



Indiana University Bloomington

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

UNCTAD



# UNCTAD: Review of Maritime Transport 2023

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14 October 2023



Welcome to the WTO!  
 WTO Director-General @NOIweala announced her four Deputy Directors-General.  
 More about these appointments here:  
[wto.org/english/news\\_e...](https://wto.org/english/news_e...)

**WTO Deputy Directors-General Appointments by Ngozi Okonjo-Iweala**

 Angela Ellard United States	 Anabel González Costa Rica	 Jean-Marie Paugam France	 Xiangchen Zhang China
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To #BuildBackBetter, the world needs updated information on how #COVID19 is impacting our economies, societies and environment.

@UNCTAD's new portal provides data and analysis for over 25 indicators. [bit.ly/3uv0rFq](https://bit.ly/3uv0rFq)

Impact of the COVID-19 pandemic on trade and development

**Recovering, but unevenly**

SITUATION AS AT  
**31 March 2021**





International Labour Organization @ilo · 24 Sep 2020  
 Nearly 400,000 seafarers continue to be stranded at sea as a result of the current #COVID19 pandemic. Their human rights are in need of our urgent action.



**80 per cent of world trade is transported by sea**



World Health Organization (WHO) @WHO · 3h  
 #COVID19 has highlighted the urgency for countries to cooperate & better prepare for future pandemics.

The **NEW** WHO Hub for Pandemic & Epidemic Intelligence will be a global center using  data to detect & monitor risks worldwide.

[bit.ly/3b3d0QR](https://bit.ly/3b3d0QR)



## “Hoffmann Shipping”:

- ✓ Owner: German
- ✓ Flag: Antigua and Barbuda
- ✓ Freight agent: Netherlands
- ✓ Seafarers: Poland
- ✓ Crewing agent: Cyprus
- ✓ Cargo: Turkey
- ✓ to Canada
- ✓ Fuel: Spain
- ✓ Insurance: United Kingdom
- ✓ Shipyard: Portugal
- ✓ Captains’ favourite drink: Ireland



# UNCTAD



**Think:**  
Research and Analysis



**Debate:**  
Consensus building

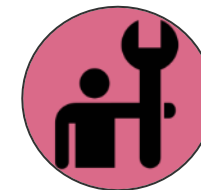


**Deliver:**  
Technical assistance



# UNCTAD TRADE LOGISTICS

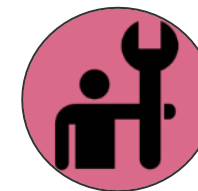
Research	Consensus Building	Technical Assistance and Capacity Building
Review of Maritime Transport		
Liner Shipping Connectivity Index		
Statistics		
Data sets on transport costs		
Country Profiles		





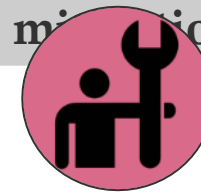
# UNCTAD TRADE LOGISTICS

Research	Consensus Building	Technical Assistance and Capacity Building
Review of Maritime Transport  Liner Shipping Connectivity Index  Statistics  Data sets on transport costs  Country Profiles	Commissions and UNCTAD Expert Meetings  Regional collaboration e.g. AfCFTA, RECs  Support to processes at WTO or IMO	



# UNCTAD TRADE LOGISTICS

Research	Consensus Building	Technical Assistance and Capacity Building
Review of Maritime Transport  Liner Shipping Connectivity Index  Statistics  Data sets on transport costs  Country Profiles	Commissions and UNCTAD Expert Meetings  Regional collaboration e.g. AfCFTA, RECs  Support to processes at WTO or IMO	Projects on building capacities of developing countries to shift towards sustainable freight transport.  Programmes on trade facilitation, port reforms, Customs automation, climate change adaptation - to help mitigate the impact of climate change mitigation



UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

REVIEW  
OF MARITIME  
TRANSPORT

2023

Towards a  
green and just  
transition



Presentation of the  
**REVIEW OF MARITIME  
TRANSPORT 2023**

Towards a green and just transition



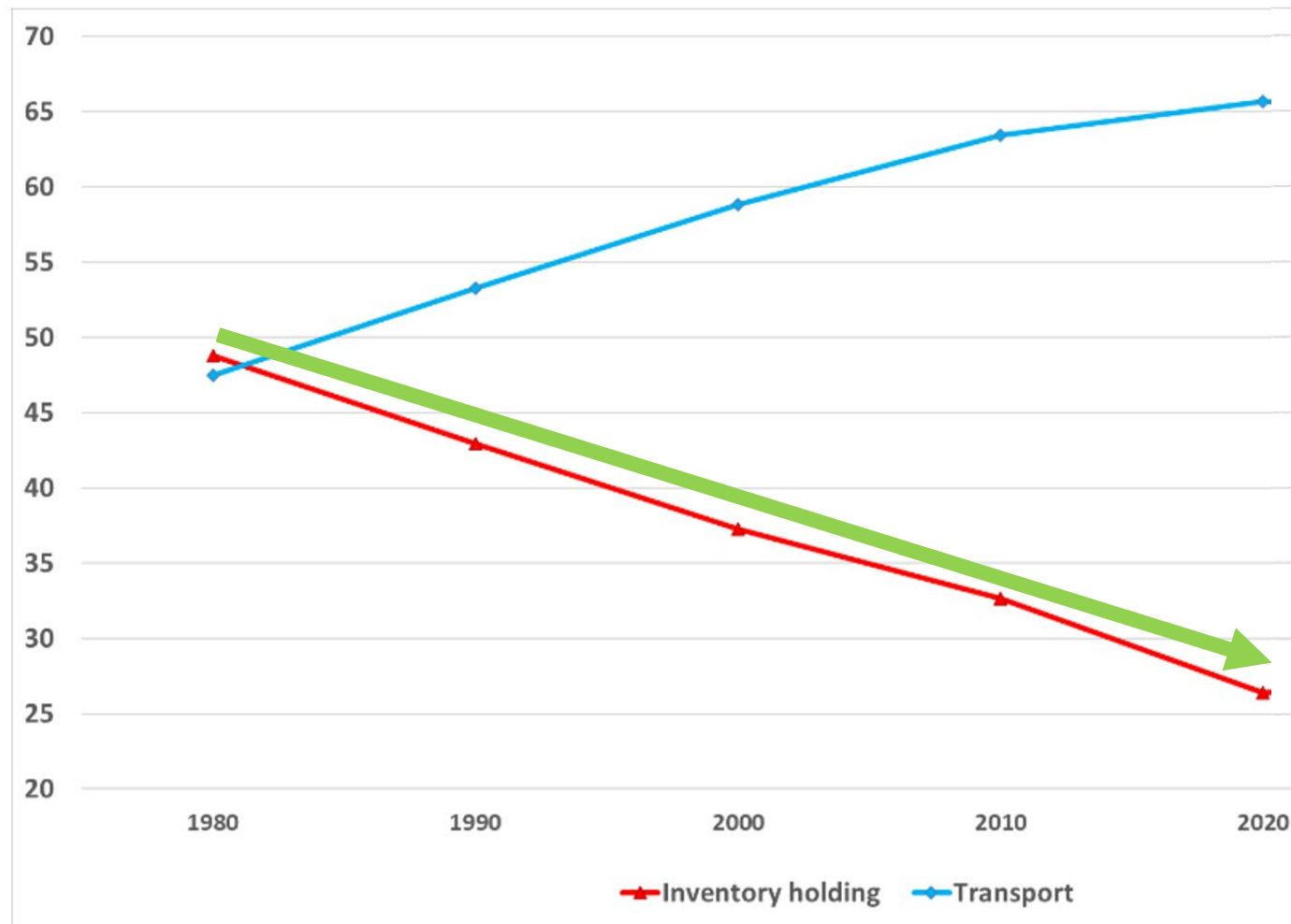
UNITED NATIONS  
UNCTAD





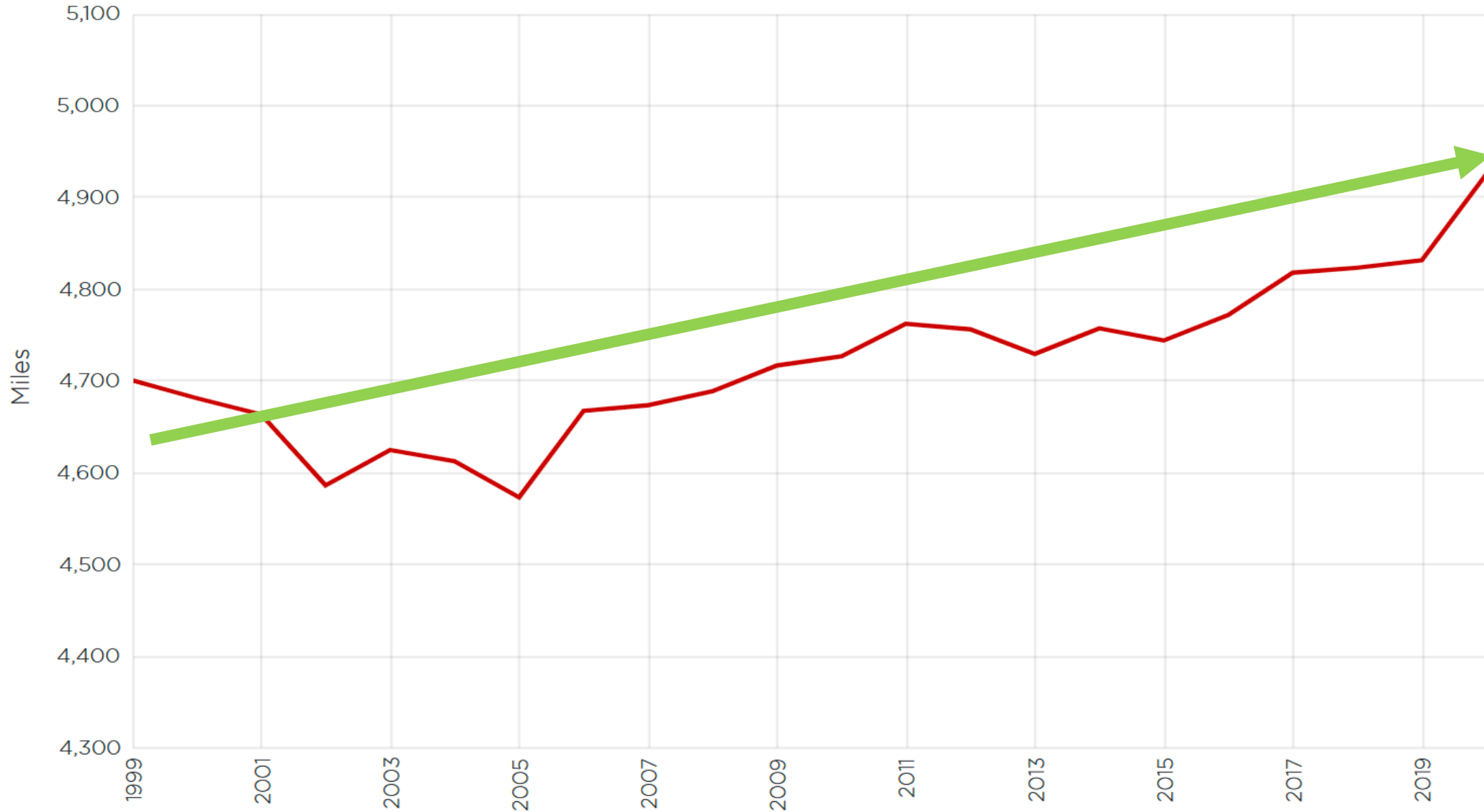
THE STORY SO FAR

## Share (per cent) of transport and inventory holding expenditure within total logistics expenditure, United States



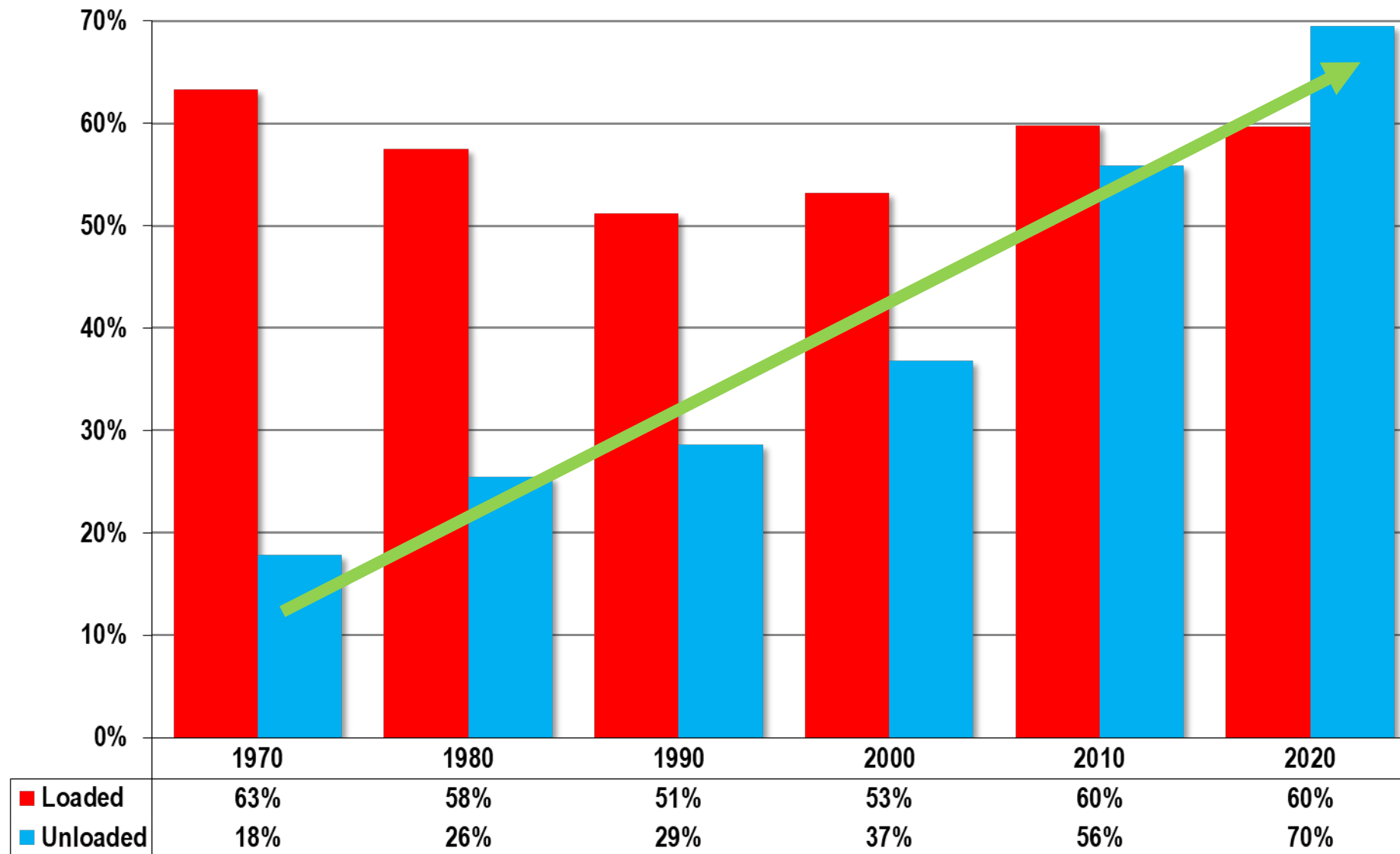
Source: UNCTAD, based on data from CSCMP Annual State of Logistics Report.  
Presented in Issues Note on Geography of Trade, TDB

