



Turun yliopisto  
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# The impact of COVID-19 on global supply chains and the transport sector\*

**UPDATE 14 May 2020**

*(Previous versions can be found [here](#))*

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**\*) This presentation can be freely disseminated**

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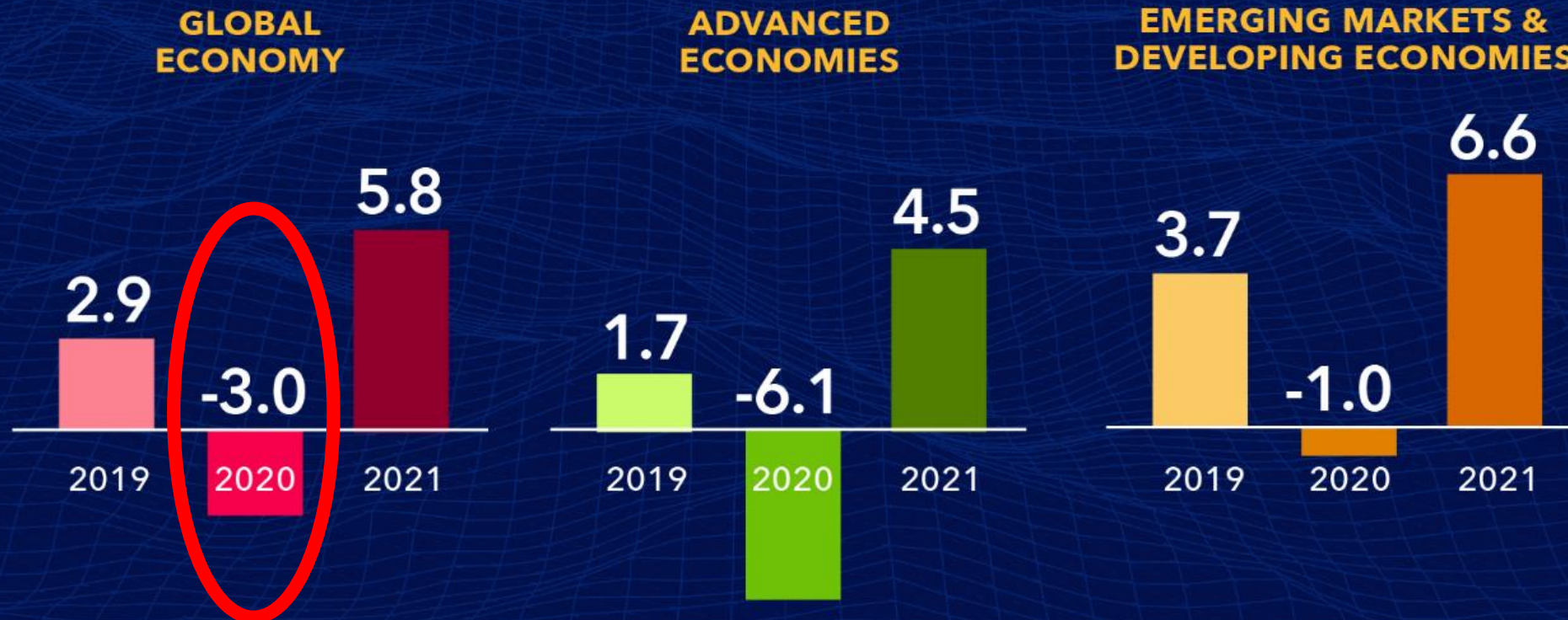
# **The “Big Picture” of COVID-19 impact on world economy in mid-April 2020**

# IMF on 14 April 2020: Global GDP -3.0 % in 2020

WORLD ECONOMIC OUTLOOK APRIL 2020

## GROWTH PROJECTIONS

The COVID-19 health crisis will have a severe impact on economic activity in 2020



# Latest World Economic Outlook Growth Projections

The COVID-19 pandemic will severely impact growth across all regions.

(real GDP, annual percent change)	2019	PROJECTIONS	
		2020	2021
<b>World Output</b>	<b>2.9</b>	<b>-3.0</b>	<b>5.8</b>
<b>Advanced Economies</b>	<b>1.7</b>	<b>-6.1</b>	<b>4.5</b>
United States	2.3	-5.9	4.7
Euro Area	1.2	-7.5	4.7
Germany	0.6	-7.0	5.2
France	1.3	-7.2	4.5
Italy	0.3	-9.1	4.8
Spain	2.0	-8.0	4.3
Japan	0.7	-5.2	3.0
United Kingdom	1.4	-6.5	4.0
Canada	1.6	-6.2	4.2
Other Advanced Economies	1.7	-4.6	4.5

**IMF**

**14 April 2020**

# Latest World Economic Outlook Growth Projections

The COVID-19 pandemic will severely impact growth across all regions.

