meters and a breadth of 32 meters, Trade Wings 2500 features six Oceanwings wingsails installed on a vertical sliding mechanism so that they can be retracted partially while the vessel is in port, thus minimising the impact on cargo operations.

men has signed a historic contract with Lenten Scheepvaart to run on hydrogen.
 forms the 135m MV Antonie will be powered by a proton membrane (PEM) fuel cell, supplied by NEDSTACK. Scheduled for 18 years, she will be used by chemical supplier Nouryon to transport Delfzijl in the north of the Netherlands to Botlek in the East.

Sea Change
 The world's first commercial vessel powered 100% by hydrogen fuel cell has been launched.
 Sea Change is a 70ft zero-emissions hydrogen fuel cell-powered electric-drive ferry that will operate in the California Bay Area. Built by All American Marine, Inc. (AAM) and owned by SWITCH Maritime (SWITCH), the ferry will be the first hydrogen fuel cell vessel in the US.

World's First Zero-Emission Wind and Hydrogen Power Cargo Ship
 Concept design for the zero-emission barge (Egil Ulvan Reden)
 PUBLISHED MAR 26, 2021 7:44 PM BY THE MARITIME EXECUTIVE
 A Norwegian partnership is moving forward with the development of what they are calling the world's first zero-emission cargo ship. After a six-month competition, with more than 31 ship owners bidding on the project, the contract for the construction has been awarded. The team expected to complete the design this year so that the vessel can enter service by 2024.

Stena's pathway to decarbonise its shipping operations
 The scale of shipping's challenge to transition from fossil-based fuels to renewables must not be underestimated. We are a global industry, and ships must be able to serve all ports. There is still no easy answer on which technology to use and vessels built today could operate for up

**TAL
TECH**

**TALLINN UNIVERSITY OF TECHNOLOGY
ESTONIAN MARITIME ACADEMY**

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