# World Seaborne Trade Average Haul Miles



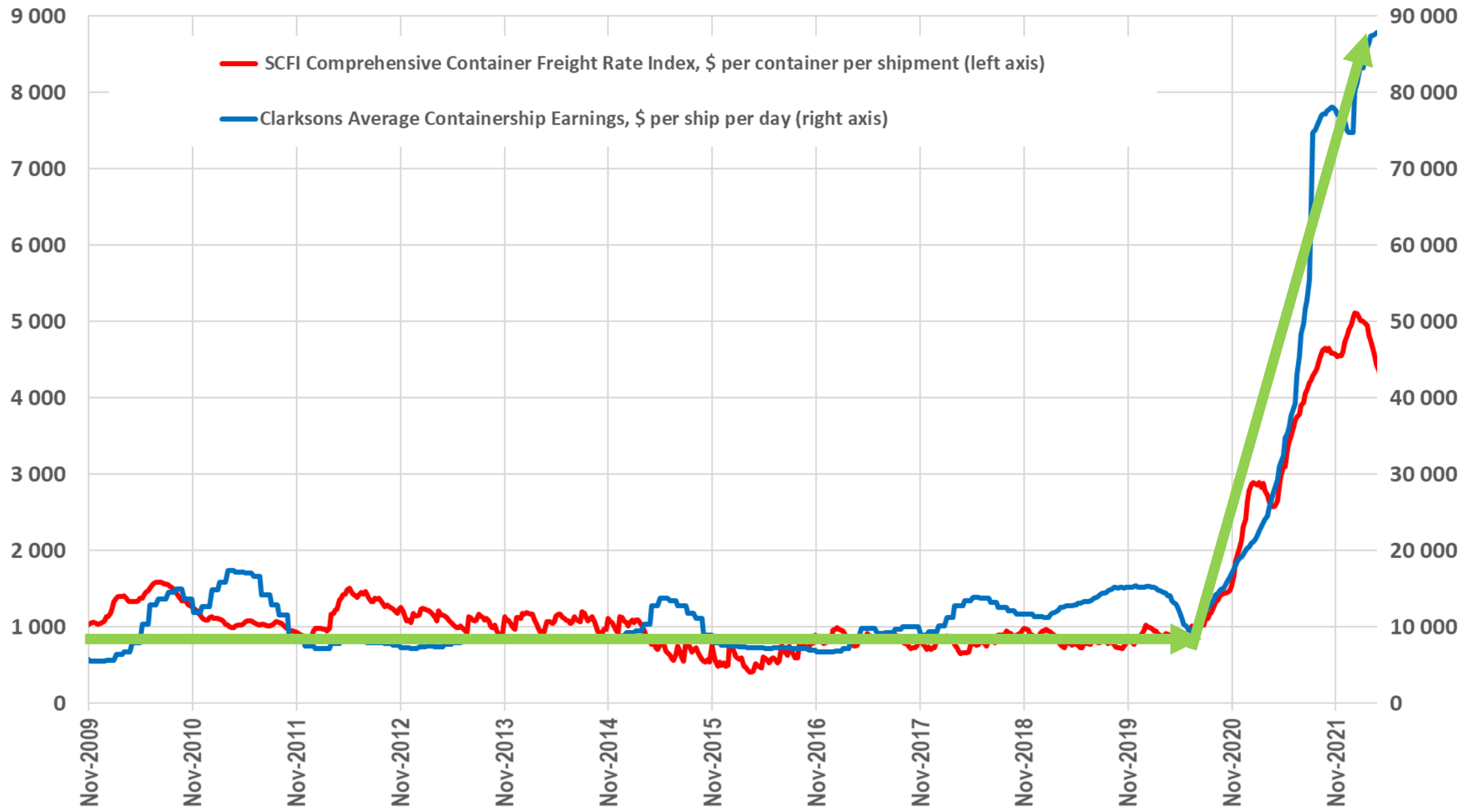
Source: Clarksons Research

## Seaborne trade: share of developing countries

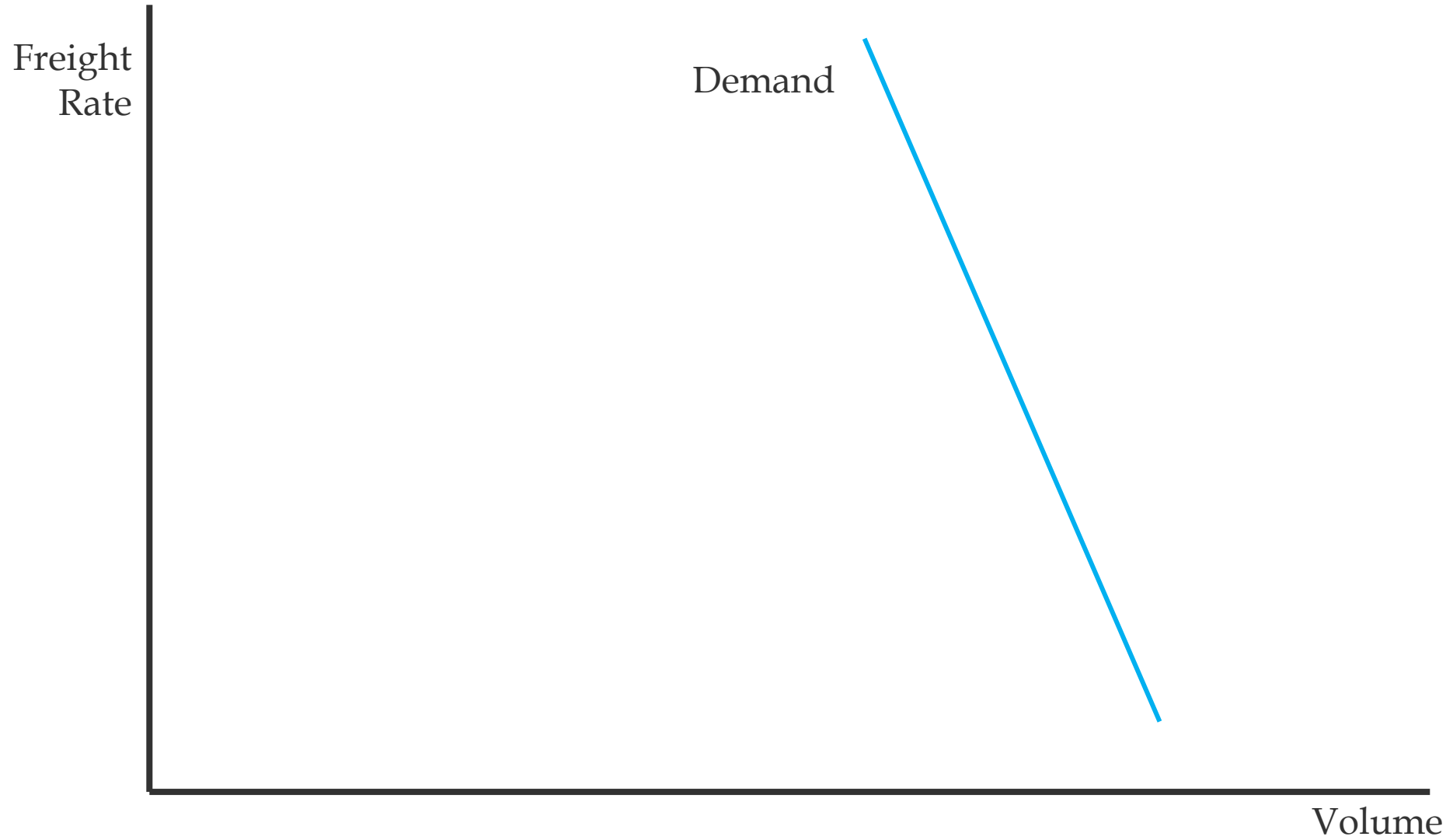


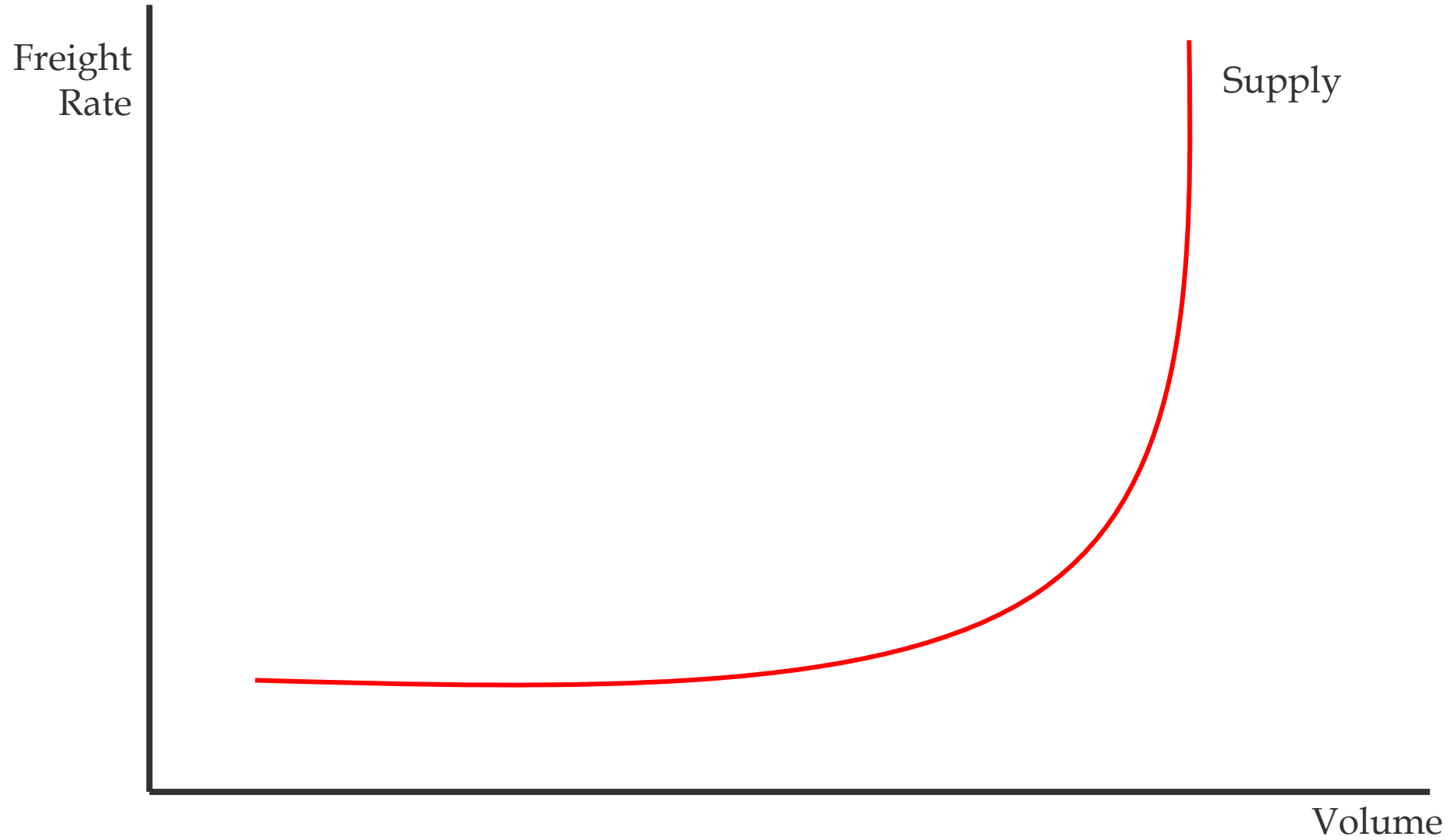
Share of developing countries in seaborne trade (tonnes)

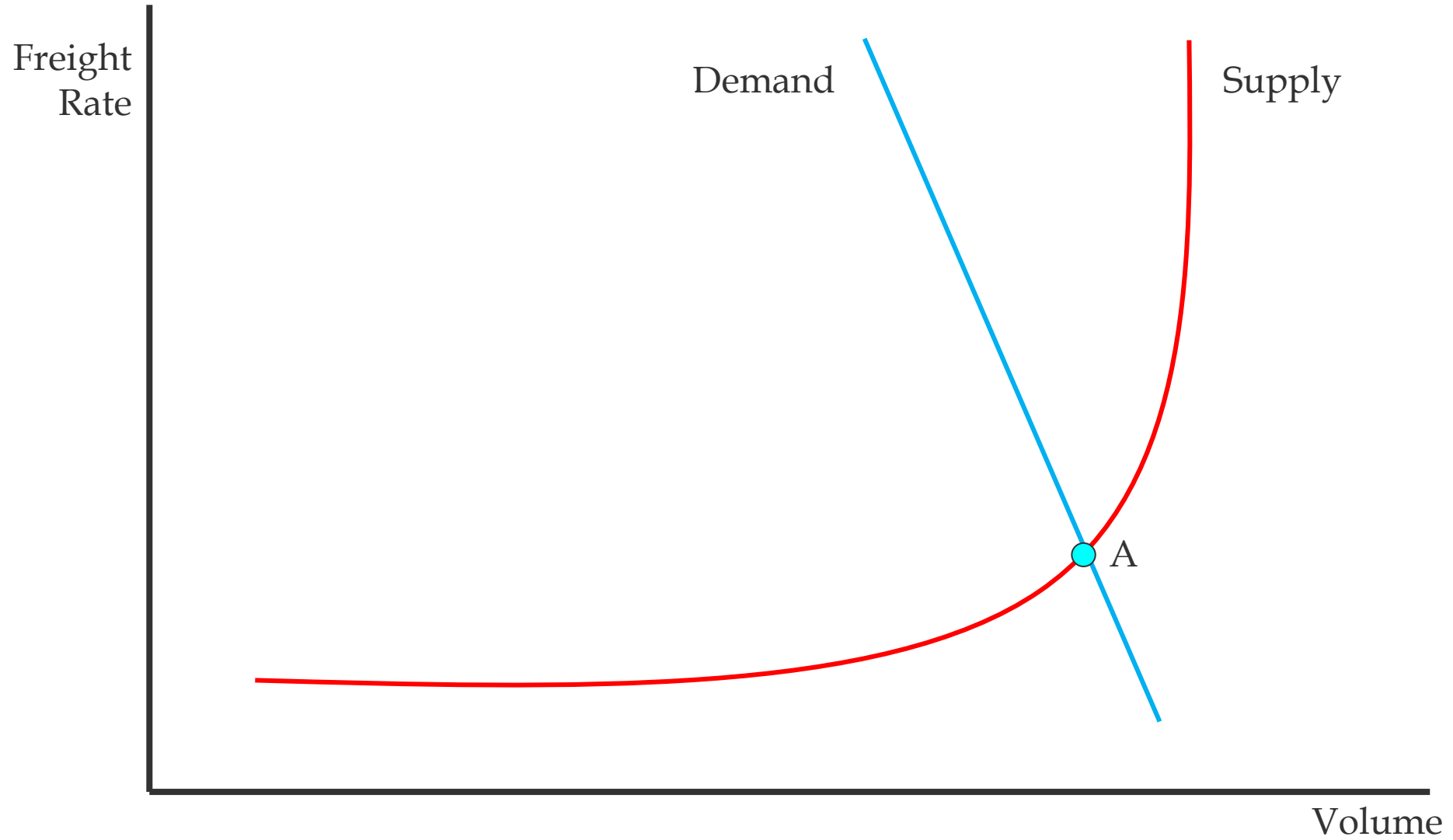
Source: Review of Maritime Transport



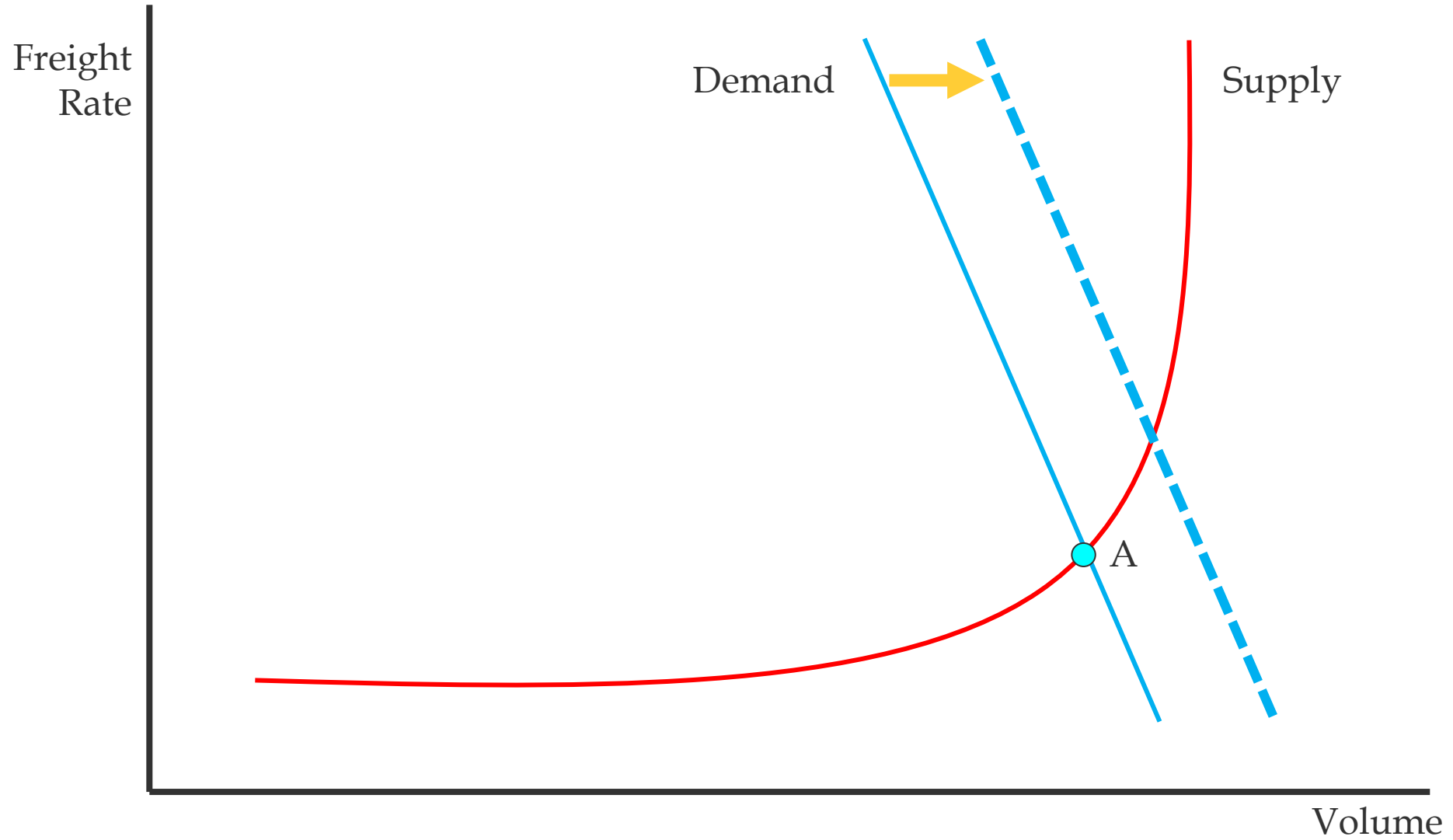
Source: UNCTAD, based on data from Clarksons Shipping Intelligence Network







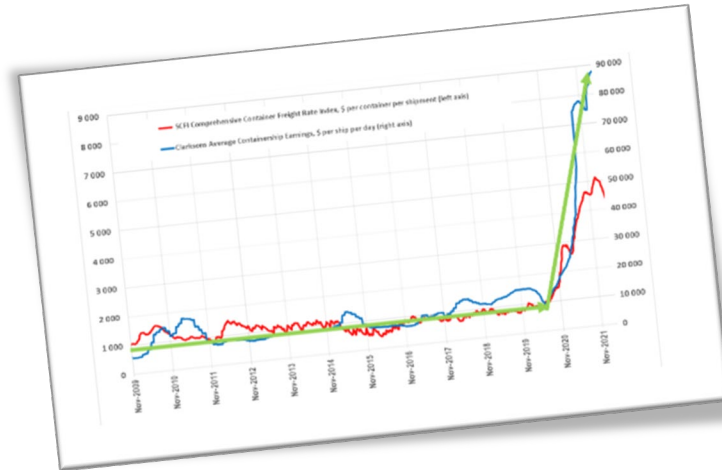




Freight Rate

Demand

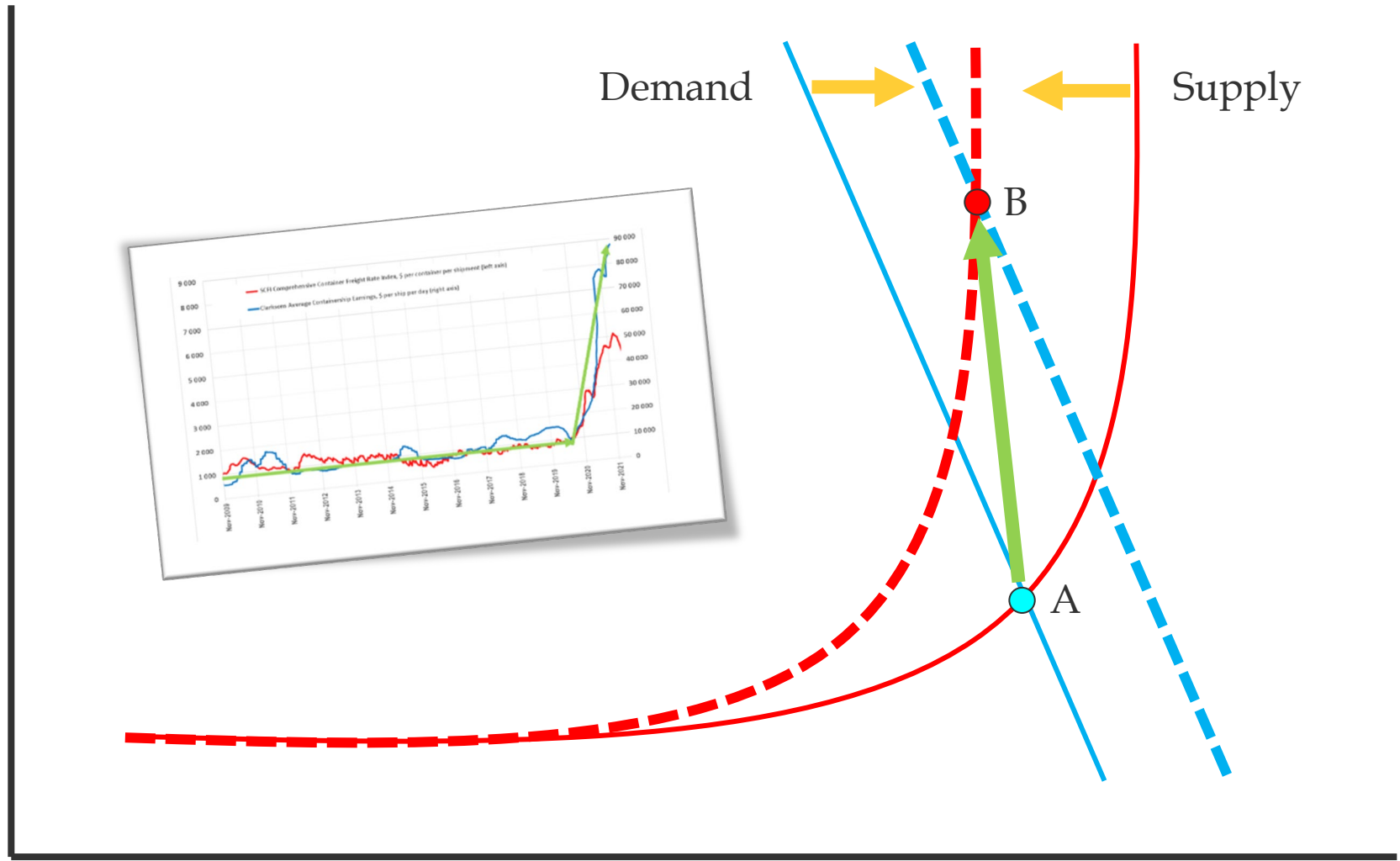
Supply



B

A

Volume

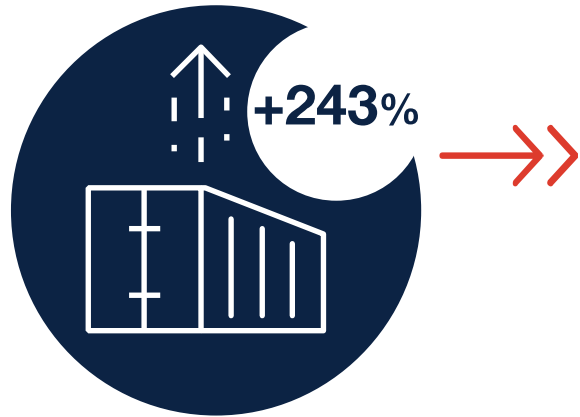


# SIMULATED IMPACT OF CONTAINER FREIGHT RATE SURGES

Hardest hit will be SIDS

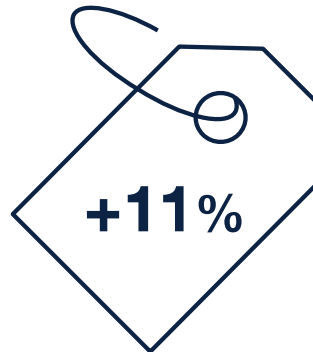
## Simulation assumption:

Sustained increase in container freight rates

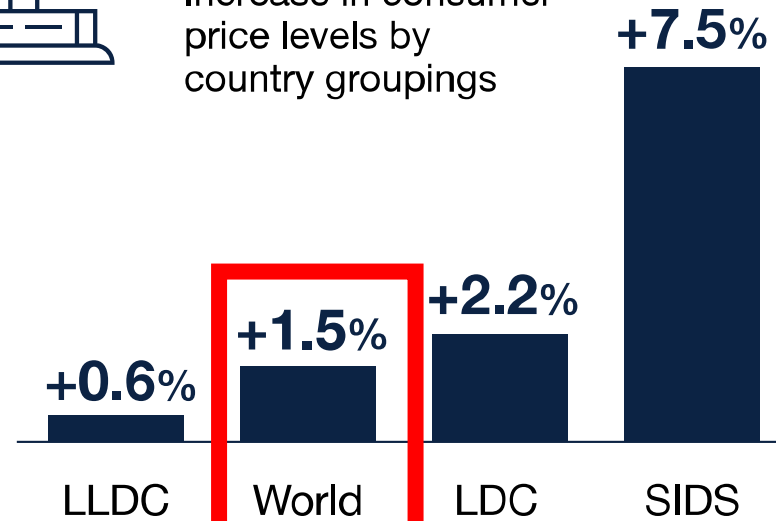


## Simulation results:

Increase in global import price levels



Increase in consumer price levels by country groupings

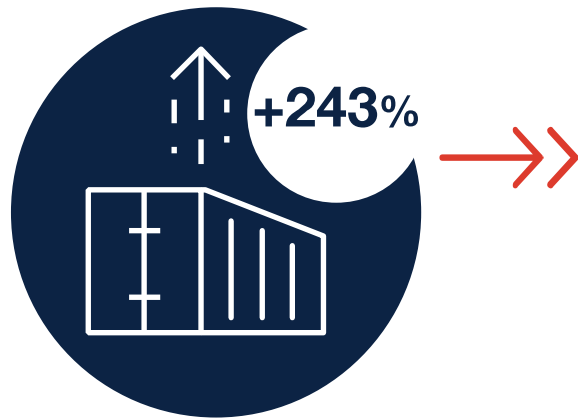


# SIMULATED IMPACT OF CONTAINER FREIGHT RATE SURGES

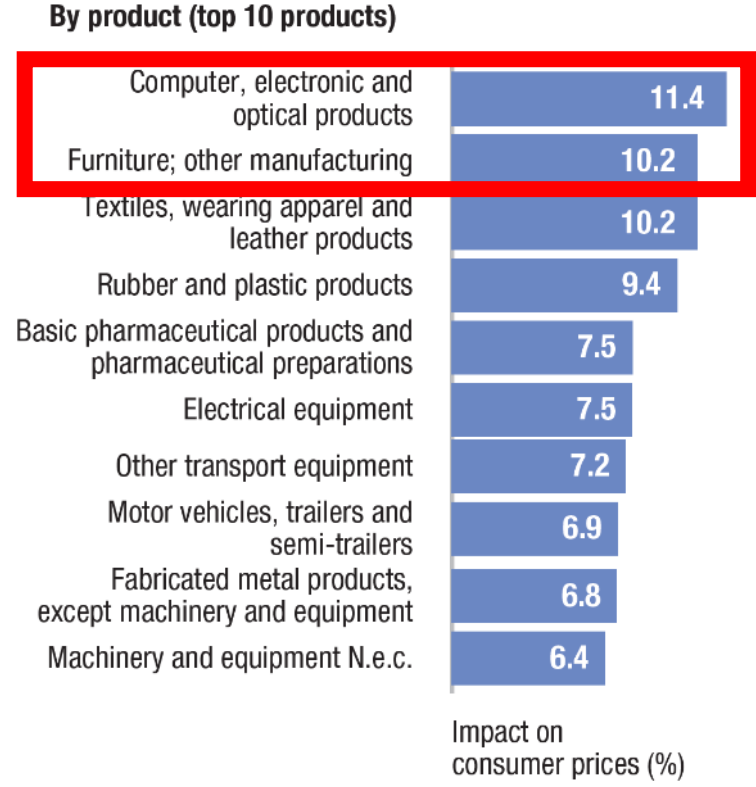
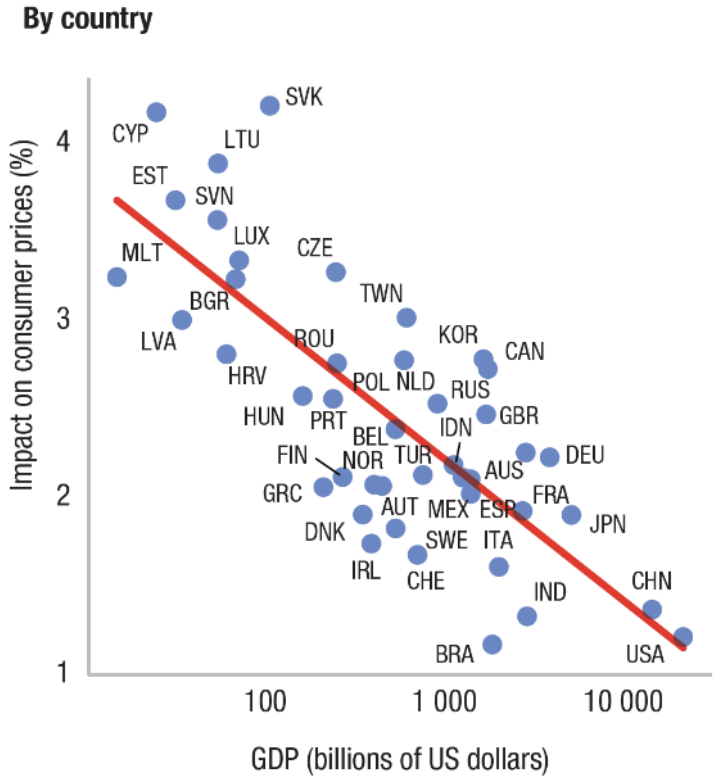
Hardest hit will be SIDS