(real GDP, annual percent change)	PROJECTIONS		
	2019	2020	2021
<b>Emerging Markets and Developing Economies</b>	<b>3.7</b>	<b>-1.0</b>	<b>6.6</b>
<b>Emerging and Developing Asia</b>	5.5	1.0	8.5
China	6.1	1.2	9.2
India	4.2	1.9	7.4
ASEAN-5	4.8	-0.6	7.8
<b>Emerging and Developing Europe</b>	2.1	-5.2	4.2
Russia	1.3	-5.5	3.5
<b>Latin America and the Caribbean</b>	0.1	-5.2	3.4
Brazil	1.1	-5.3	2.9
Mexico	-0.1	-6.6	3.0
<b>Middle East and Central Asia</b>	1.2	-2.8	4.0
Saudi Arabia	0.3	-2.3	2.9
<b>Sub-Saharan Africa</b>	3.1	-1.6	4.1
Nigeria	2.2	-3.4	2.4
South Africa	0.2	-5.8	4.0
<b>Low-Income Developing Countries</b>	5.1	0.4	5.6

**IMF**

**14 April 2020**



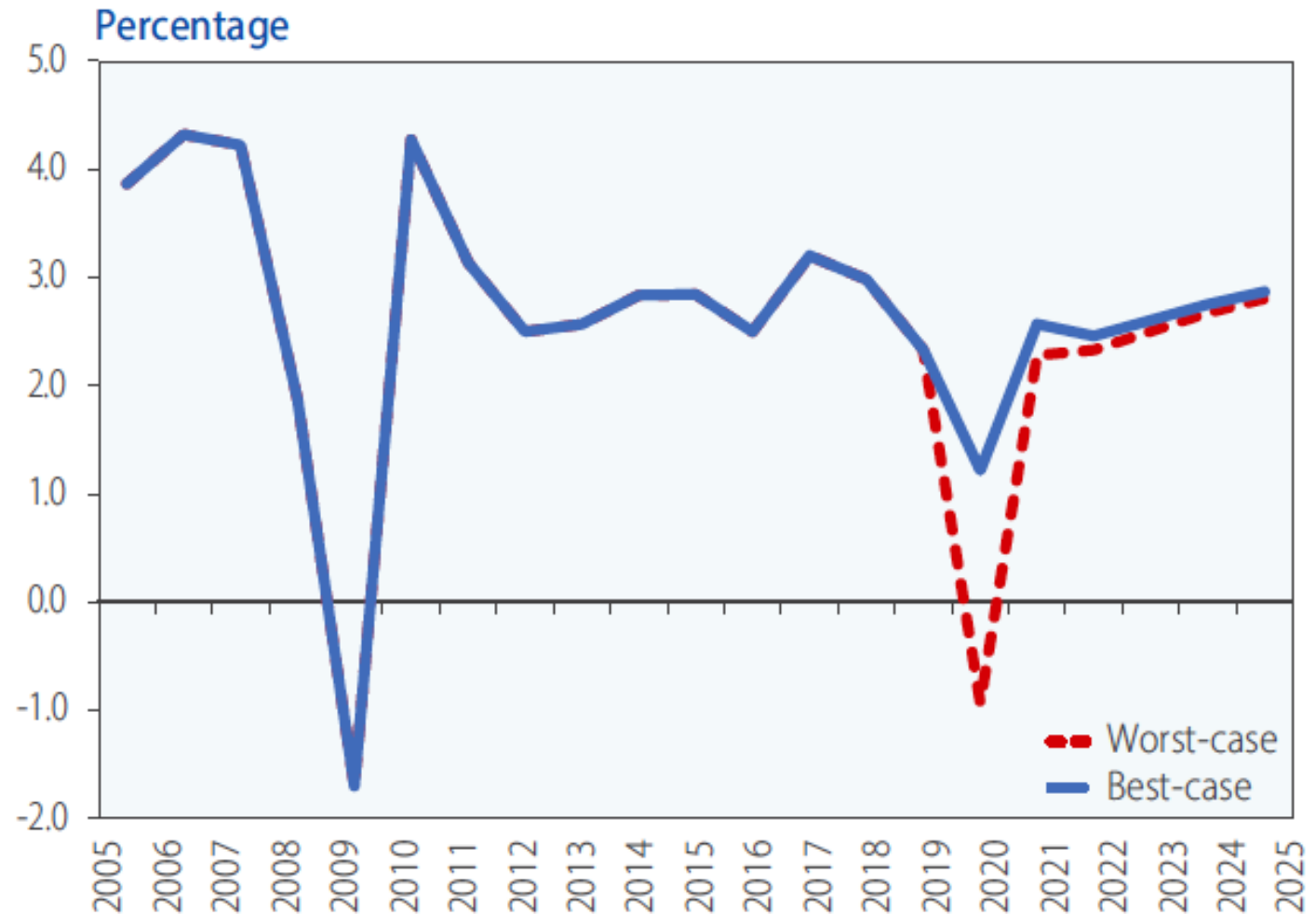
## UN on 1 April 2020: COVID-19 likely to shrink global GDP by almost one per cent in 2020

Governments are considering and rolling out large stimulus packages to avert a sharp downturn of their economies which could potentially plunge the global economy into a deep recession.

According to [UN DESA\\*](#) on 1 April 2020, the world economy could contract by 0.9 per cent in 2020 in the worst-case scenario.

\*) UN Department of Economic and Social Affairs Economic Analysis

## World growth outlook for 2020 in the best- and worst-case scenarios, as of late March 2020



Source: UN DESA.