## Simulation assumption:

Sustained increase in container freight rates

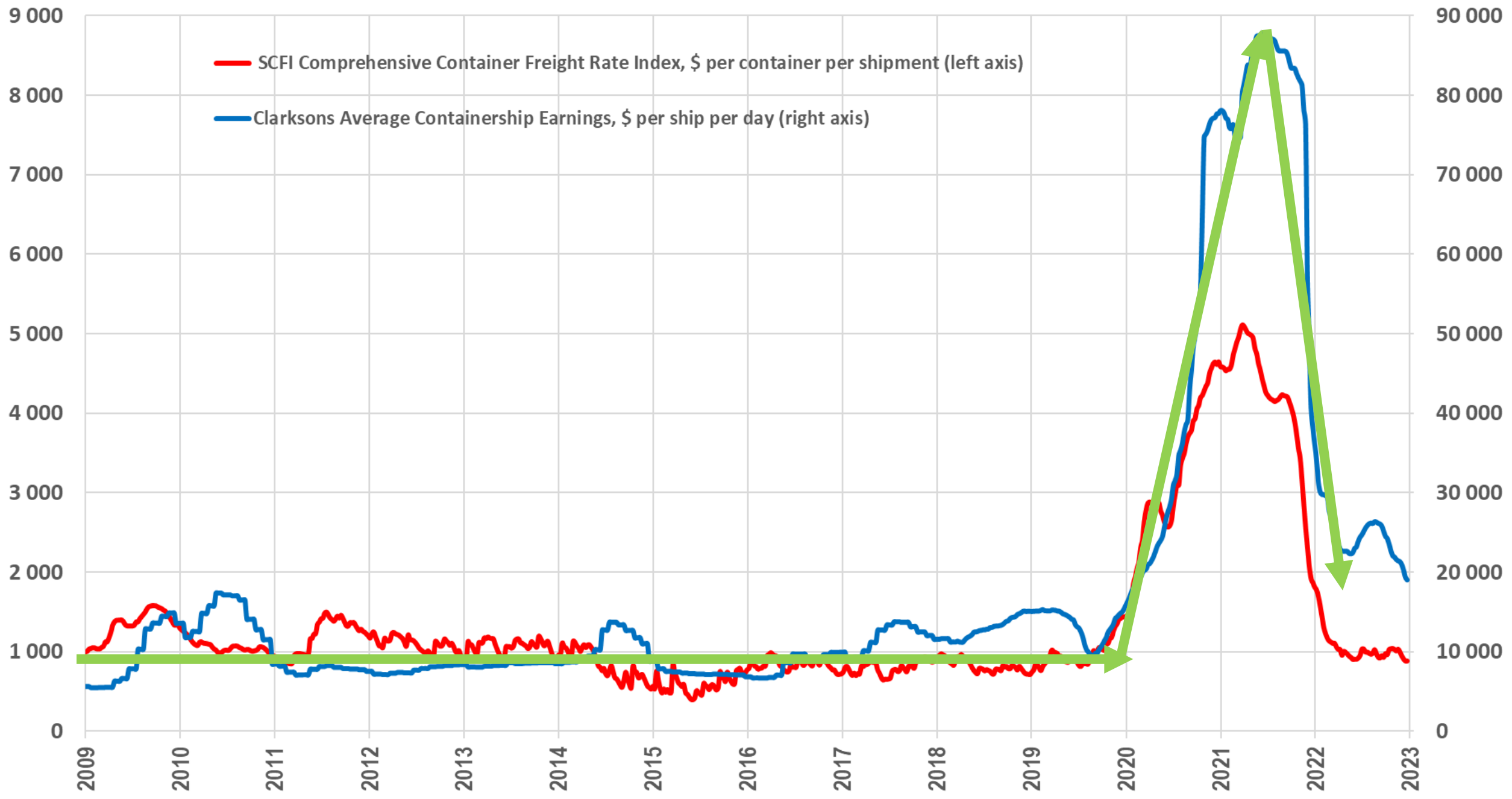


**Figure 3.9** Simulated impacts of the container freight rate surge on consumer price levels, by country and by product



Sources: UNCTAD calculations based on the WIOD (accessed 7–8 June 2021) developed by Timmer et al., 2015, Clarkson Research, *Shipping Intelligence Network* (accessed 2 September 2021), UNCTADstat (accessed 24 June 2021), and the Centre d'Études Prospectives and d'Informations Internationales, *Gravity Database* (accessed 21 May 2021).

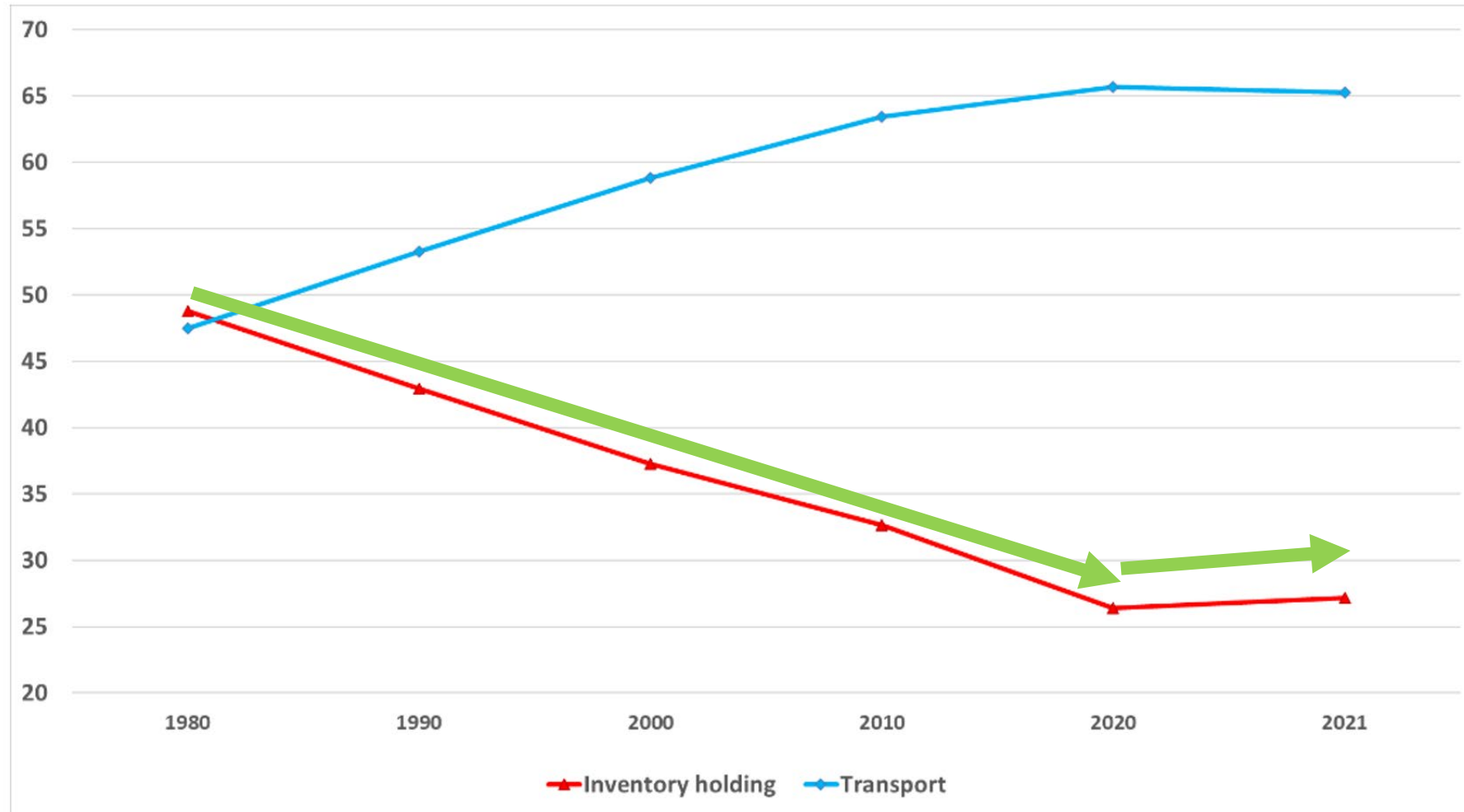
Note: The impacts of the container freight rate surge on prices are based on a 243 per cent increase in the CCFI between August 2020 and August 2021. The simulated impacts on price levels are long-term impacts, i.e., the simulation assumes that the current container freight rate surge and the corresponding increases in production costs are fully passed to consumers. See technical note 2 for the detail of the methodology.



Source: UNCTAD, based on data from Clarksons Shipping Intelligence Network,

up to October 2023

## Share (per cent) of transport and inventory holding expenditure within total logistics expenditure, United States, 1980 - 2021



Source: UNCTAD, based on data from CSCMP Annual State of Logistics Report.

Presented in Issues Note on Geography of Trade, TDB

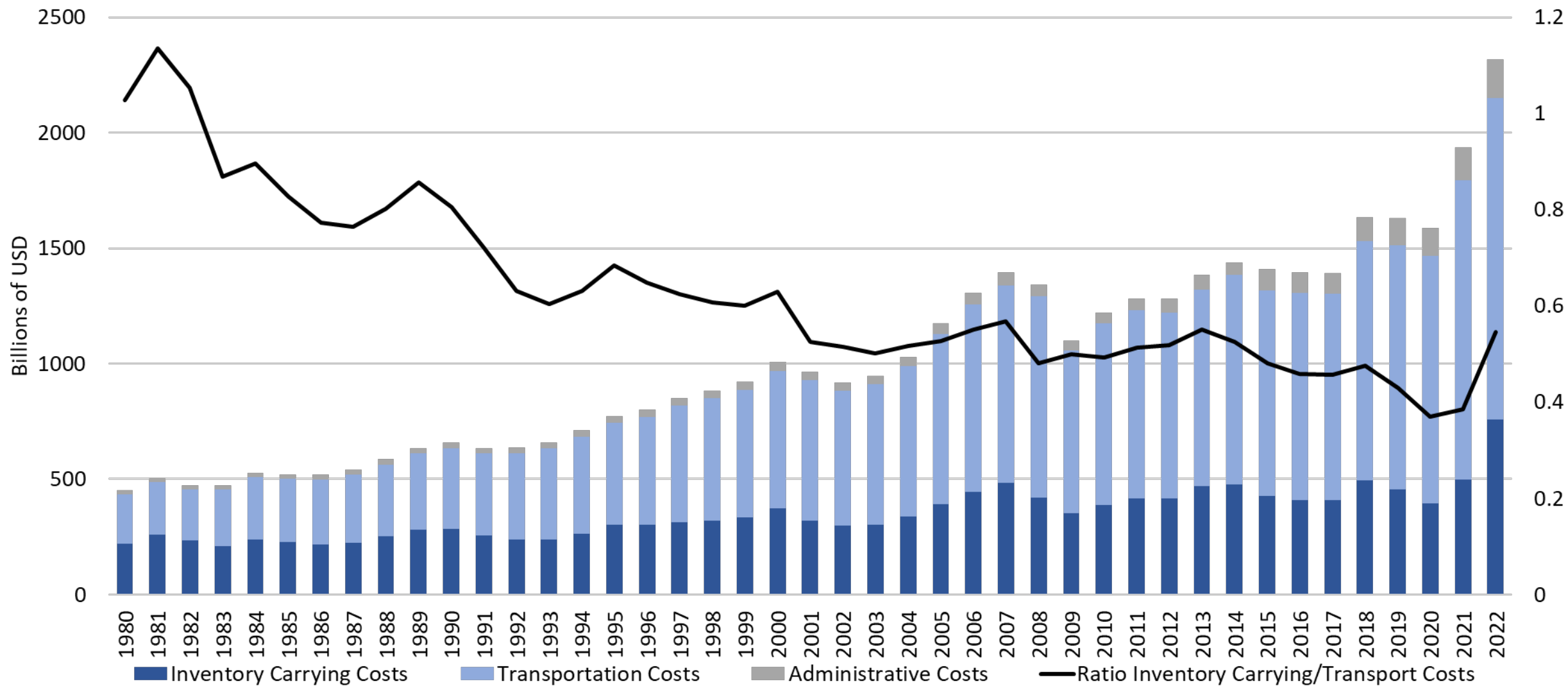
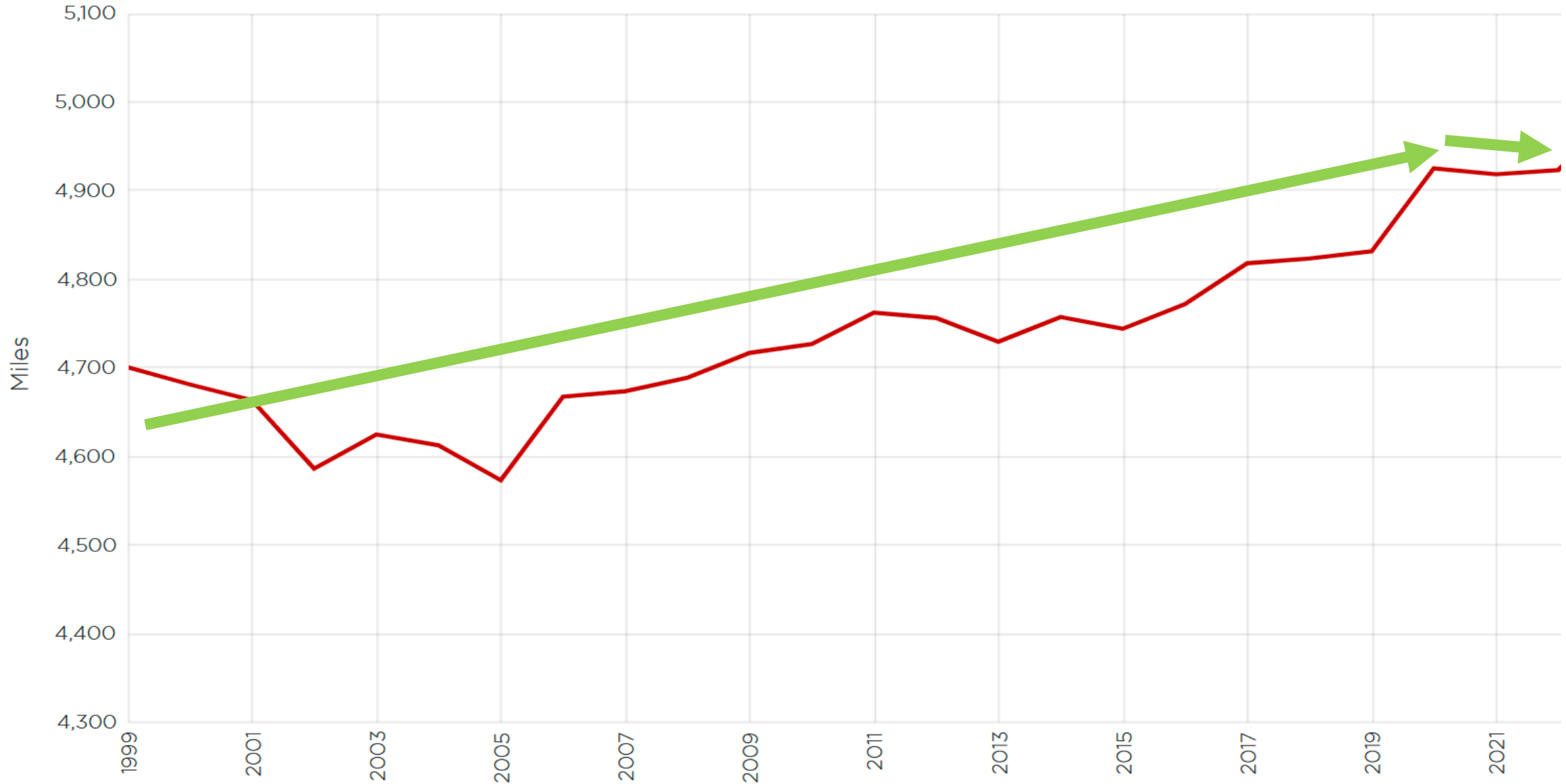