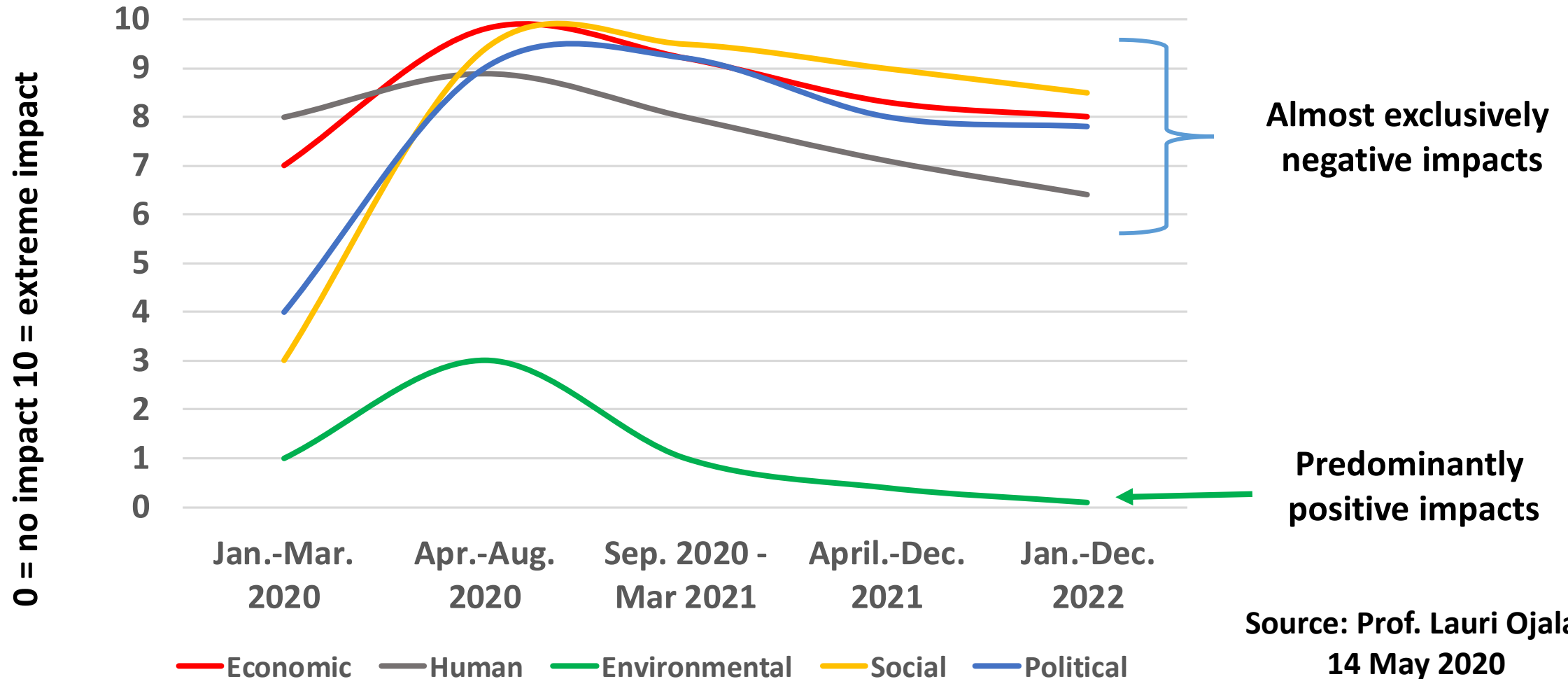
**How long will this last,  
and what shape will it take?**

**– well, too early to say:**

**nobody seems to have the answer right now,  
only good or less good guesses...**

# A "guesstimate"\* of broader impacts of COVID-19 in EU countries: social problems may remain the main concern by 2022

(provided any further waves of pandemic will not be massive)



\*) N.B. This is purely for illustration purposes, and reflects the Author's personal "guesstimate"



# **How does COVID-19 impact on trade and supply chains look like now\*?**

**\*) Updated in end-April 2020**

# The impact of the Covid-19 pandemic on global and EU trade

## by Chief Economist Team, [DG Trade](#), EC, 17 April 2020

The in-house analysis performed by DG TRADE's Chief Economist team estimates a **9.7% decrease in global trade for 2020**.

For the EU27, the predicted COVID19-related economic contraction results in a **reduction of 9.2% in extra-EU27 exports of goods and services, and an 8.8% decrease in extra-EU27 imports in 2020**.