Chart prepared by JP Rodrigue

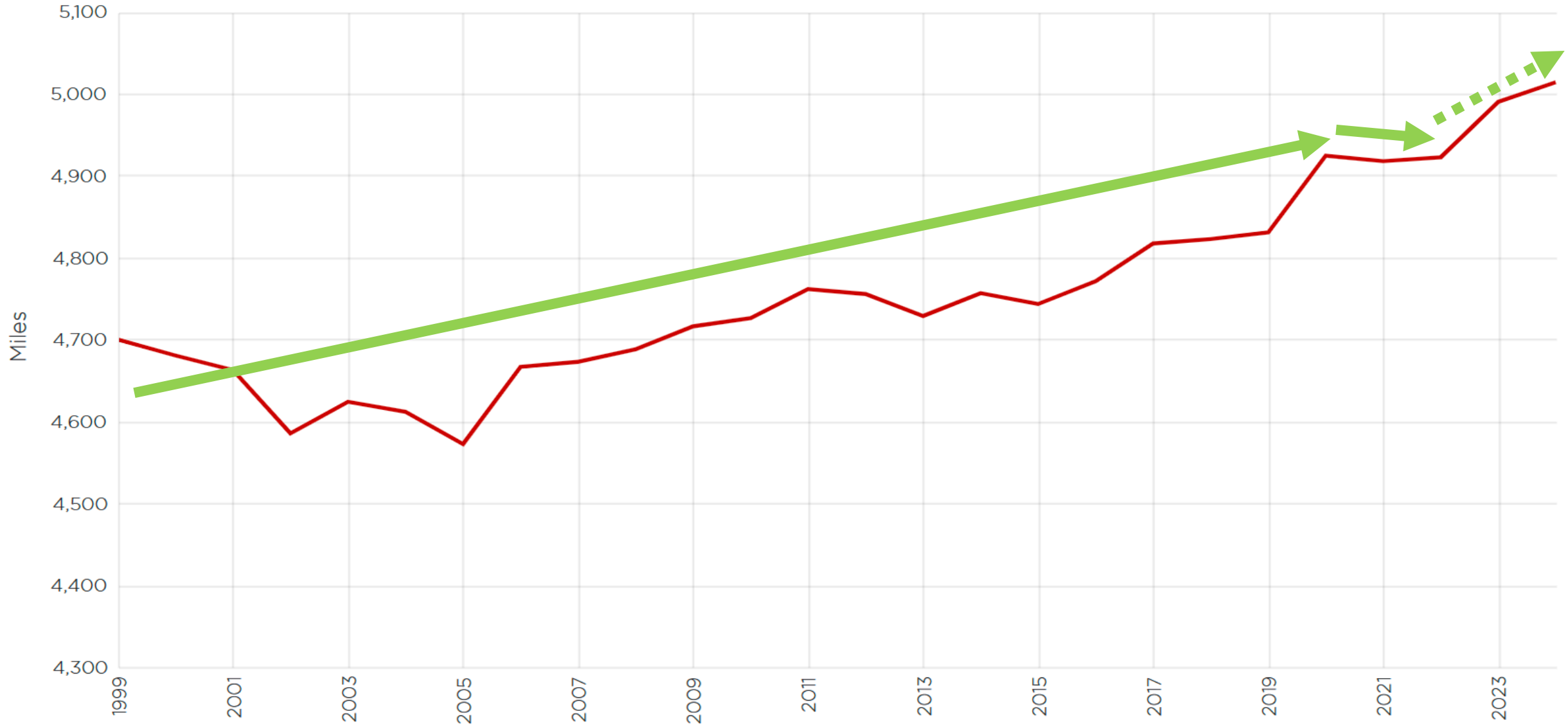
World Seaborne Trade Average Haul Miles



Source: Clarksons Research

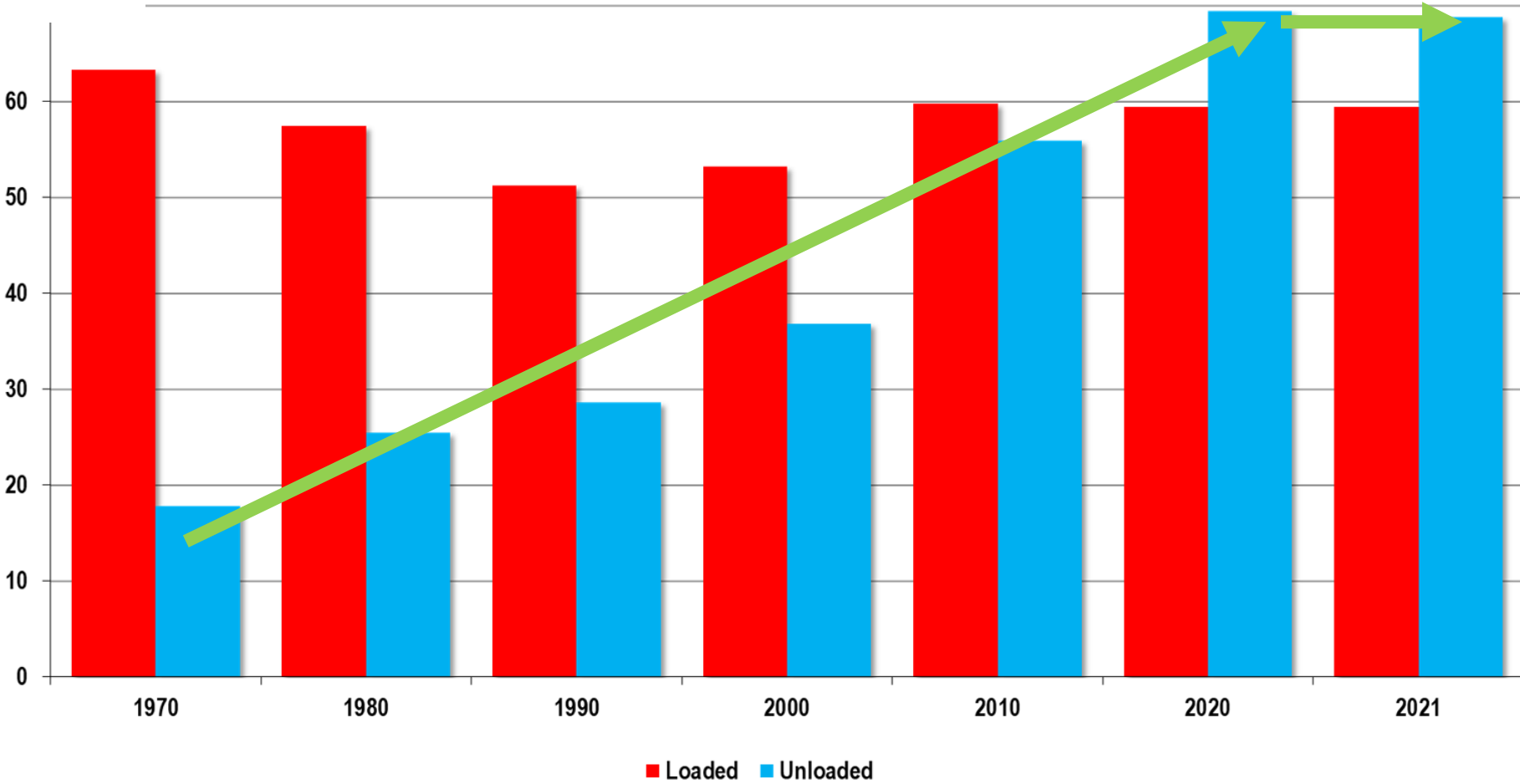


World Seaborne Trade Average Haul Miles

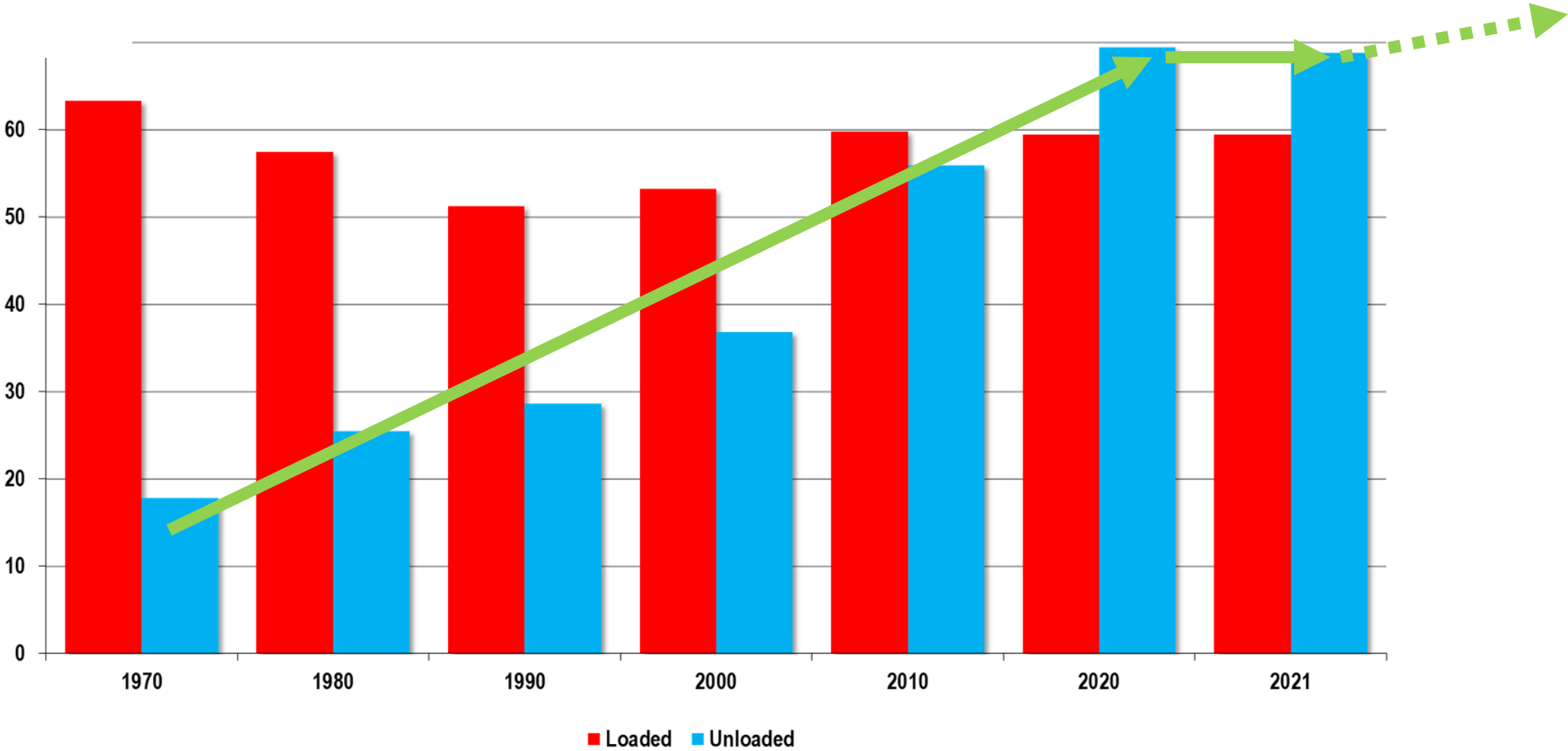


Source: Clarksons Research

# Seaborne trade: share of developing countries



# Seaborne trade: share of developing countries



007



REVIEW  
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2023

Towards a  
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Presentation of the  
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UNITED NATIONS  
UNCTAD



- 1) The Energy Transition**
- 2) Demand, Supply, and Markets**
- 3) Ports and Maritime Connectivity**
- 4) Challenges – and Opportunities**





# 1) The Energy Transition

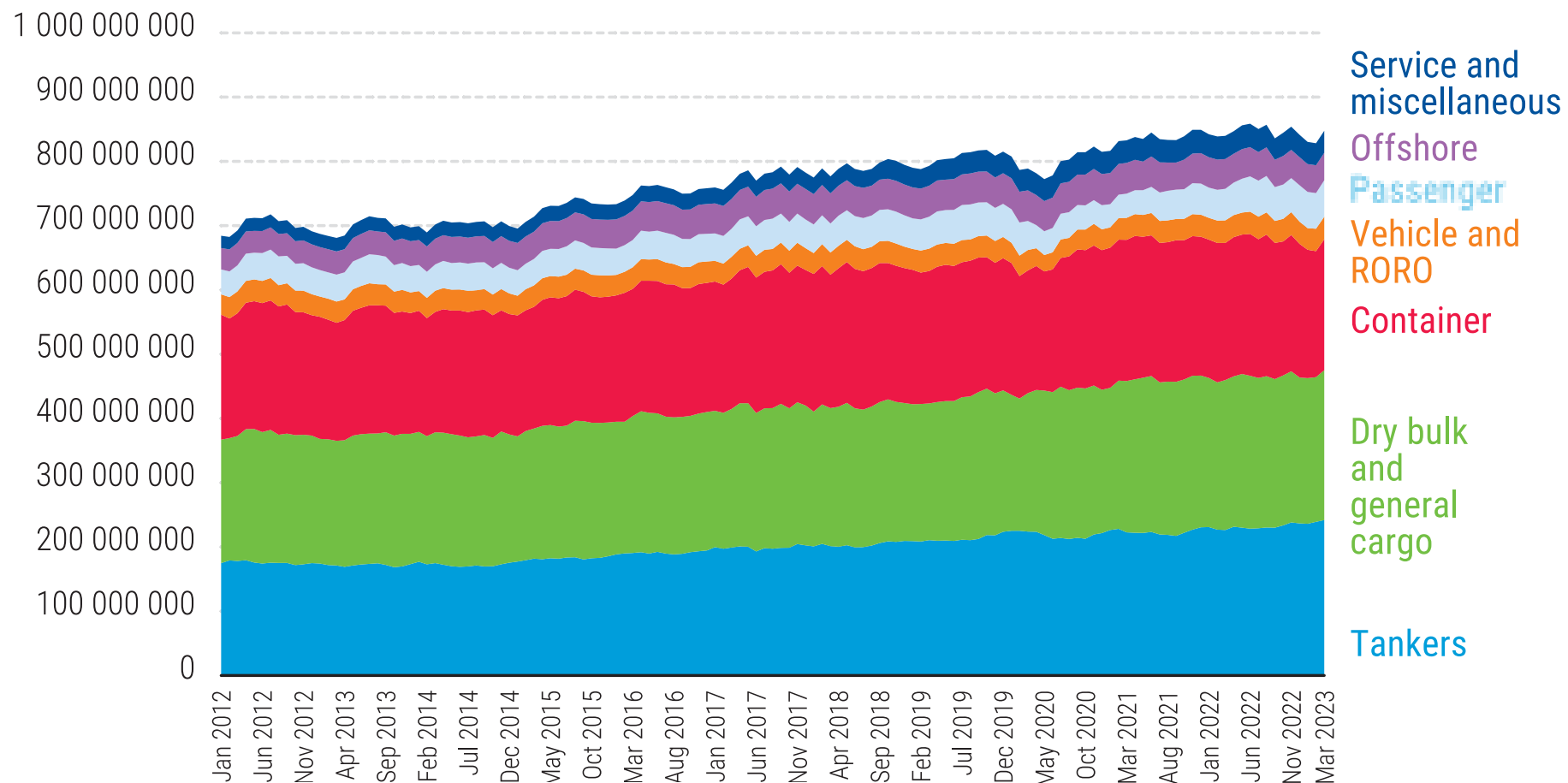
## 2) Demand, Supply, and Markets

## 3) Ports and Maritime Connectivity

## 4) Challenges – and Opportunities



# Total CO2 emissions by vessel types, tons, January 2012–March 2023



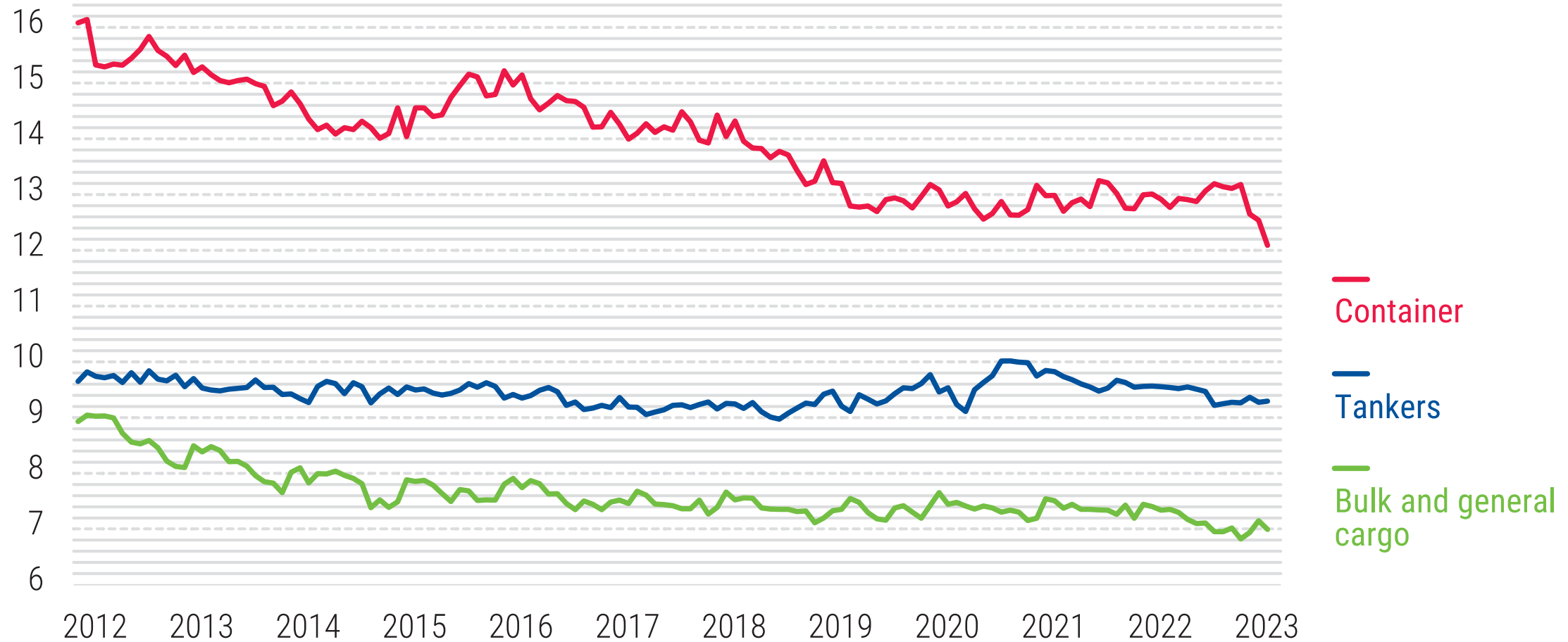
Source: UNCTAD, based on data provided by Marine Benchmark, July 2023.

Note: RORO means roll-on/roll-off vehicle carrier.



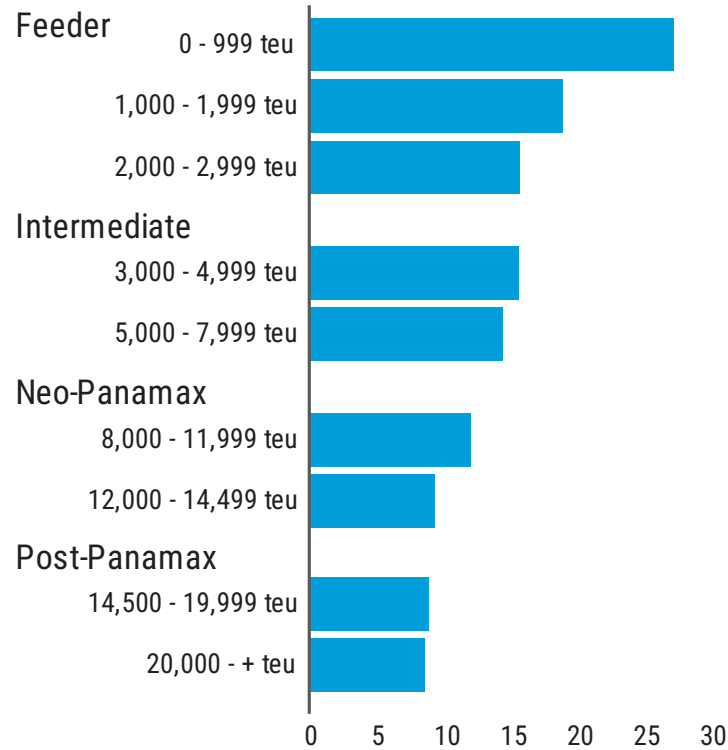
# World fleet, three main vessel types, monthly CO2 emissions per ton-mile, January 2012–March 2023

(Gram/ton\*nautical mile)

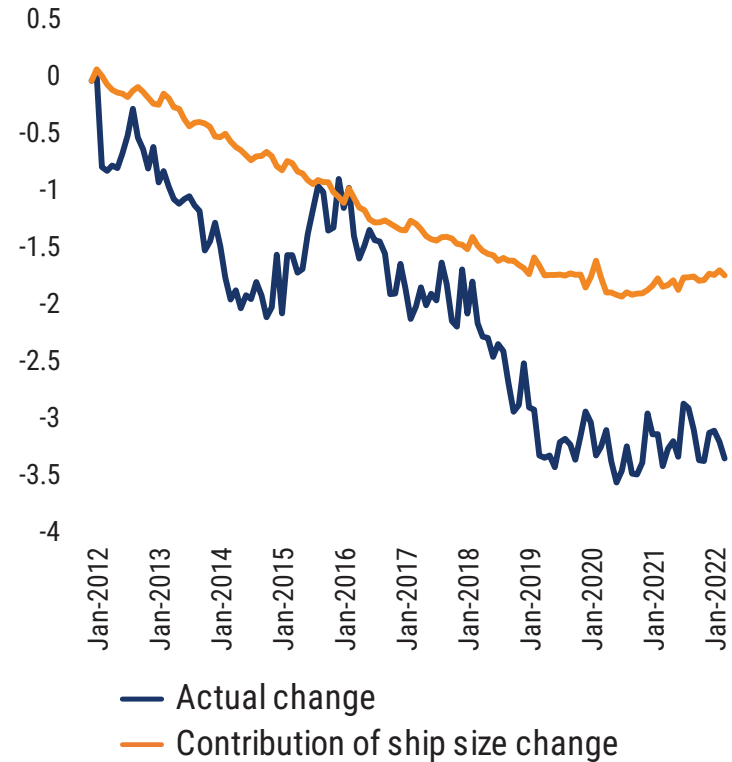


Source: UNCTAD, based on data provided by Marine Benchmark, July 2023.

## CO2 emission intensity of container ships by ship size, grams per ton-mile, 2021



## Cumulative change from January 2012 in CO2 emission intensity, and contribution of ship size change of container ships, grams per ton-mile





# 1) The Energy Transition

## 2) Demand, Supply, and Markets

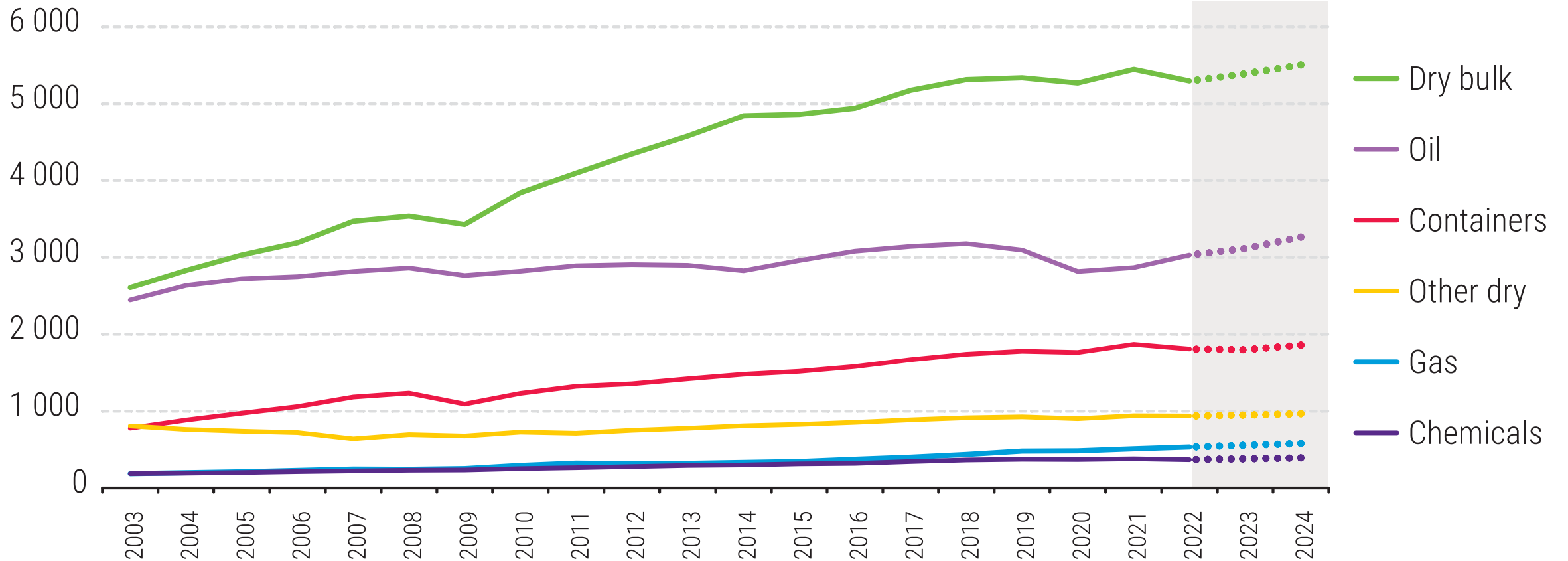
# 3) Ports and Maritime Connectivity

# 4) Challenges – and Opportunities



# International maritime trade, 2003–2024

(Million tons loaded)

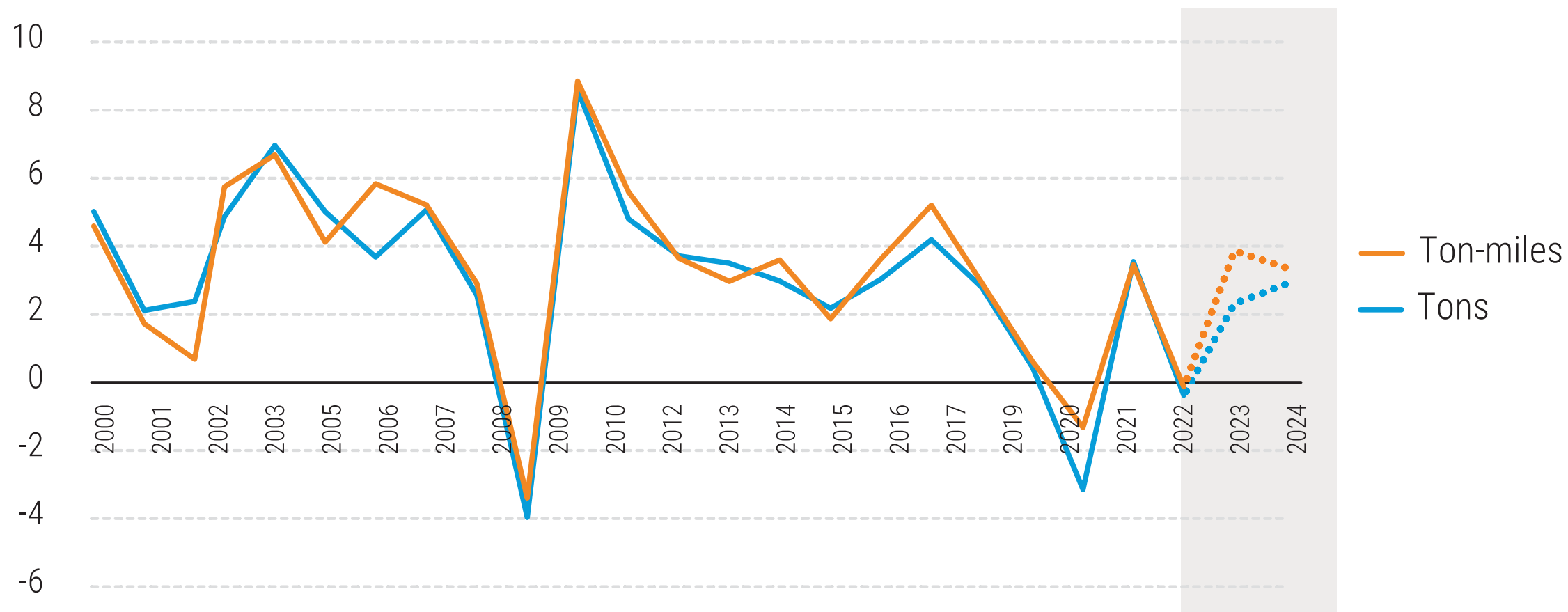


Source: UNCTAD secretariat, based on Clarksons Research, Shipping Intelligence Network time series (July 2023).

Notes: 2023 and 2024 are forecast. “Dry bulk” includes major bulks (iron ore, coal and grain) and minor bulks (metals, minerals, agribulks and softs); “Oil” encompasses crude oil and refined oil products; “Other dry” is an estimation of all other dry trade that is not included in major/minor bulks, for instance, cars and other vehicles, ro-ro and project cargoes, as well as reefer cargoes that don’t go in containers and breakbulk cargoes that are not in the minor bulk category; “gas” includes LPG, LNG and ammonia.

# Seaborne trade growth, tons and ton-miles, 2000 – 2024

(percentage annual change)

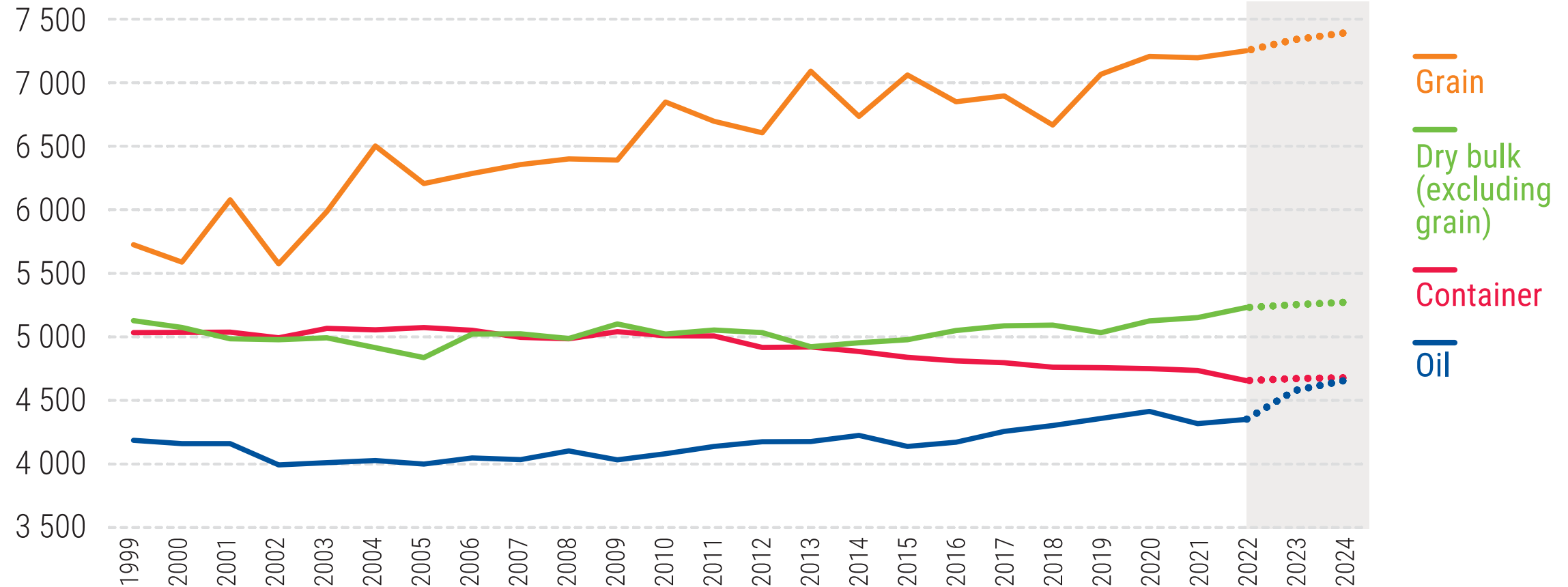


Source: UNCTAD secretariat, based on Clarksons Research, Shipping Intelligence Network time series (July 2023).

Note: 2023 and 2024 are forecast.

# Distance travelled per ton of maritime cargo, 1999–2024

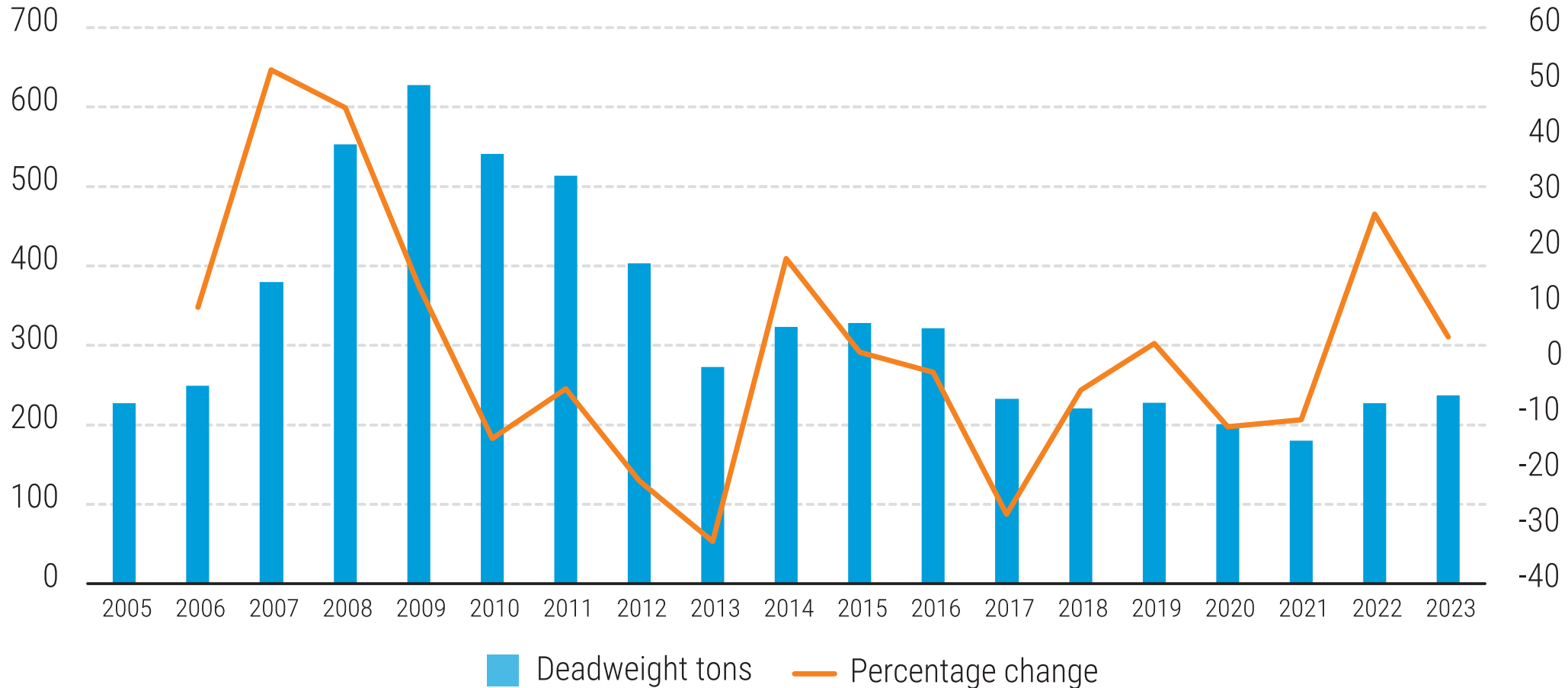
(Nautical miles)



Source: UNCTAD secretariat, based on Clarksons Research, Shipping Intelligence Network time-series (July 2023).

Notes: 2023 and 2024 are forecast. "Oil" includes crude oil and refined oil products.

## World tonnage on order, million dead weight tons and percentage change, 2005–2023



Source: UNCTAD calculations, based on data from Clarksons Research, 2023.

Notes: Propelled seagoing merchant vessels of 100 GT and above. Beginning of year figures.



**1) The Energy Transition**

**2) Demand, Supply, and Markets**

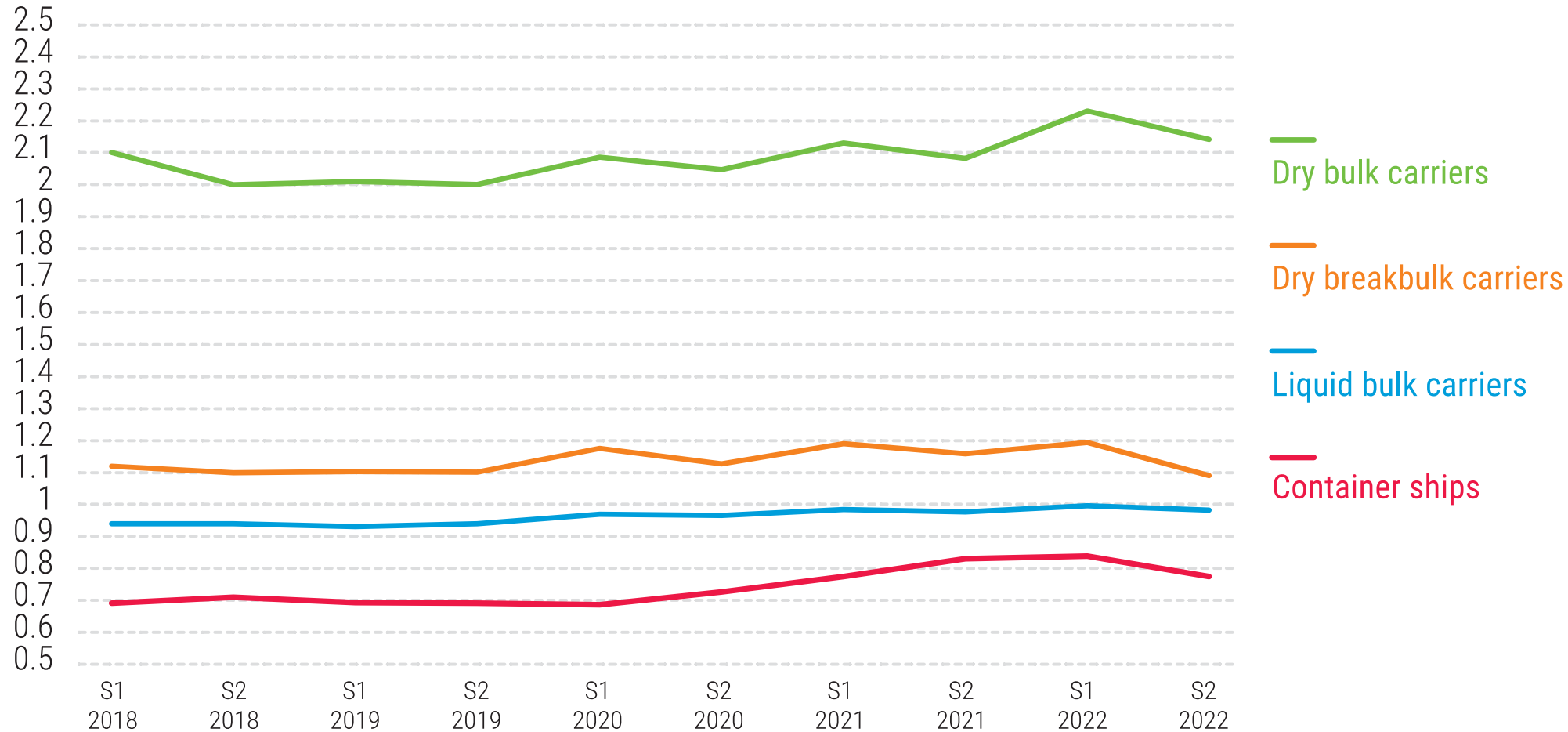
**3) Ports and Maritime Connectivity**

**4) Challenges – and Opportunities**





## Time in port, world median, in days, 2018 S1–2022 S2



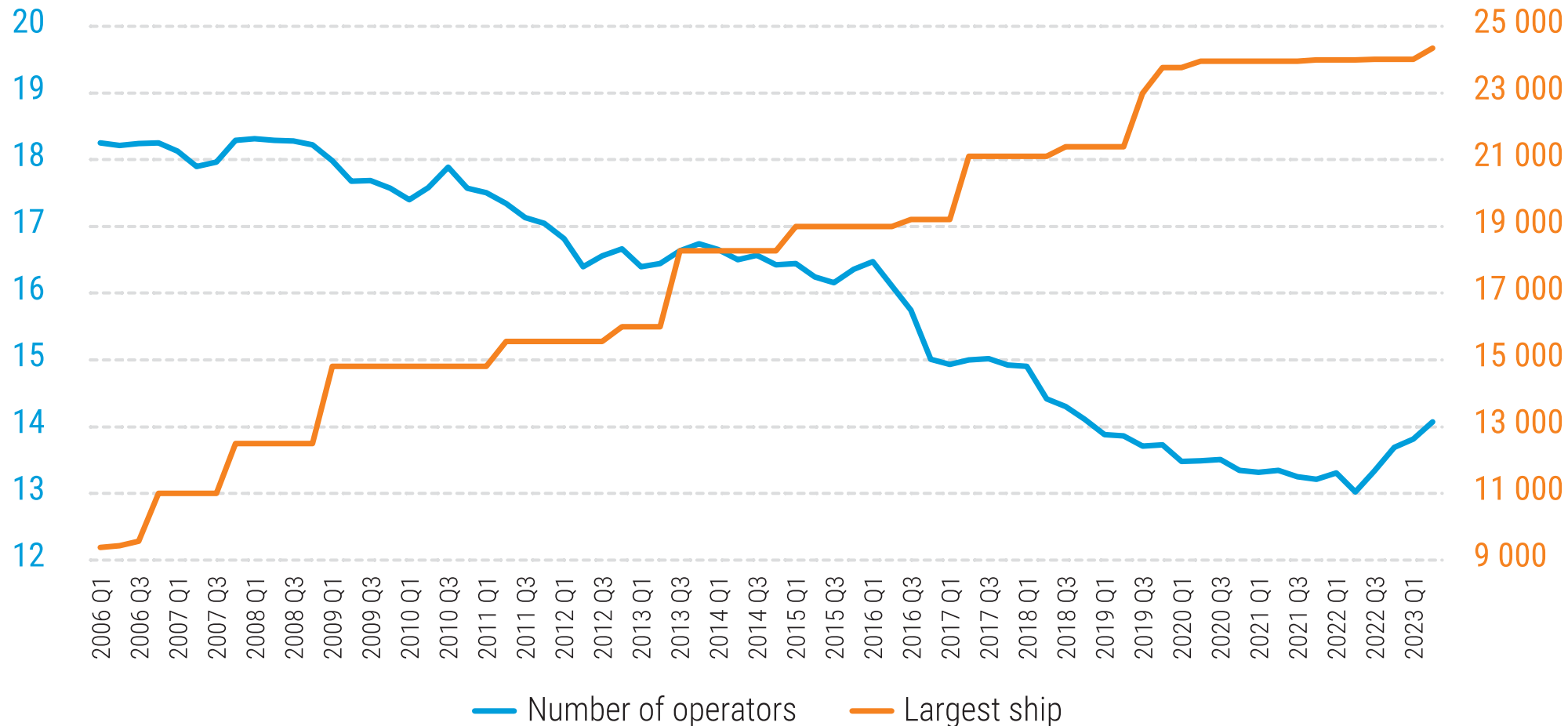
Source: UNCTAD, based on data provided by MarineTraffic.

Note: Ships of 1 000 GT and above.





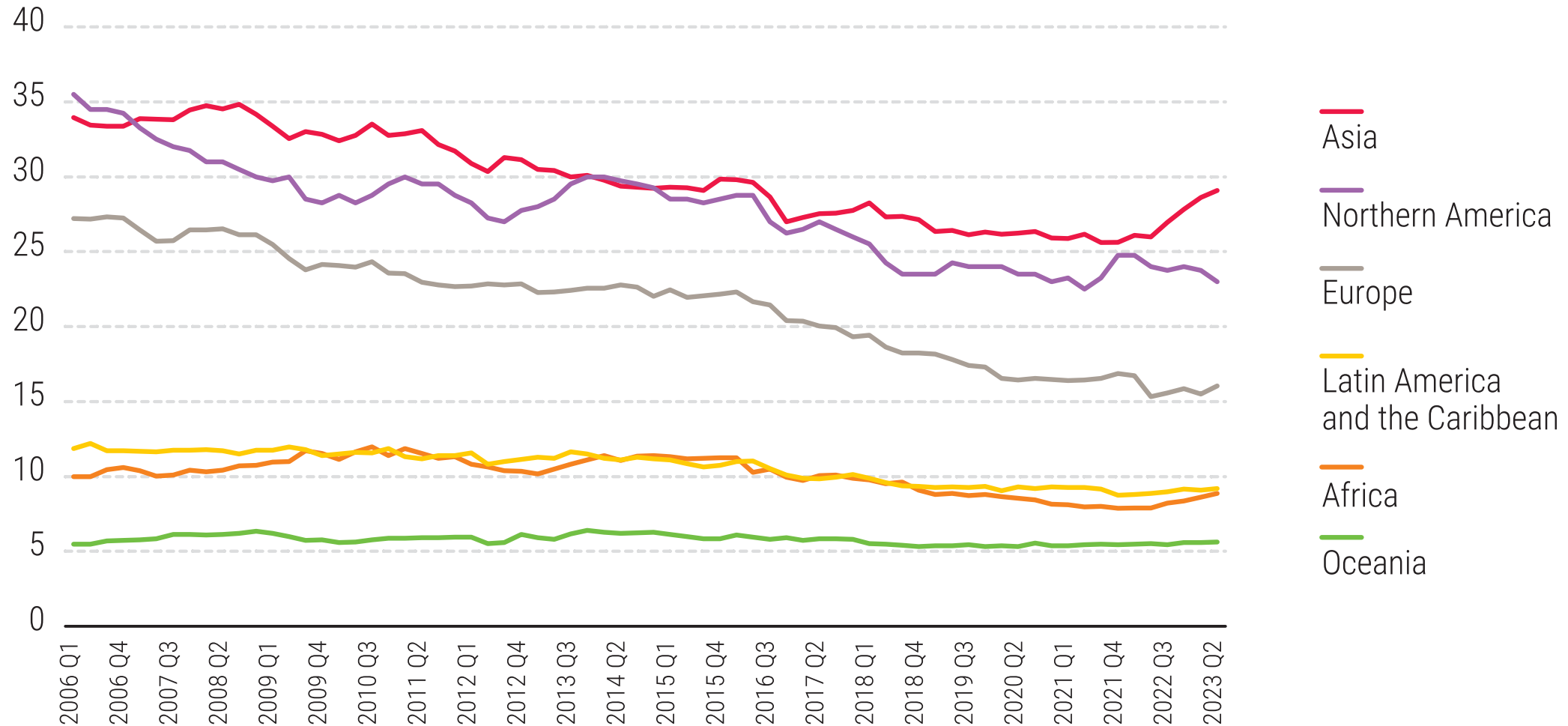
## Number of operators and largest ships, average per country, 2006 Q1–2023 Q2



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

Note: Average number of operators is calculated from the country data. For countries with no liner shipping connections, their values are assumed to be zero. Countries with no liner shipping connections for the entire period are excluded from the averages. Largest ship reflects the largest ship being serviced globally.