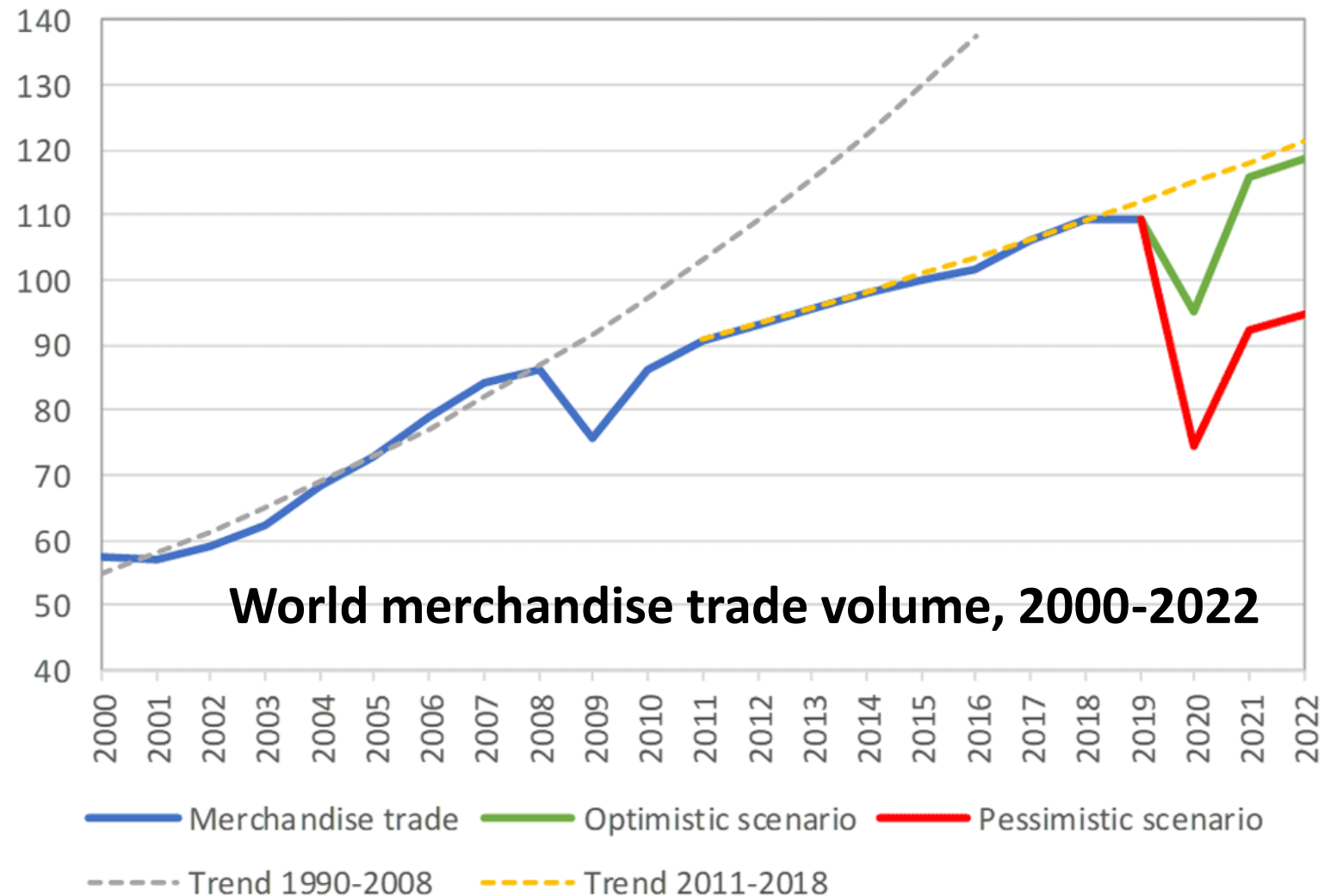
In absolute terms, compared to the latest available statistics, this amounts to a **reduction of exports by about 285 billion EUR and by 240 billion EUR in extra-EU imports (goods and services combined)**.

Exports of primary sectors (other than energy) and services trade turn out to be less strongly affected than manufacturing sectors, most of which see export contractions above 10%. **In particular, transport equipment and electrical machinery turn out to be more strongly affected.**

# WTO on 8 April 2020: Trade set to plunge as COVID-19 pandemic upends global economy

WTO expects world trade to fall by between 13% and 32% in 2020 as the COVID 19 pandemic disrupts normal economic activity and life around the world ([here](#)).

See also e.g. [VOX](#): a good analysis of WTO's estimates by **Bekkers, Keck, Koopman & Nee** from **24 April 2020**



# **IHS Markit Eurozone PMI<sup>®</sup> (Purchasing Managers Index):**

**COVID-19 outbreak has led to largest collapse  
in business activity ever recorded already in March,**

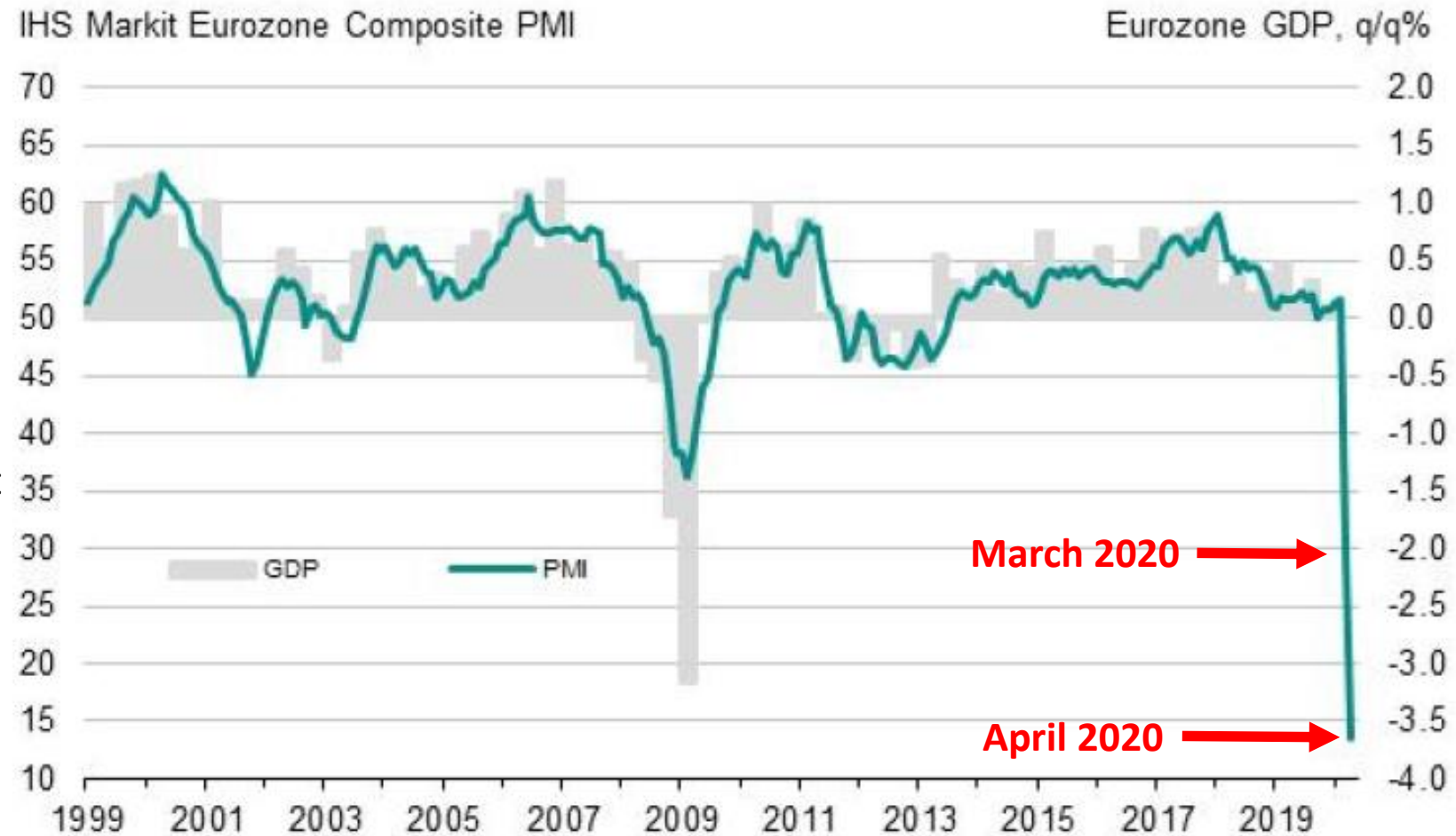
**with a significant further drop in April 2020  
(next update around 22 May 2020)**