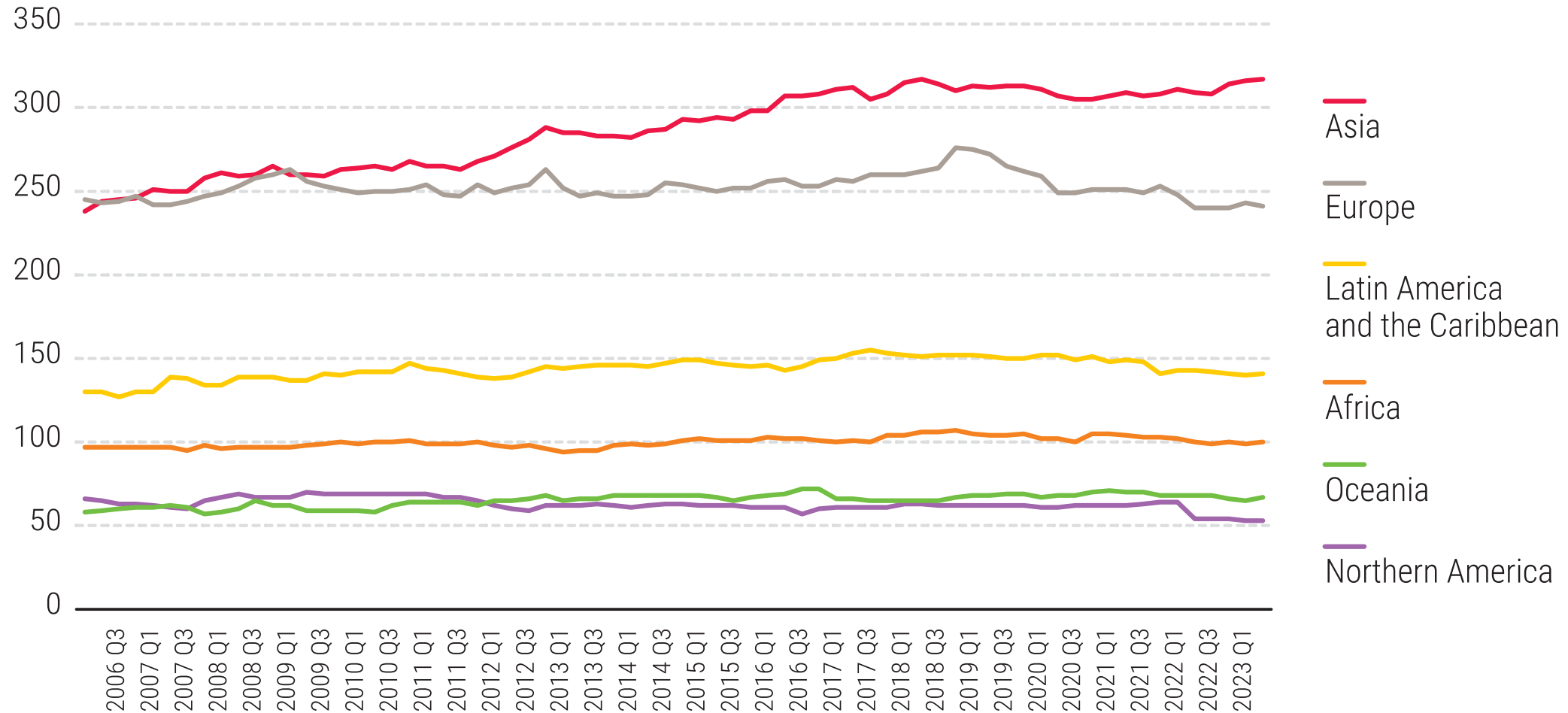
## Average number of operators, regional average, 2006 Q1–2023 Q2



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

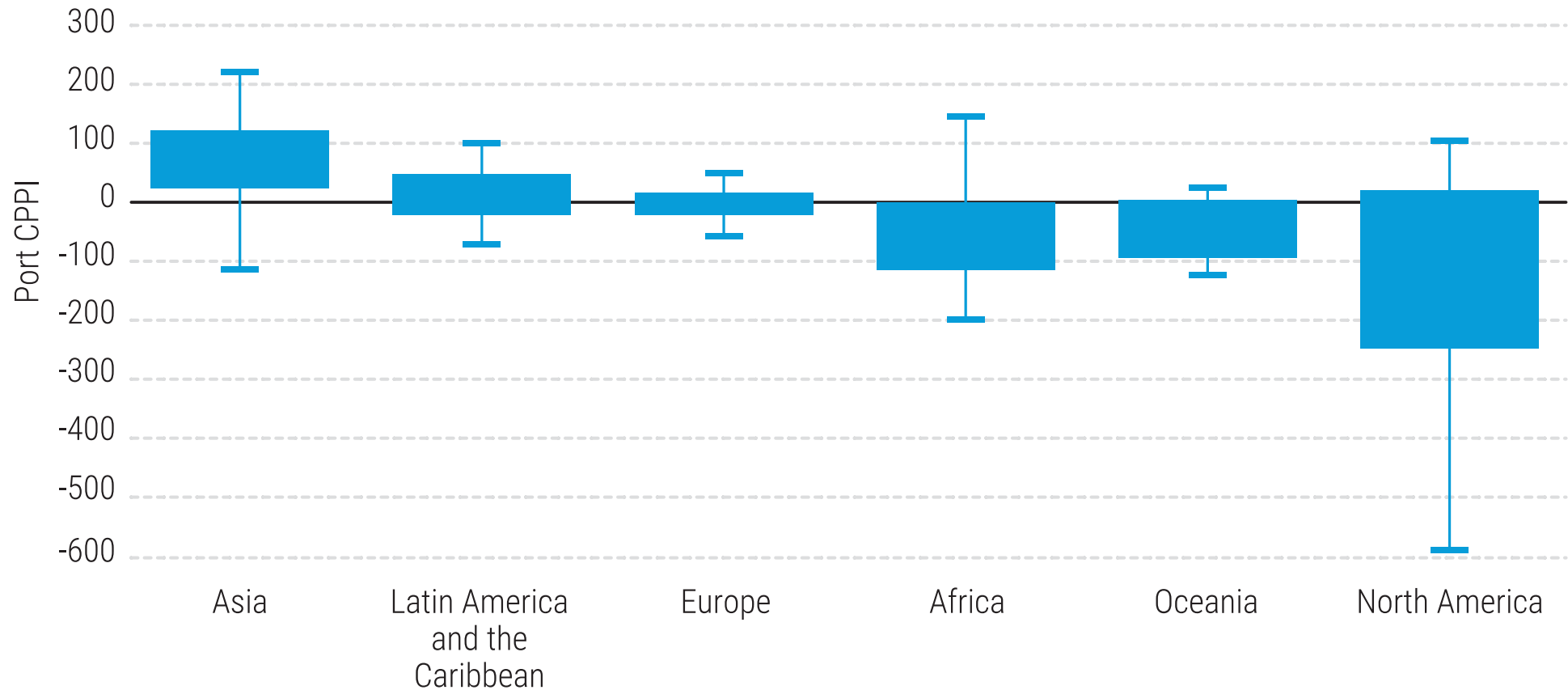
Note: Average number of operators is calculated from the country data. For countries with no liner shipping connections, their values are assumed to be zero. Countries with no liner shipping connections for the entire period are excluded from the averages.

## Number of active container ports, regional totals, 2006 Q1–2023 Q2



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

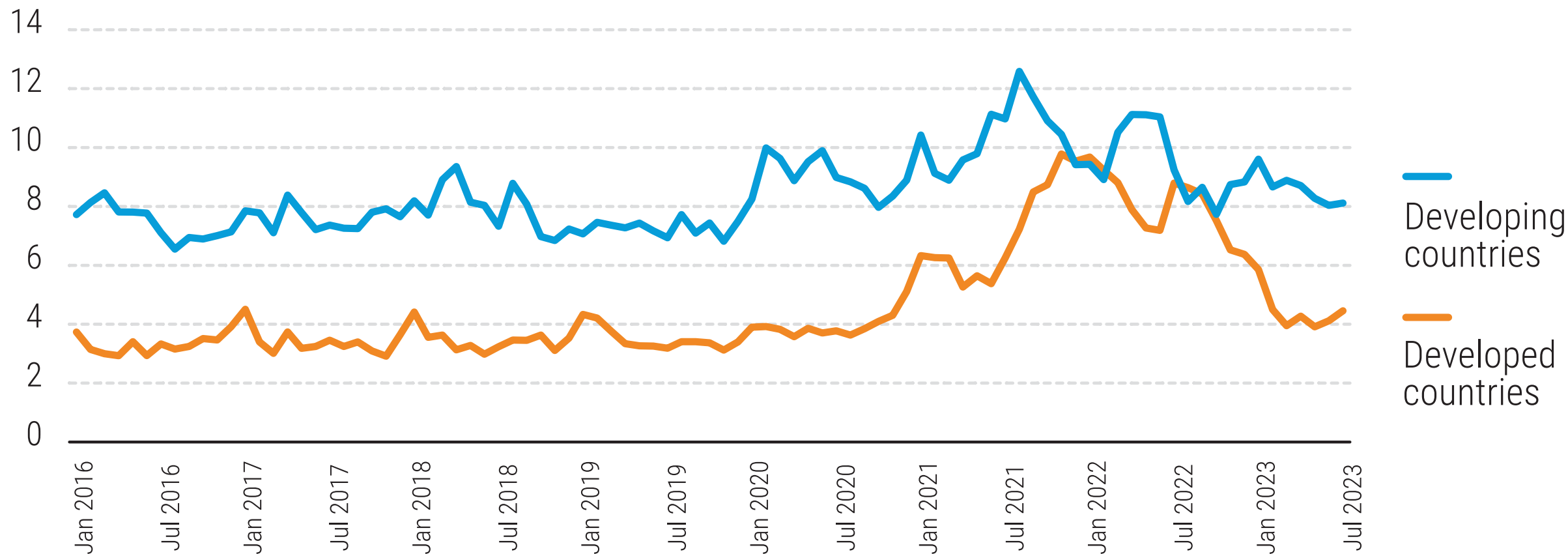
## Container Port Performance Index values 2022, ports' regional distributions



Source: World Bank and S&P Global Port Performance Program.

Note: Ranked by the Administrative Approach scores. The middle line represents the median, the top and bottom lines of the boxes represent the first and third quartile, and the top and the bottom lines (the whiskers) represent the minimum and the maximum values (excluding outliers).

## Average waiting times of container ships at port in hours, monthly, January 2016–July 2023

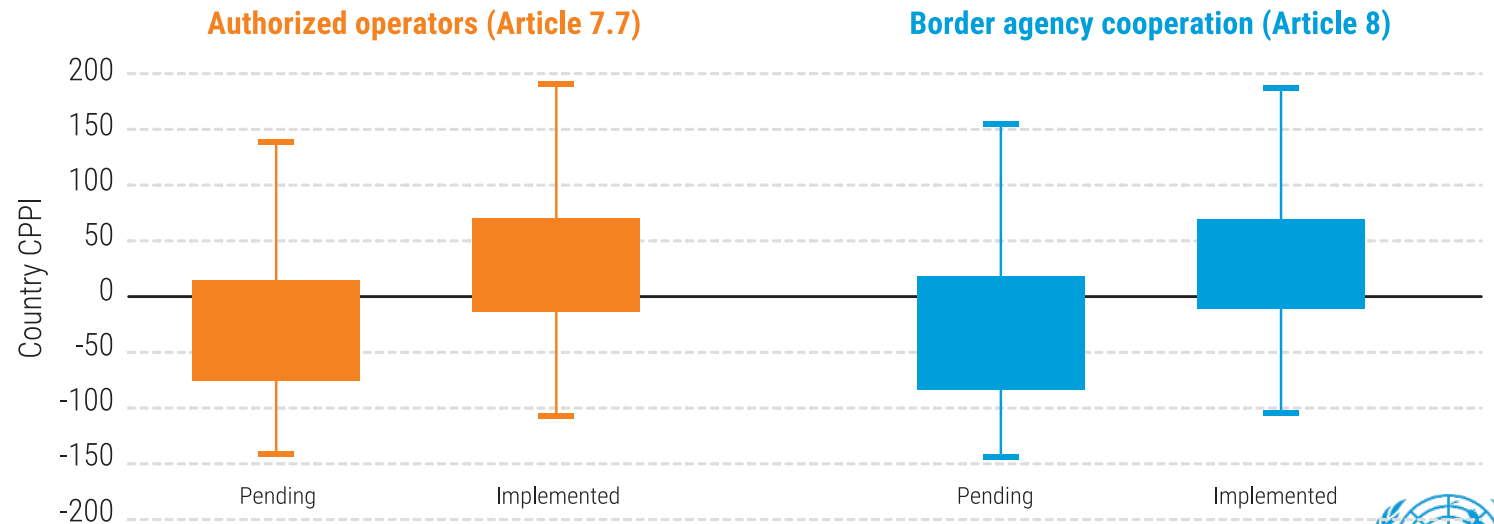
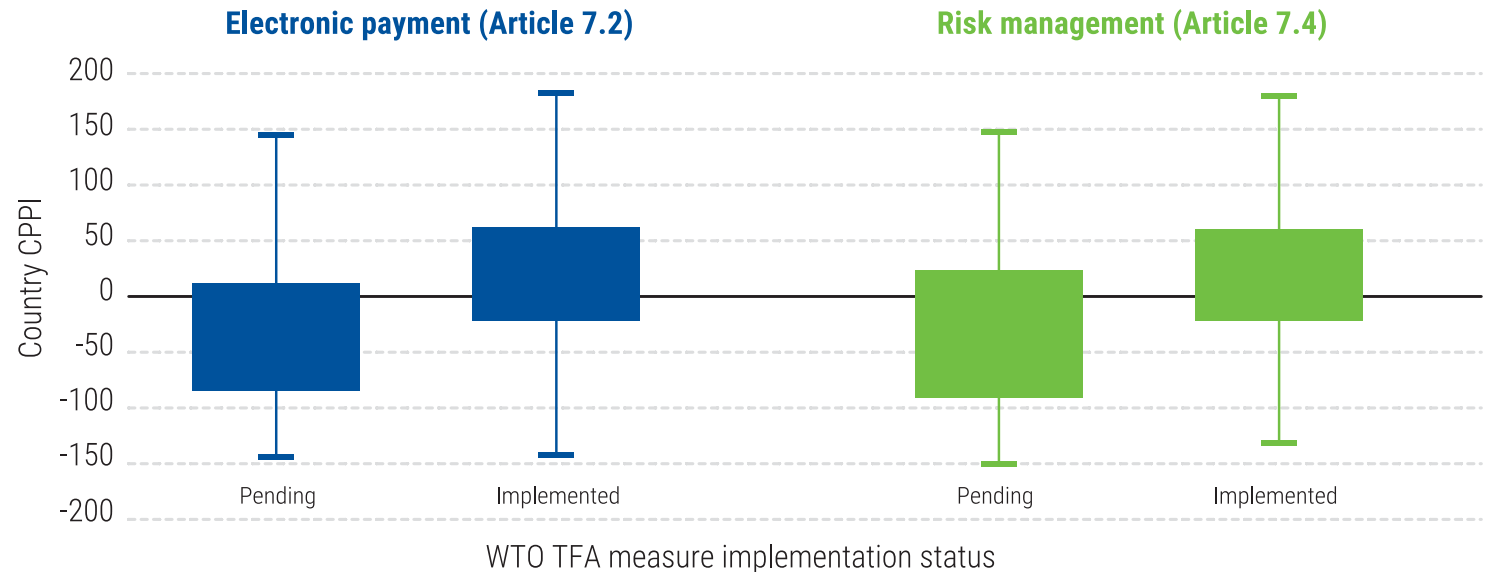


Source: UNCTAD, based on data provided by Clarksons Research.

Notes: Waiting time estimated based on the time between vessel first entering an anchorage associated with a port group (or port where vessel has not been seen in an anchorage shape), and first entering a berth within a port.



# Country Container Port Performance Index values 2022 by implementation status of selected measures under the WTO Trade Facilitation Agreement



Source: UNCTAD, based on data from the Container Port Performance Index 2022 and the WTO Trade Facilitation Agreement Facility.

Note: Country grouping implementation status based on the WTO TFA articles. Distributions showing port efficiency according to the 2022 Container Port Performance Index of the World Bank and S&P Global using the Administrative Approach scores. The middle line represents the median, the top and bottom lines of the boxes represent the first and third quartile, and the top and the bottom lines (the whiskers) represent the minimum and the maximum values (excluding outliers).



## TWO KEY DEVELOPMENTS

1. The 2020-2022 supply chain crisis motivated further digitalization.
2. Exponential technological progress in AI

# THREE STAGES OF DIGITALIZATION

- 1. Optimization**  
Maximizing efficiency and reliability in existing processes
- 2. Extension**  
Moving beyond efficiency to capture new sources of value
- 3. Transformation**  
Reinventing logistics, trade and business models, based on data-driven revenue streams

Source and further reading:  
<https://t.co/vbHAdYaSWf>



# 1: OPTIMIZATION

## Example: Port call optimization

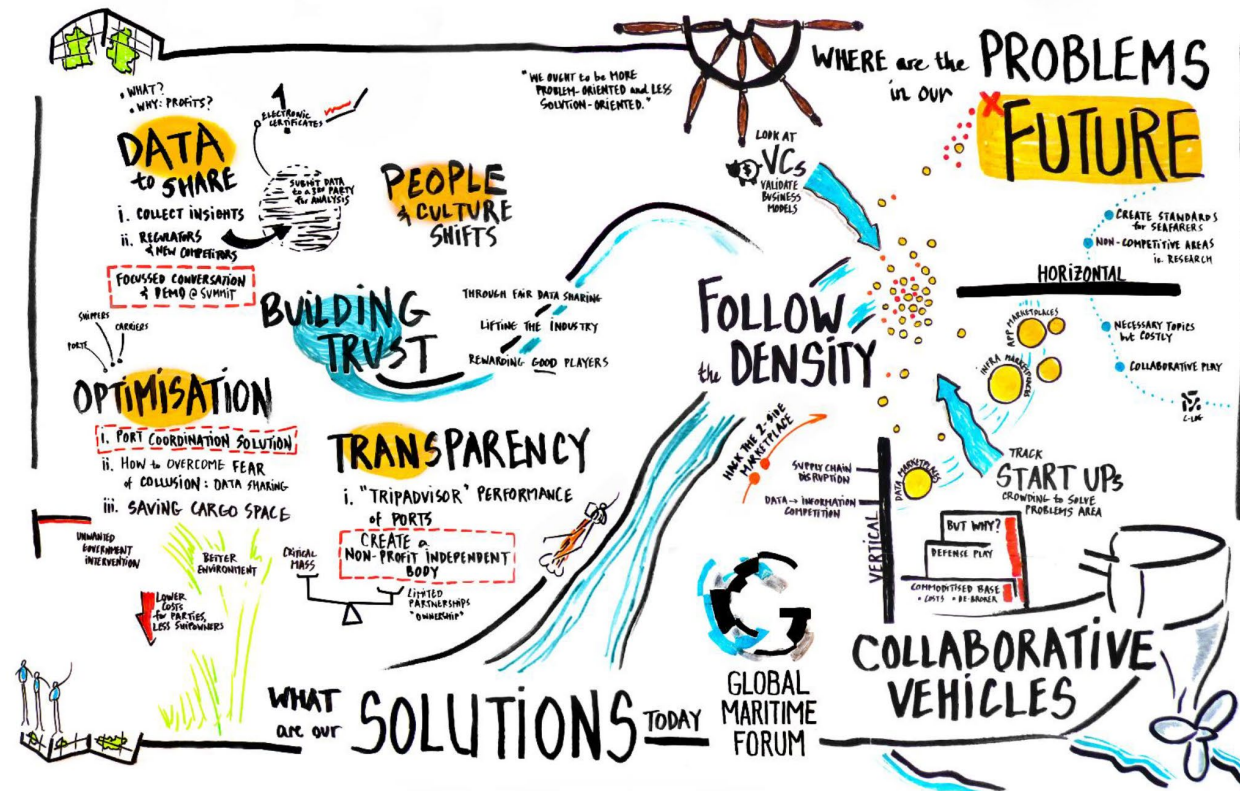
“Port Call Optimization is about optimizing speed, draught and port stay, leading to lower costs, cleaner environment, more reliability and safety for Shipping, Terminals and Ports”.



<https://portcalloptimization.org/>

# 2: EXTENSION

“Action opportunities”



Further reading: <http://globalmaritimeforum.org>

# 3: TRANSFORMATION

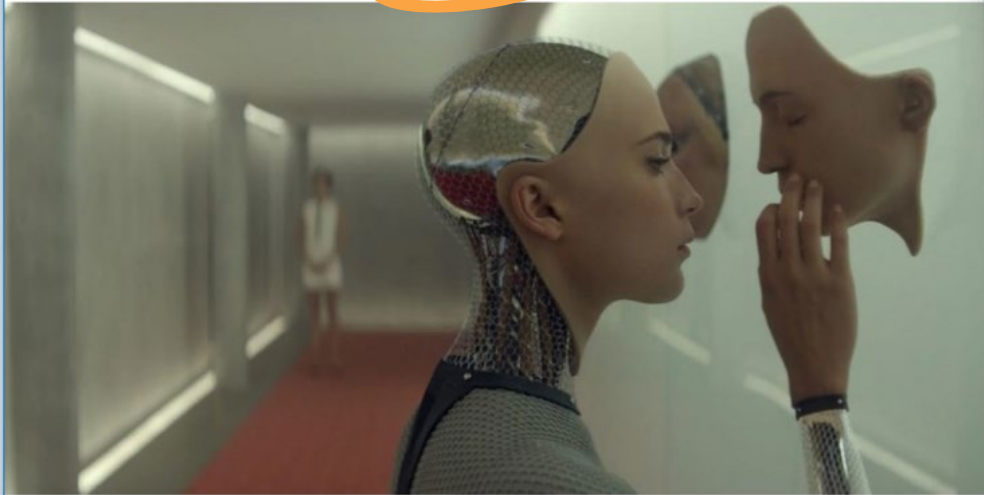


DISCOVER VIDEO BIG THINK FOR BUSINESS

## Human-like A.I. will emerge in 5 to 10 years, say experts

A survey conducted at the **Joint Multi-Conference on Human-Level Artificial Intelligence** shows that 37% of respondents believe human-like artificial intelligence will be achieved within five to 10 years.