# IHS Markit Eurozone PMI®: the largest collapse in business activity ever recorded in March-April 2020

## Key findings:

- Flash Eurozone PMI Composite Output Index at **13.5** (29.7 in March).  
→ **Record low (since July 1998).**
- Flash Eurozone Services PMI Activity Index at **11.7** (26.4 in March).  
→ **Record low (since July 1998).**
- Flash Eurozone Manufacturing PMI Output Index at **18.4** (38.5 in March).  
→ **Record low (since June 1997).**
- Flash Eurozone Manufacturing PMI(3) at **33.6** (44.5 in March). 134-month low.

## IHS Markit Eurozone PMI and GDP



Data collected April 07-22

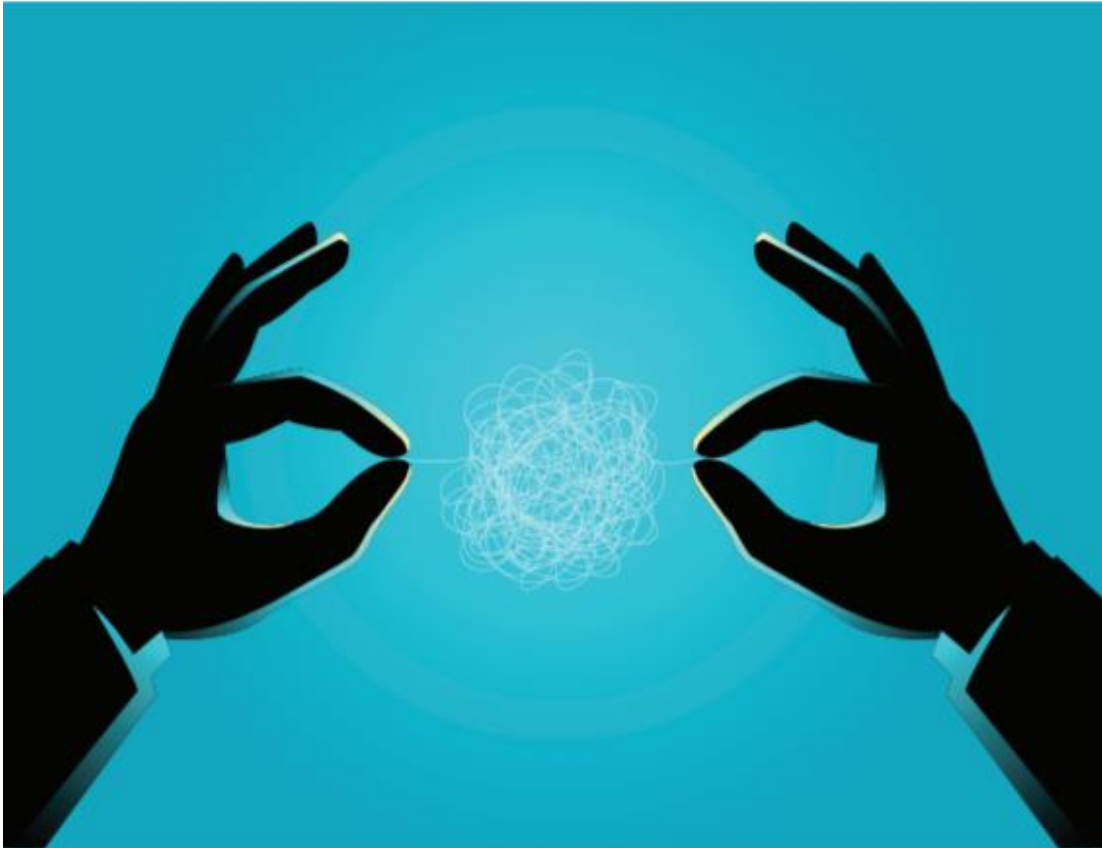
14.5.2020

Prof. Lauri Ojala  
Sources: IHS Markit, Eurostat.