**STEPHEN JOHNSON** 26 September, 2018

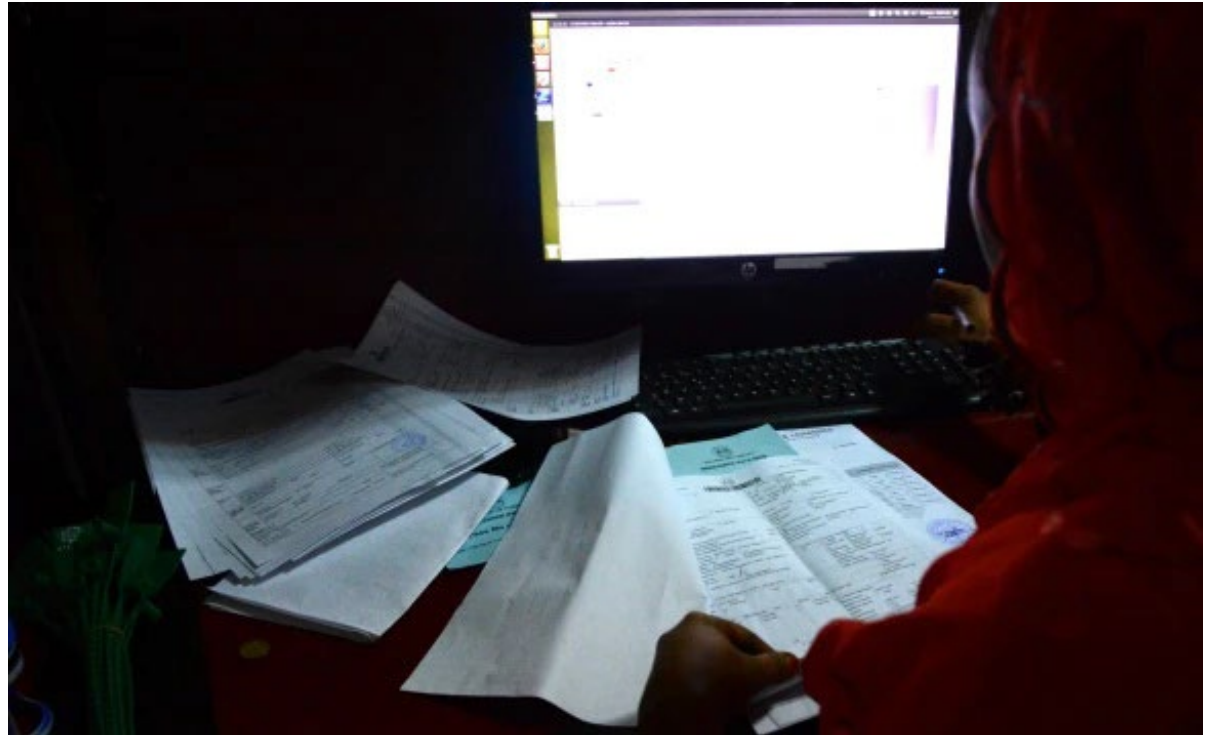


Further reading: <https://www.linkedin.com/pulse/what-read-times-chatgpt-jan-hoffmann/>

# WHAT IS THE IMPACT OF ARTIFICIAL INTELLIGENCE (AI) ON THE **FUTURE** OF INTERNATIONAL TRANSPORT AND LOGISTICS?

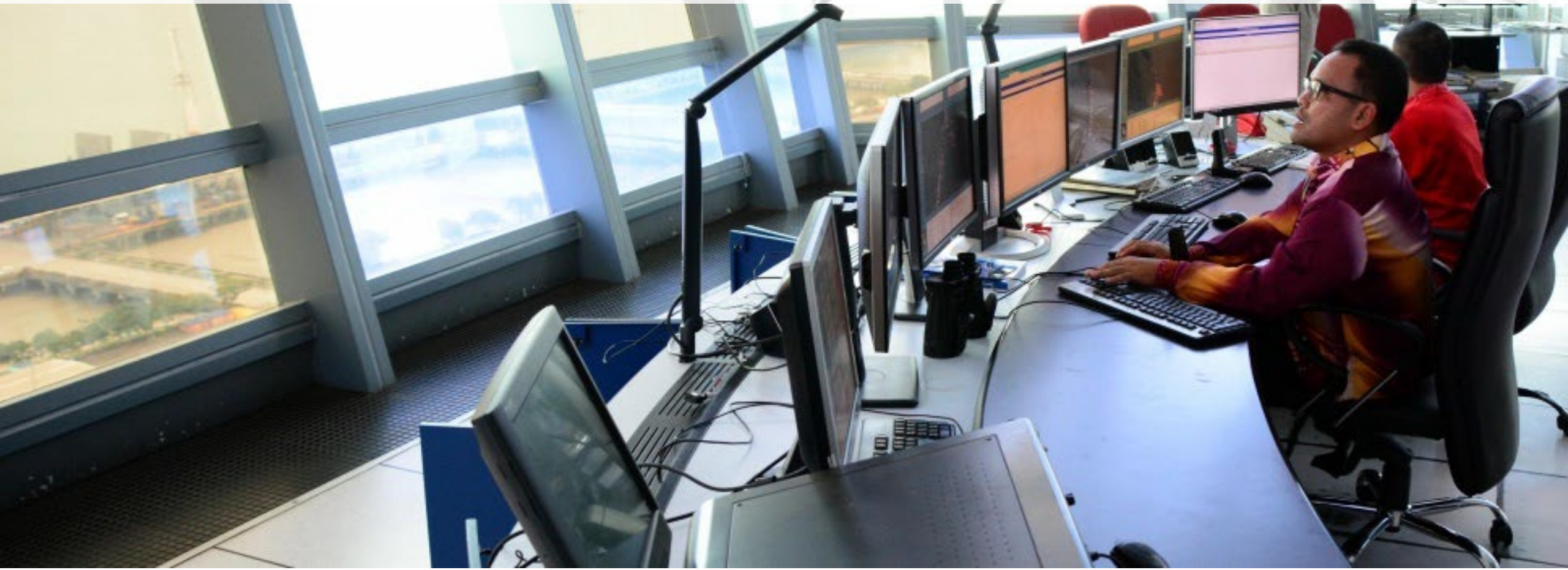
AI is expected to have a significant impact on the future of international transport and logistics in various ways.

**7** key areas where  
AI can transform the  
industry



## 1. **Optimized** routes and scheduling

AI algorithms can analyze massive amounts of data to find the most efficient routes, considering factors such as fuel consumption, distance, traffic, and weather conditions. This will enable quicker, more cost-effective deliveries and reduce overall carbon emissions.





## 2. **Autonomous** vehicles and drones

Self-driving trucks, ships, and drones powered by AI will play a major role in transporting goods internationally.

Autonomous vehicles can operate 24/7 with minimal human intervention, improving productivity and reducing labor costs.

They can also lead to increased safety by reducing the likelihood of accidents caused by human error.



### 3. Demand **forecasting** and inventory management

AI-driven systems can analyze historical data, market trends, and other factors to predict demand and optimize inventory levels.

This enables businesses to reduce stockouts, overstocks, and warehousing costs, improving overall supply chain efficiency.





#### 4. Enhanced **customs** clearance

AI-powered systems can facilitate faster, more accurate customs clearance by automatically classifying goods, calculating duties, and identifying potential risks or violations.

This can reduce the time spent in customs, leading to faster deliveries and reduced costs.

## 5. **Smart** ports and warehouses

AI can optimize port and warehouse operations by automating tasks such as container stacking, loading, and unloading.

Robotic systems powered by AI can perform these tasks more efficiently, reducing dwell times and improving overall throughput.



## 6. Improved supply chain **visibility**

AI can provide real-time updates on the status of shipments, allowing businesses to track their goods and make data-driven decisions.

This increased visibility can help prevent delays and improve customer satisfaction.



## 7. Enhanced security

AI can analyze patterns and detect potential threats to the supply chain, such as cyberattacks or cargo theft.

By identifying these risks early, businesses can take preventative measures to protect their assets.



## 8. AI can also help prepare ppt presentation for the CSA 😊

Source:

<https://chat.openai.com/?model=gpt-4>



What is the impact of AI on the future of international transport and logistics?



AI is expected to have a significant impact on the future of international transport and logistics in various ways. Some of the key areas where AI can transform the industry include:

1. **Optimized routes and scheduling:** AI algorithms can analyze massive amounts of data to find the most efficient routes, considering factors such as fuel consumption, distance, traffic, and weather conditions. This will enable quicker, more cost-effective deliveries and reduce overall carbon emissions.
2. **Autonomous vehicles and drones:** Self-driving trucks, ships, and drones powered by AI will play a major role in transporting goods internationally. Autonomous vehicles can operate 24/7 with minimal human intervention, improving productivity and reducing labor costs. They can also lead to increased safety by reducing the likelihood of accidents caused by human error.
3. **Demand forecasting and inventory management:** AI-driven systems can analyze historical data, market trends, and other factors to predict demand and optimize inventory levels. This enables businesses to reduce stockouts, overstocks, and warehousing costs, improving overall supply chain efficiency.
4. **Enhanced customs clearance:** AI-powered systems can facilitate faster, more accurate customs clearance by automatically classifying goods, calculating duties, and identifying potential risks or violations. This can reduce the time spent in customs, leading to faster deliveries and reduced costs.
5. **Smart ports and warehouses:** AI can optimize port and warehouse operations by automating tasks such as container stacking, loading, and unloading. Robotic systems powered by AI can perform these tasks more efficiently, reducing dwell times and improving overall throughput.
6. **Improved supply chain visibility:** AI can provide real-time updates on the status of shipments, allowing businesses to track their goods and make data-driven decisions. This increased visibility can help prevent delays and improve customer satisfaction.
7. **Enhanced security:** AI can analyze patterns and detect potential threats to the supply chain, such as cyberattacks or cargo theft. By identifying these risks early, businesses can take preventative measures to protect their assets.

In summary, the impact of AI on international transport and logistics is poised to improve efficiency, reduce costs, increase safety, and enhance overall supply chain performance. However, it's important to consider potential challenges such as job displacement, regulatory issues, and data security concerns. As AI technologies continue to develop, the industry will need to adapt to these changes to fully harness the benefits AI has to offer.

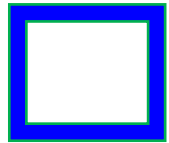
Der technologische  
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WTO OMC

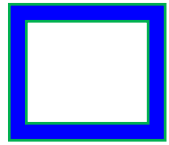




# WHO LEADS THE IT REFORMS IN YOUR COMPANY?



The CEO



The CTO



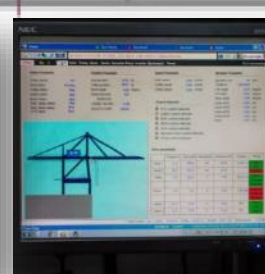
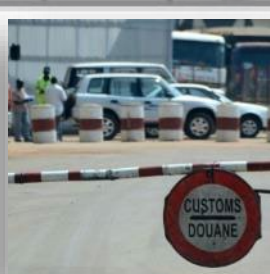
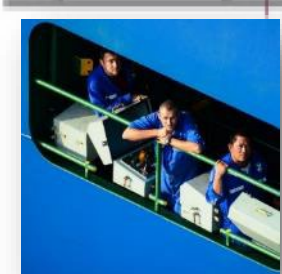
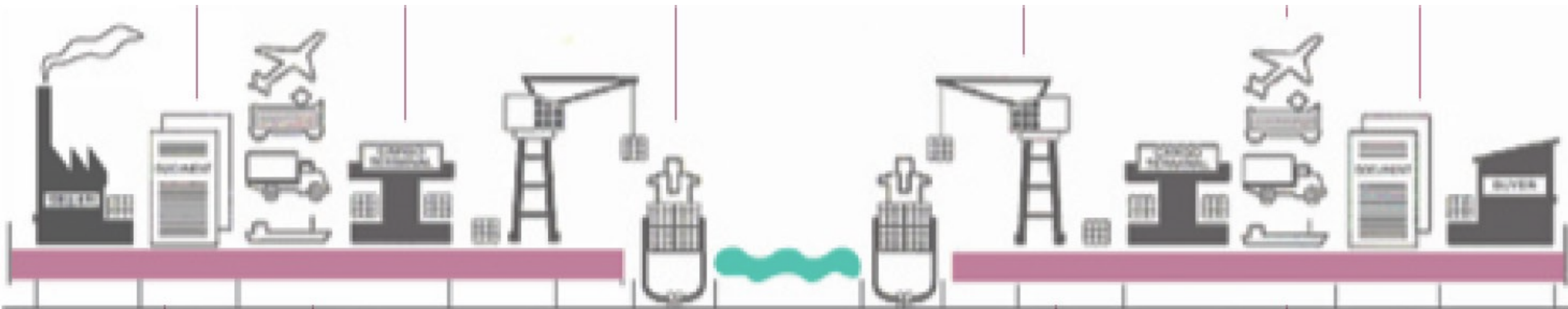
Covid-19



# TRANSPORT IN TIMES OF COVID19

A 10-point action plan

<https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2713>



# IS THERE A TRADE-OFF BETWEEN CONTROLS AND TRADE FACILITATION?



The concrete measures proposed in this policy brief help to facilitate transport and trade and to protect the population from COVID-19.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT  
**UNCTAD**

No. 79  
APRIL 2020

## POLICY BRIEF

### COVID-19: A 10-POINT ACTION PLAN TO STRENGTHEN INTERNATIONAL TRADE AND TRANSPORT FACILITATION IN TIMES OF PANDEMIC

The coronavirus disease (COVID-19) pandemic is substantially impacting people's lives and livelihoods and putting extreme stress on socioeconomic systems. International collaboration, coordination and solidarity among all is going to be key to overcoming this unprecedented global challenge. As part of efforts aimed at reducing the international spread of the virus and to mitigate the potentially crippling longer-term consequences of the pandemic, especially for the most vulnerable countries, policymakers need to take a number of measures to ensure the facilitation of international trade and the transport of goods. It is crucial to keep ships moving, ports open and cross-border and transit trade flowing, while ensuring that border agencies can safely undertake all necessary controls.

#### Key points

- There is a need to keep ships moving, ports open and cross-border trade flowing, while ensuring that border agencies can safely undertake all necessary controls.
- Facilitating trade and the transport of goods has become more important than ever, to avoid economic collapse and critical supply chain disruptions.
- The concrete measures proposed in this policy brief help to facilitate transport and trade and to protect the population from COVID-19.

#### Challenges for international trade logistics\*

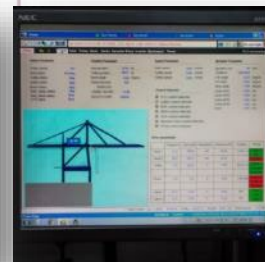
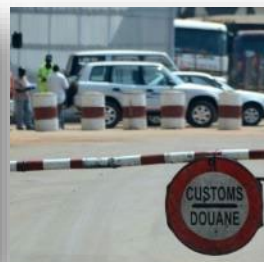
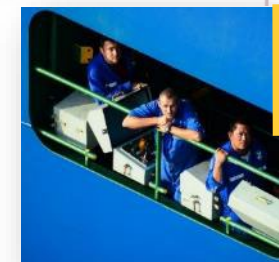
Border agencies face the challenge of expediting imports, exports and transit, including of necessary medical supplies, donations and relief consignments, while ensuring epidemic prevention and providing adequate customs clearance and compliance controls of goods and transport personnel.

This challenge affects goods and services that are necessary for the preservation of many jobs in manufacturing, on which modern society depends. Particular efforts need to be made on the part of Governments to secure and enhance the production and distribution of critical goods needed to contain and combat the pandemic (such as medical supplies and equipment) and to secure basic needs (including food and energy). Relevant service providers and the supporting infrastructure need to be protected as a matter of priority. This includes ensuring that transport services, ports and border agencies not only remain operational, but are effectively strengthened to cope with the exceptional challenges they face.

Governments need to adopt common approaches to addressing these issues across the global network of supply chains to avoid widespread disruptions. In the absence of urgent action in this regard, the post-pandemic economic recovery may be severely hampered, potentially worsening long-term sustainable development prospects, particularly for the world's poorest and most vulnerable.

International cooperation on these points is vital, as protectionism may significantly exacerbate the global health crisis and delay a post-pandemic economic recovery. Effective collaboration, coordination and cooperation among public and private stakeholders at all levels will also be key.

\* Note: All websites referred to in this document were accessed in April 2020.

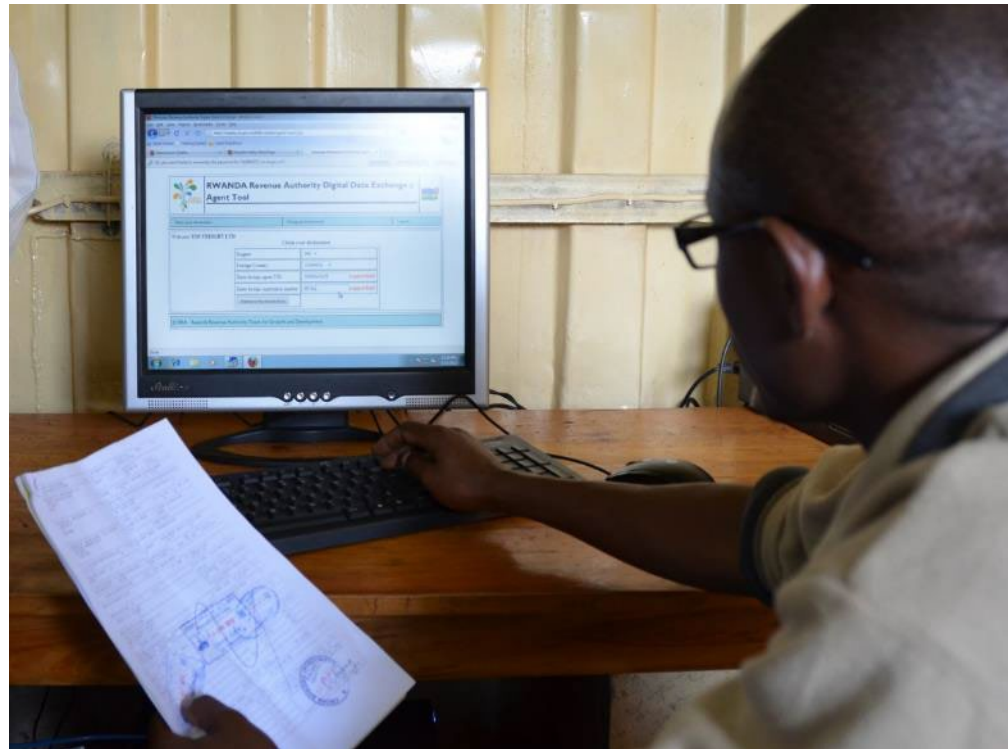


- The negotiation, ratification and implementation of conventions take time
- Need to commit to **whatever** is the best [**future**] technological solution



# OUT OF DATE ALREADY?

- In the future the concept of “copies” versus “originals” as per Article 10.2 TFA will become obsolete as processes focus on **data** rather than on documents.



# A DYNAMIC DIMENSION IN THE TFA

- In the **long term**, Article 10.1 will gain in importance, it does not prescribe any specific technological solution.



# A DYNAMIC DIMENSION IN THE TFA

- In the long term, Article 10.1 will gain in importance, it does not prescribe any specific technological solution.
- Progressively, various provisions will become antiquated or obsolete and we will just want to *minimize* “the incidence and complexity of import, export, and transit formalities”; continuously “*review*” requirements; keep “*reducing* the time and cost of compliance for traders and operators”; and always choose “the *least* trade restrictive measure” (10.1 TFA)





# 1) The Energy Transition

## 2) Demand, Supply, and Markets

## 3) Ports and Maritime Connectivity

## 4) Challenges – and Opportunities





# Climate Change



## Who pays today?

- Coastal populations in Bangladesh whose lands are flooded
- Investors in the Bahamas whose properties are devastated by more frequent hurricanes
- Farmers in Mali whose crops fail after another dry season
- Families on Pacific islands whose homes are disappearing
- Swiss ski resorts left without snow



The polluter should pay.

And the polluter should be given three options.

**1. Don't pollute / pollute less:**

Go slower, use clean fuel, near-source

**2. Clean up and help adapt:**

Filter, build flood walls, invest in ports, construct hurricane resilient cranes, ...

**3. Compensate:**

Help those who are negatively affected



# “MARKET BASED MEASURES” = “ECONOMIC MEASURES”

Called “MBMs”: Measures that place a **price** on greenhouse gas (GHG) emissions. This can, for example, be a levy, or a market price under a carbon trading scheme.





TECHNICAL CO-OPERATION  
COMMITTEE  
41st session  
Agenda item 7(c)

12 One possible source of autonomous sustainable financing is the "internalisation of costs". That means wherever it is administratively feasible it should be made sure that the "polluter" pays either for the prevention, clean-up or compensation for costs that are caused by his economic activity. *If* this can be assured the potential "polluter" will usually choose the cheapest mix of prevention, clean-up and/or compensation. Whenever others (e.g. individuals, donors, countries, companies) pay for the prevention, clean-up or compensation, then the potential polluter will rely on this "payment" as much as possible. If, for example, the public pays for "compensation" companies can free ride and will have less incentives to invest in "prevention" or "clean-up"; or if the public arranges the "clean-up" companies will need to pay fewer insurance premiums to cover potential "compensation". It must be stressed that the *total* costs will usually be minimised if each company had to choose the cheapest mix of mechanisms herself.

# A LEVY ON CO2 ?

## A proposal for an IMO-led global shipping industry decarbonisation programme

### Marshall Islands demands \$100 tax on shipping emissions

A levy on greenhouse gas emissions would be the first market-based measure ever imposed on the shipping industry

11 Mar 2021 | NEWS



The Marshall Islands and Solomon Islands have made a landmark proposal to the International Maritime Organization to charge by 2025 shipping companies \$100 per tonne of CO2 equivalent their vessels emit



## CARBON LEVY EVALUATION

Could a carbon levy in shipping be an effective way to help reach the IMO greenhouse gas reduction goals?

October 2019



NEWS KEY ISSUES SUBMISSIONS FREE RESOURCES PUBLICATIONS ABOUT ICS

Home // Shipping sector proposes USD 5 billion R&D board to cut emissions

## Shipping sector proposes USD 5 billion R&D board to cut emissions

Dec 18, 2019

The global maritime transport industry has submitted a proposal to form the world's first collaborative shipping R&D programme to help eliminate CO2 emissions from international shipping. The proposal includes...



## Global Carbon Price

A global price on carbon combined with dependable and broad-based "buy down" programmes that effectively level the playing field among newer low and zero GHG ships and the tens of thousands of ships that will still be burning conventional fuels.

This will play a large role in making it possible for companies to put zero GHG ships on the water and to operate them competitively.

responsibility for regulating the reduction of CO2 by international shipping.

The industry-wide move to accelerate R&D is necessary to ensure the ambitious reduction targets agreed to by IMO Member States in 2018 are met.

These ambitious IMO targets include an absolute cut in the sector's total greenhouse emissions of at least 50 percent by 2050, regardless of trade growth, with full decarbonisation shortly after. The 2050 target will require a carbon efficiency improvement of up to 90 percent, which is incompatible with a continued long-term use of fossil commercial shipping.

Meeting the IMO GHG reduction goals will require the deployment of new zero-carbon technologies and propulsion systems, such as green hydrogen and ammonia, fuel cells, batteries and synthetic fuels produced from renewable energy sources. These do not yet exist in a form or scale that can be applied to large commercial ships, especially those

## SHIP TECHNOLOGY

Dr Kostas Gkonis, secretary general of the International Association of Dry Cargo Shipowners (INTERCARGO) believes that closer investigation of the environmental impact of slow steaming is also necessary. "When it comes to GHG emissions, one would need to factor in the extra emissions from the shipbuilding activity for constructing these ships. More emissions would also result from steel production, but also mining and transporting coal for the shipbuilding purposes," he says.

"Imposing a tax on fuel would be a better way to encourage "environmentally friendly and efficient slow steaming". It's the idea of imposing speed limits with which he doesn't agree. "The absence of 'speed limits' allows a ship to speed up during boom market periods. This is desirable, otherwise the market would necessitate extra shipping capacity by building more ships in a wasteful and inefficient way," he says.