## The Great Unwinding

Covid-19 and the regionalisation of global supply chains

A report by The Economist Intelligence Unit



# Insights from The Economist Intelligence Unit (EIU), May 2020



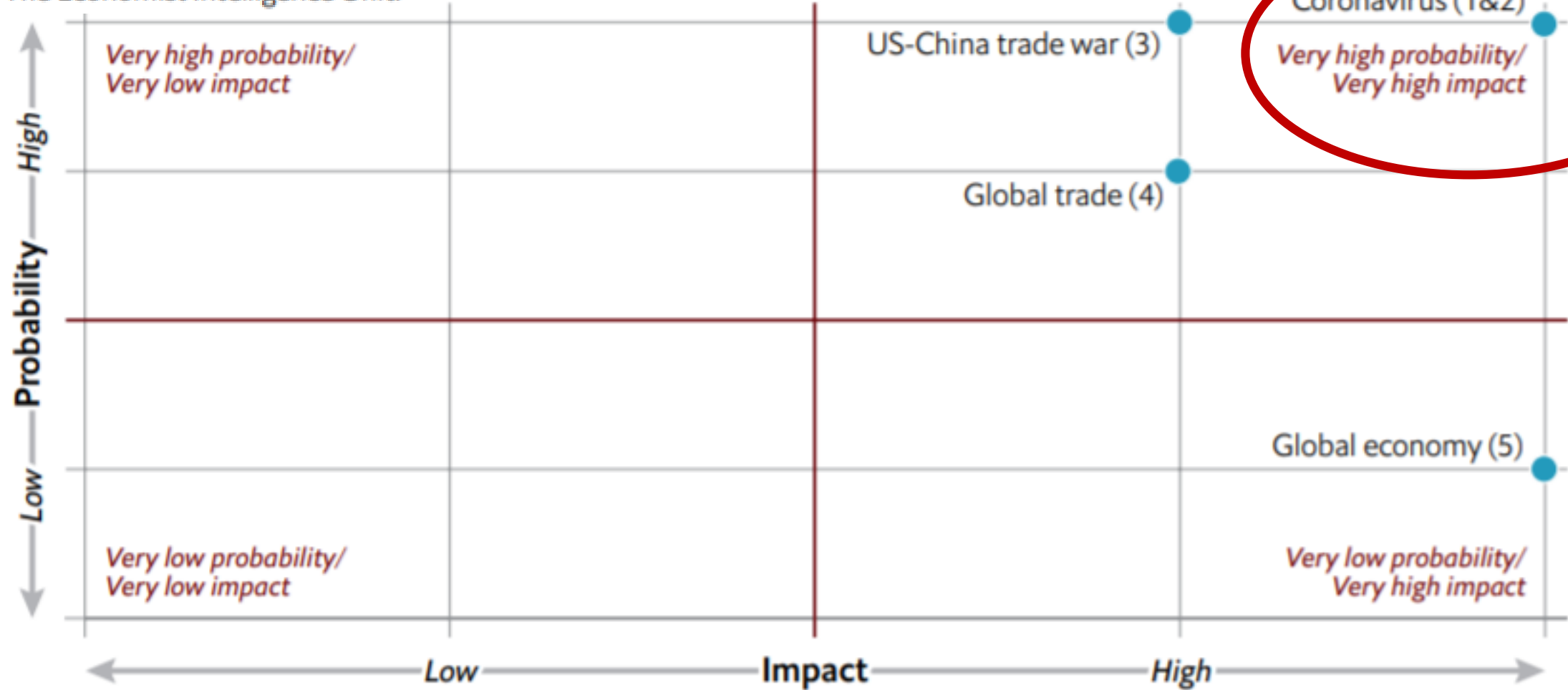
The EIU\* expects the global economy to see a steeper decline in output than followed the global financial crisis of 2007-08, with a slow recovery to follow, implying that demand for a range of goods and services will be significantly curtailed in 2020.

Scenario	Probability	Impact	Intensity
The uncontained spread of the coronavirus drives the global economy into an economic depression	Very high risk	Very high	25
The response to the coronavirus leads to a string of sovereign defaults and financial contagion	Very high risk	Very high	25
An escalating US-China trade war forces a split in the global economy	Very high risk	High	20
Global trade is hit by open economies permanently reverting to anti-globalist policies	High risk	High	16
The global economy bounces back quickly as the coronavirus proves to be less damaging than expected	Low risk	Very high	10

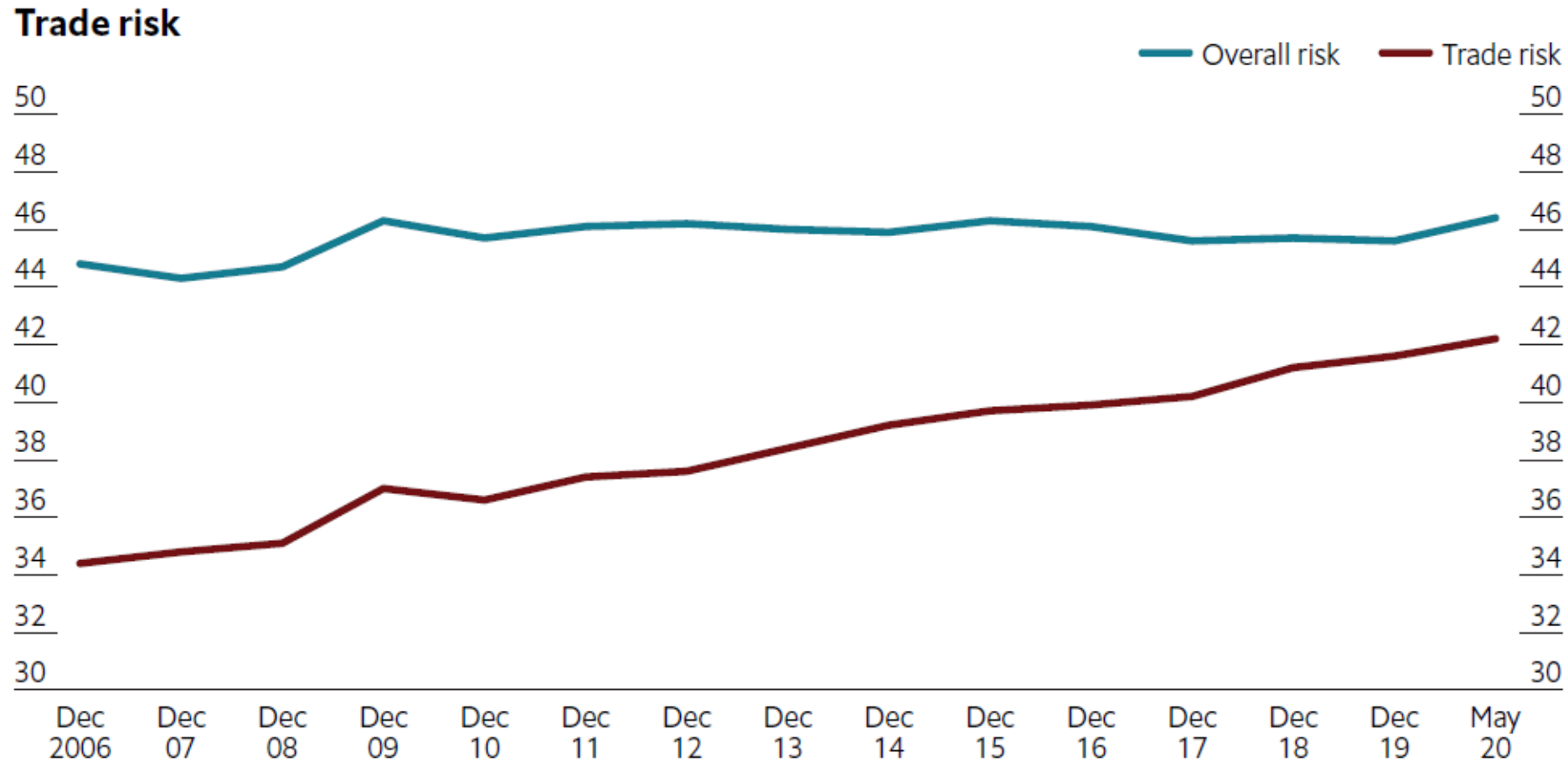
Source: The Economist Intelligence Unit.

Scenario planning techniques will be central as businesses seek to limit the impact on their supply chains and match goods to markets at a time when consumption possibilities are highest.

Source: The Economist Intelligence Unit.



**A lasting impact of Covid-19 will be a greater focus on risk in multinationals. Whether it is regionalising a supply chain (SC) or attention to SC Risk Management, the immediate returns will be hard to see. Over time, the apparent need to invest in risk-related practices will decline. But reverting back to a sole focus on growth with little regard for risk would be a mistake, as the global economy was already being buffeted by uncertainty before the current pandemic.**



Source: The Economist Intelligence Unit, Risk Briefing.

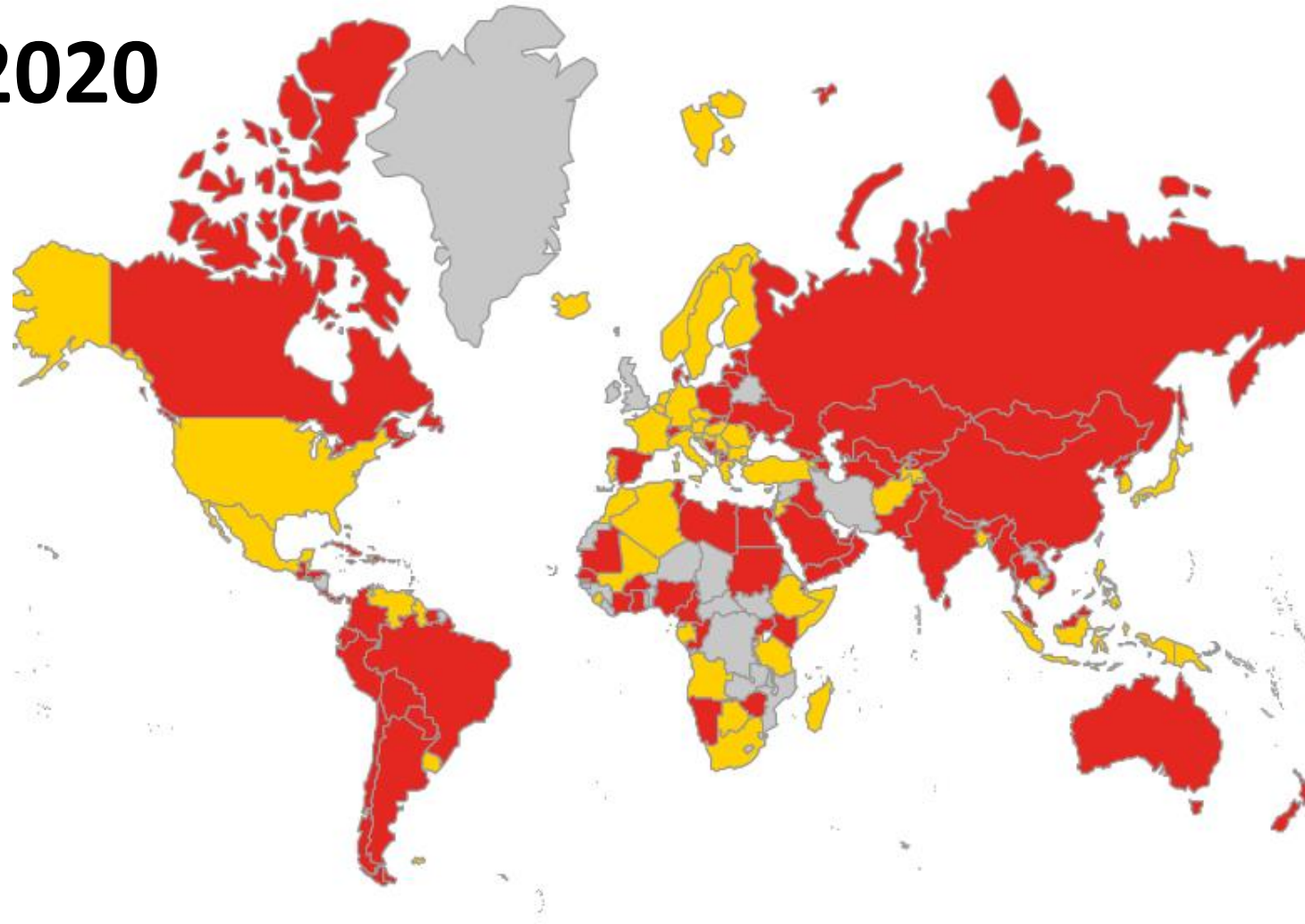
# Global Transport Capacity Constraints by road, air and ocean freight