For the first time, the International Chamber of Shipping (ICS) and Intercargo have jointly proposed a levy based on mandatory contributions for each tonne of CO2 emitted from ships exceeding 5,000 gross tonnes and trading globally.



The money collected would go into a climate fund that would be used to deploy bunkering infrastructure in ports around the world to supply cleaner fuels such as hydrogen and ammonia, according to the proposal.

"What shipping needs is a truly global market-based measure like this that will reduce the price gap between zero-carbon fuels and conventional fuels," ICS Secretary General Guy Platten said.

# A LEVY ON CO2 ?



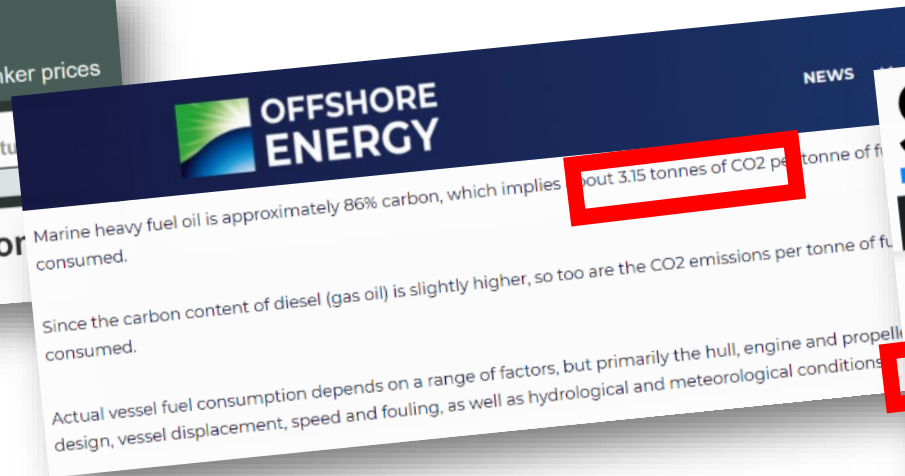
## DHAKA-GLASGOW DECLARATION OF THE CVF



**7. Maritime Emissions:** We recognize the critical importance of shipping to our states and to prioritize and support all efforts to advocate for this sector. We call upon further urgent discussion, study and work of the IMO for establishing a mandatory GHG levy on international shipping to ensure that IMO emission measures are fully aligned with a 1.5°C pathway following IPCC AR6. We recognize the need for the shipping transition to next generation vessels and fuels to be equitable and benefit all states. We support that the majority of the levy's revenues be employed as additional financial support for urgent climate actions, particularly by the vulnerable developing countries. We urge members to consider adopting ambitious targets in domestic maritime emissions for a transition to zero emissions that leaves no one behind.

Afghanistan, Bangladesh, Barbados, Benin, Bhutan, Burkina Faso, Cambodia, Colombia, Comoros, Costa Rica, Democratic Republic of the Congo, Dominican Republic, Eswatini, Ethiopia, Fiji, the Gambia, Ghana, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Kenya, Kiribati, Lebanon, Liberia, Madagascar, Malawi, Maldives, Marshall Islands, Mongolia, Morocco, Nepal, Nicaragua, Niger, Palau, Palestine, Papua New Guinea, Philippines, Rwanda, Samoa, Saint Lucia, Senegal, South Sudan, Sri Lanka, Sudan, Tanzania, Timor-Leste, Tunisia, Tuvalu, Uganda, Vanuatu, Viet Nam, Yemen.

# HOW MUCH IS IT?



$$229\,000\,000 * 3.15 * 100 = 72\,135\,000\,000 \$ \text{ per year total carbon levy}$$





**Technological  
progress will  
never be as slow  
as today**



# The decarbonization of maritime transport: Delaying the transition is more costly than the transition





**1) The Energy Transition**

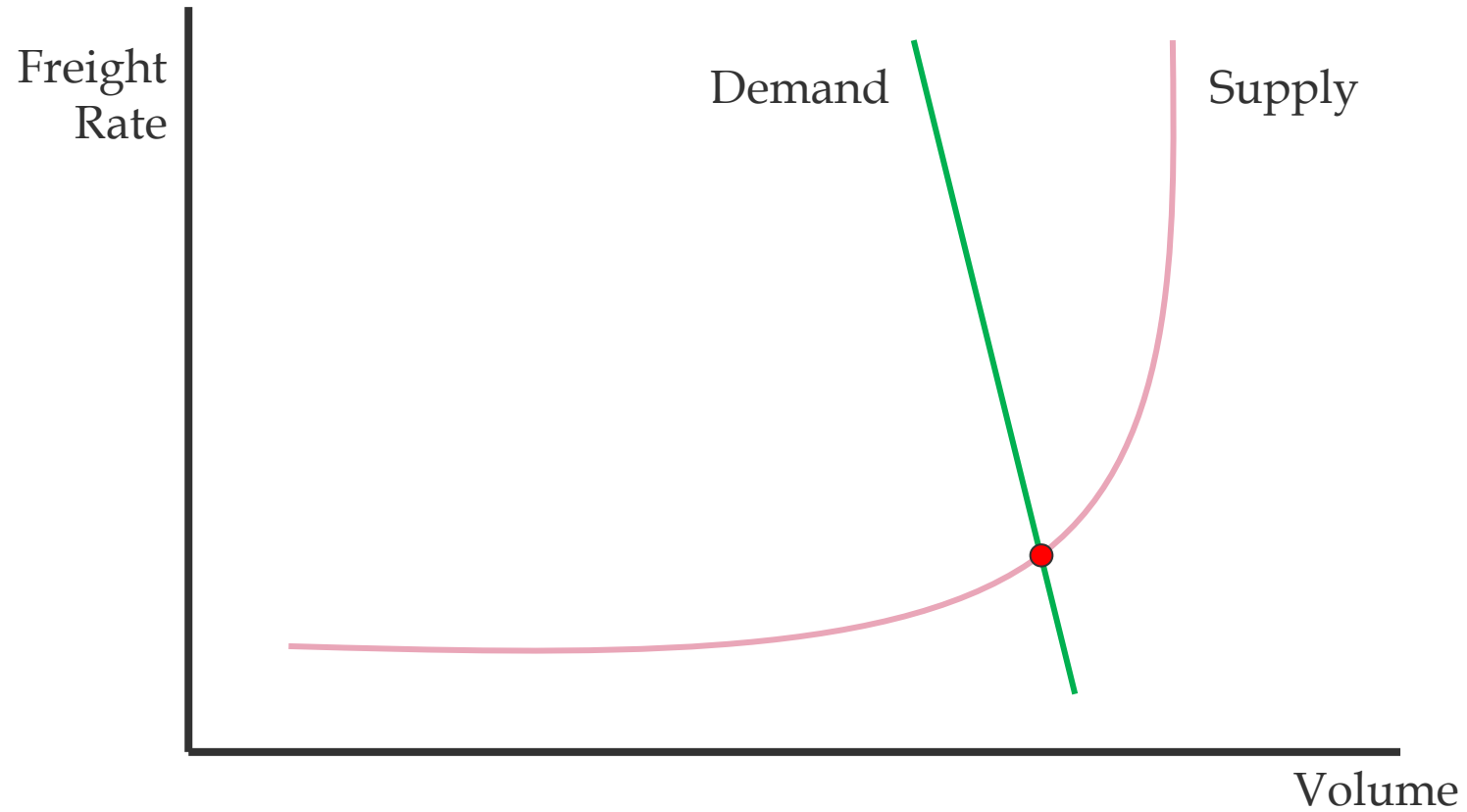
**2) Demand, Supply, and Markets**

**3) Ports and Maritime Connectivity**

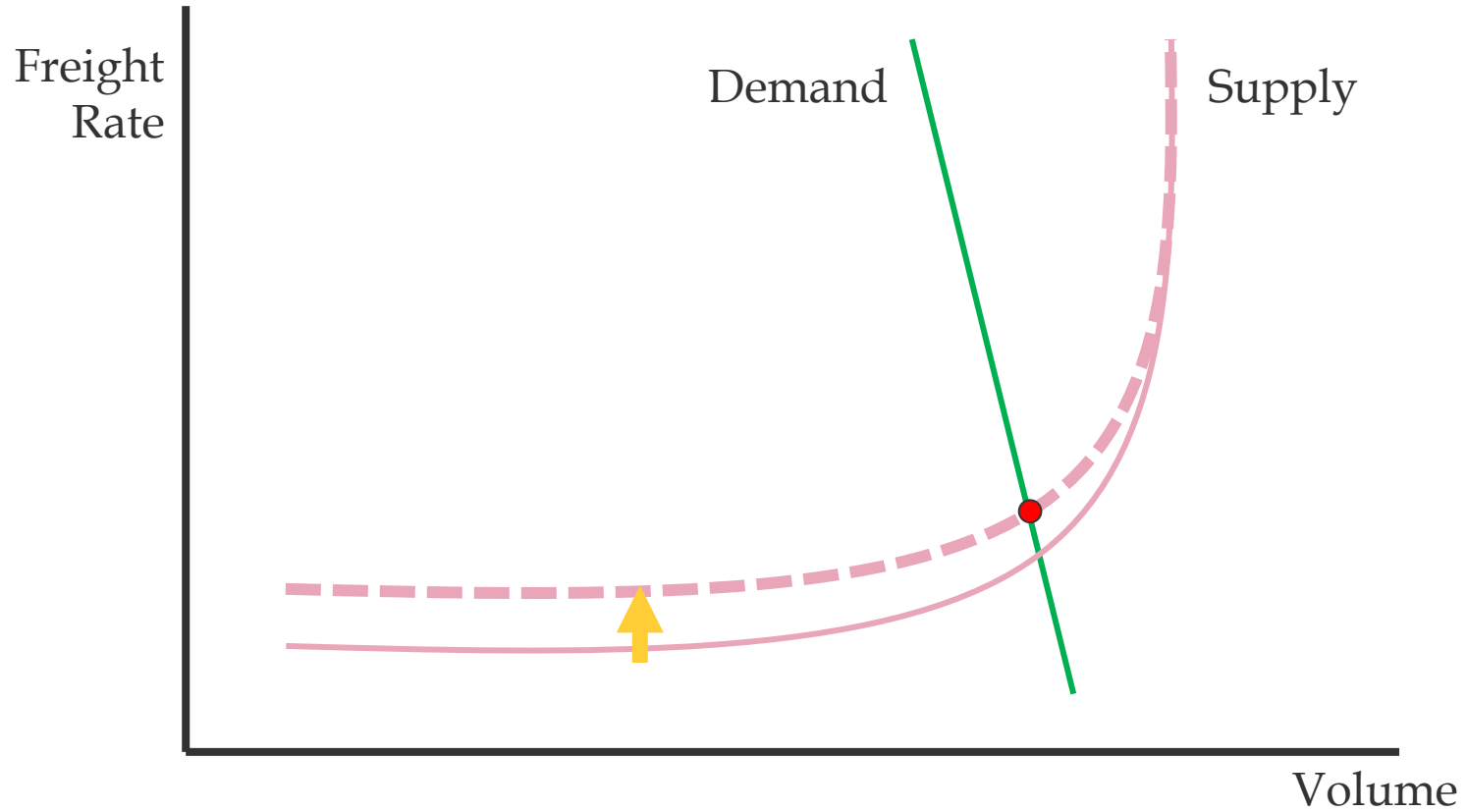
**4) Challenges – and Opportunities**



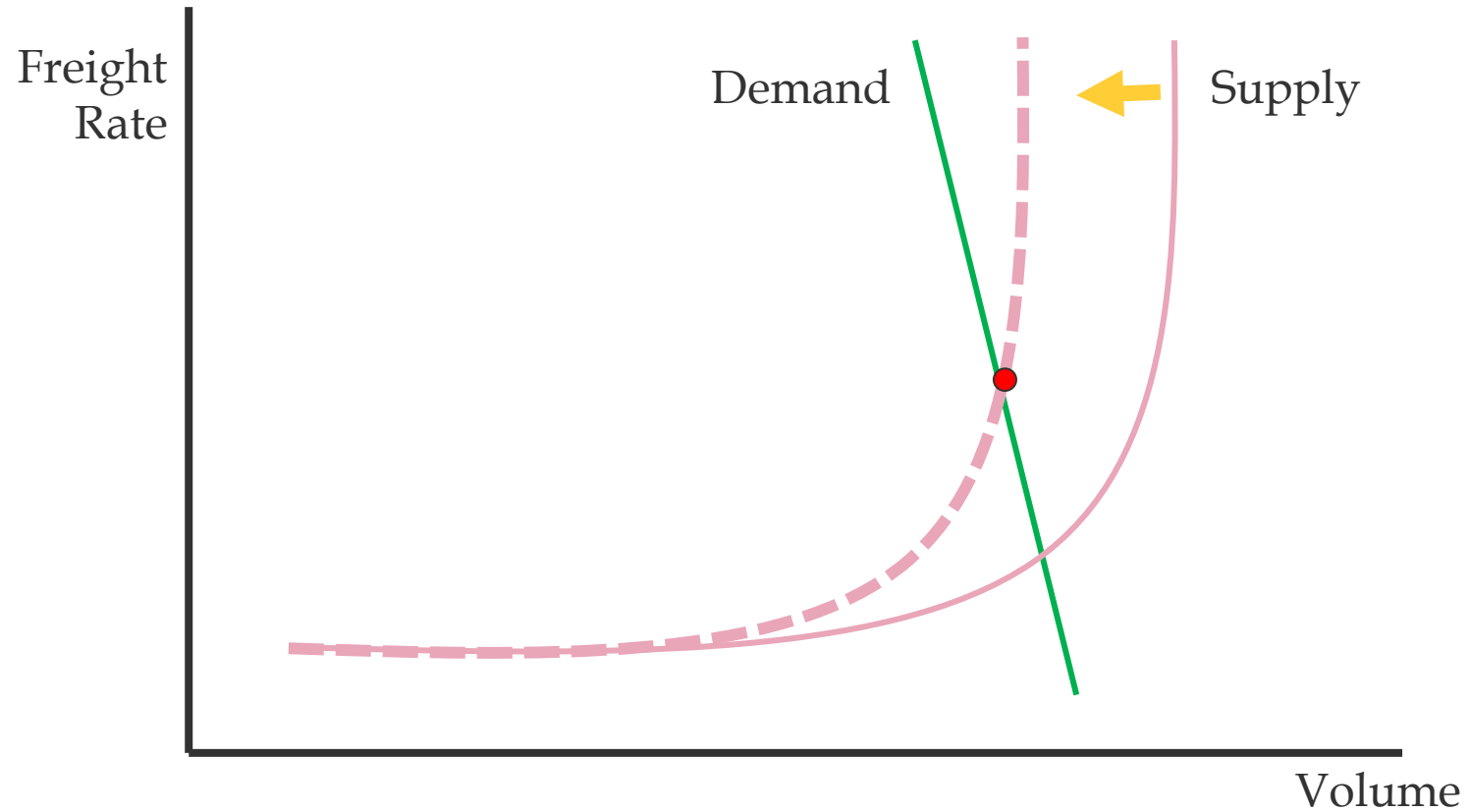
# The starting point



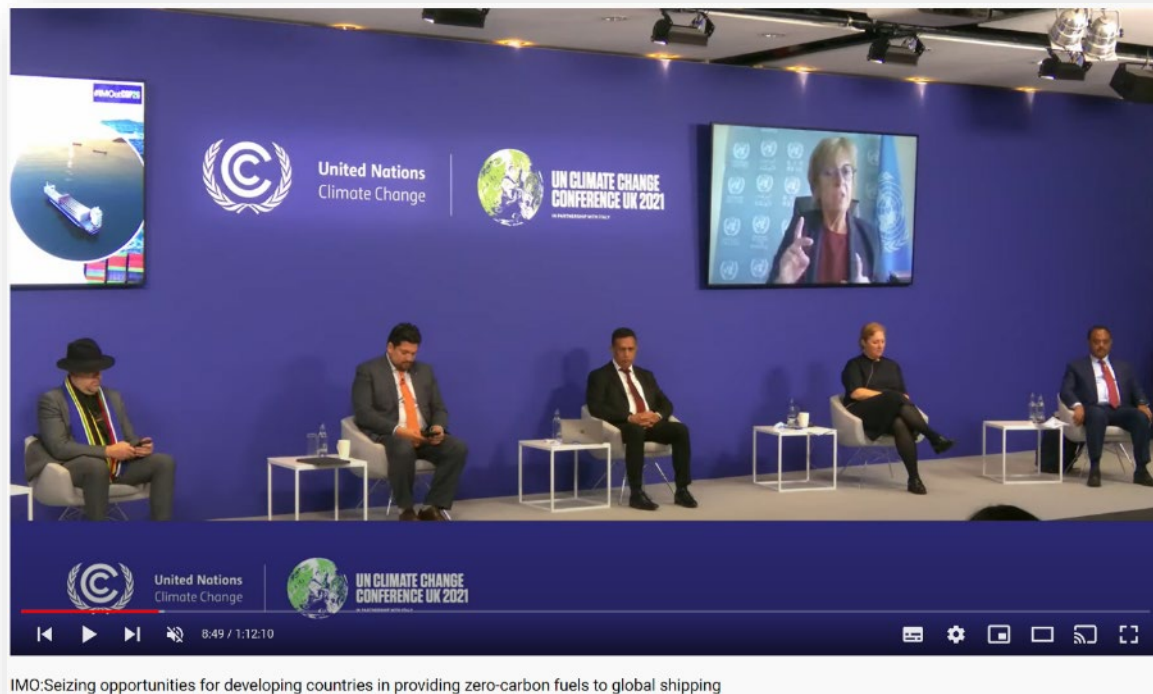
# Decarbonization leads to a slightly higher supply curve



# Uncertainty leads to a shift of the supply curve to the left



# Opportunity 1: Developing countries as providers of alternative fuels



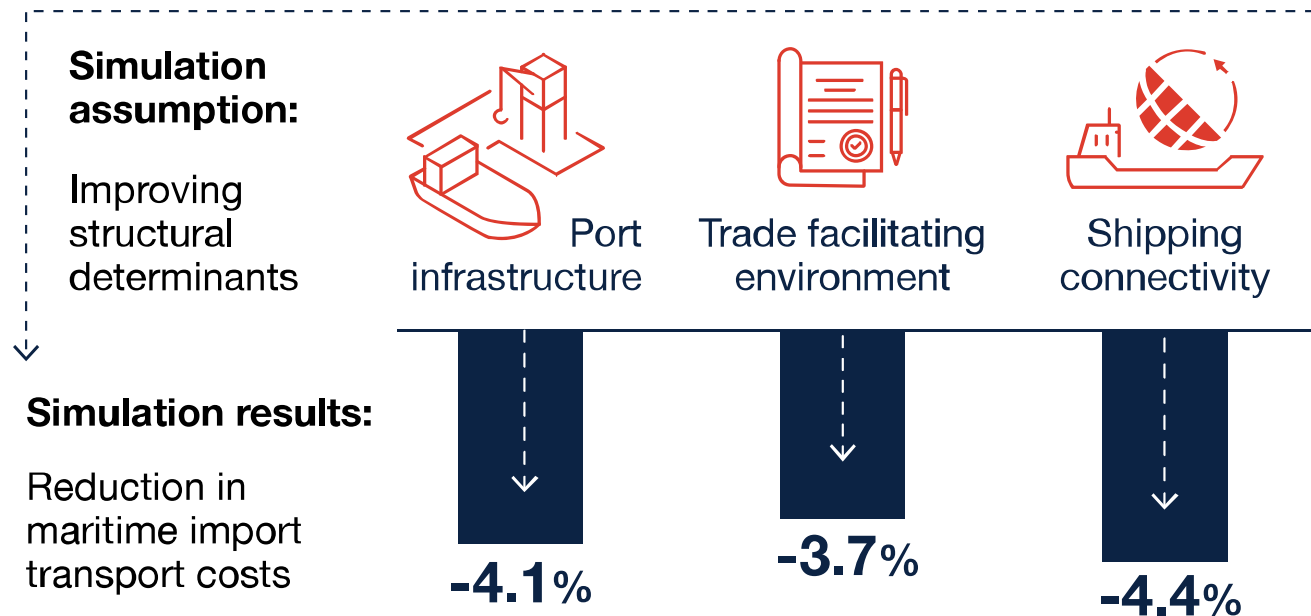
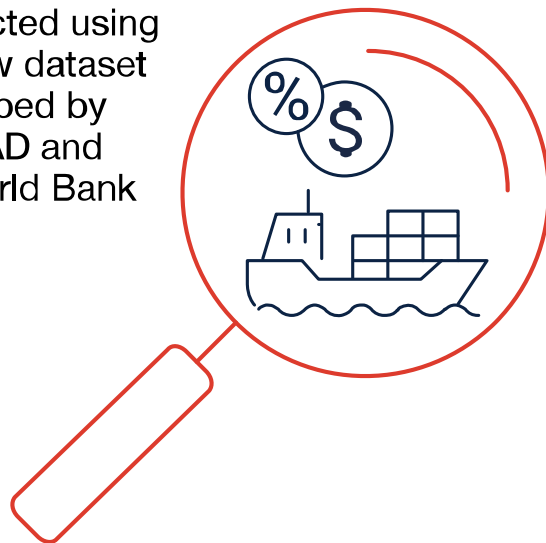
“... here is an opportunity. Zero-carbon shipping represents a business and development opportunity for several developing countries. In the past, the bunker fuel market was a very non-inclusive market: countries with large oil reserves could participate, others could not.” (UNCTAD DSG Isabelle Durant)

## Opportunity 2:

With the generated funding, invest in improved trade logistics

### SIMULATED IMPACT OF IMPROVING MARITIME TRANSPORT COST DETERMINANTS

Simulation is conducted using the new dataset developed by UNCTAD and the World Bank





## Opportunity 3: Decarbonize shipping

The maritime industry has the historical opportunity to be ahead of the curve, as it can shape one global multilateral framework; other industries need to implement many national frameworks, where there is the risk of free riders and no global enforcement



UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

REVIEW  
OF MARITIME  
TRANSPORT

2023

Towards a  
green and just  
transition



Presentation of the  
**REVIEW OF MARITIME  
TRANSPORT 2023**

Towards a green and just transition



UNITED NATIONS  
UNCTAD



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# THANK YOU!

- <http://unctad.org/rmt>
- <http://stats.unctad.org/Maritime>

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