As seen by [Agility](#),  
one of the largest integrated logistics service  
providers in the world

Updated 29 April 2020

# Countries that have closed borders due to COVID-19

## 12 May 2020



● Complete ● Partial

\*Except for citizens or residents returning home or special circumstances.

Map by Al-Jazeera

Source: [Agility](#)

14.5.2020

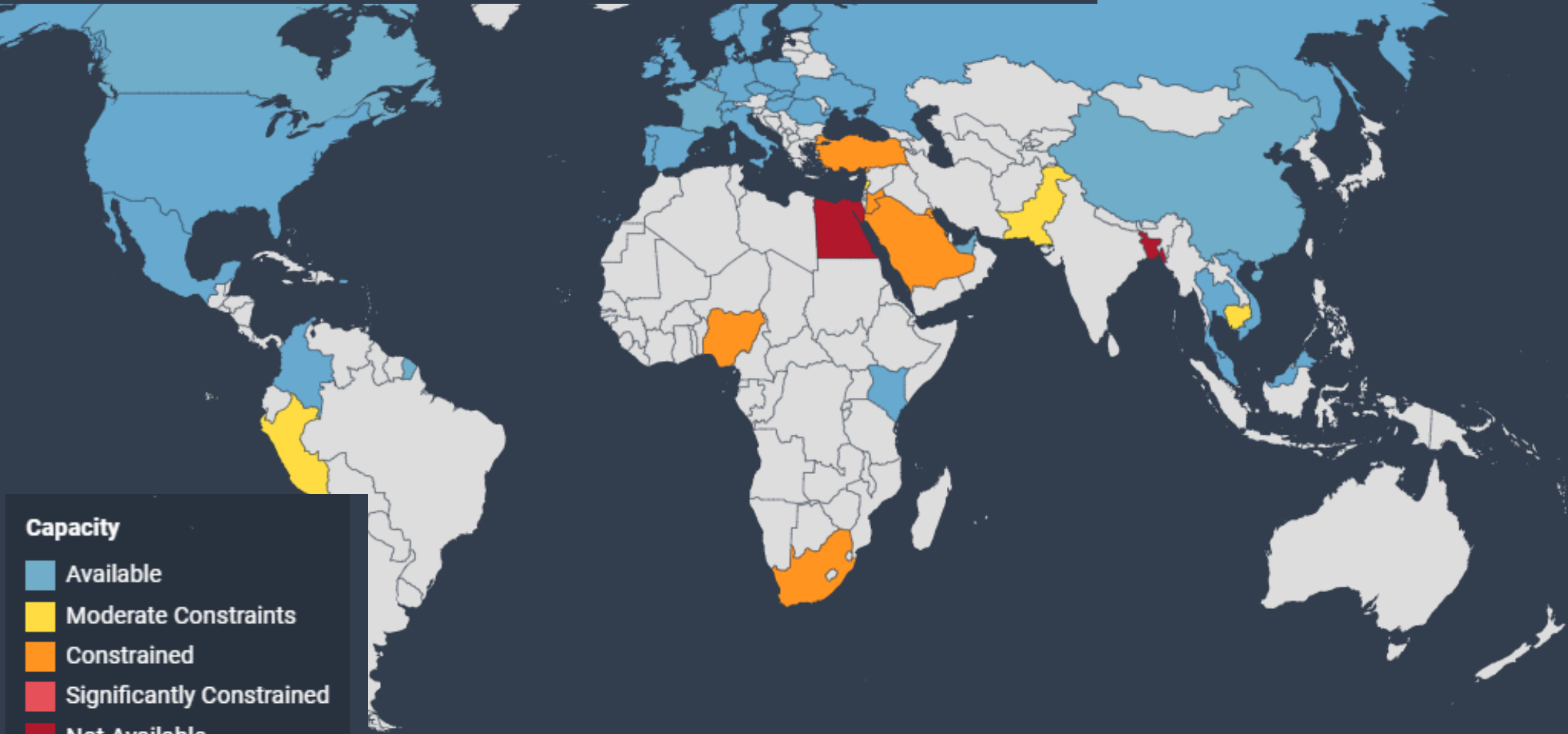
Prof. Lauri Ojala

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# Impact of COVID-19 on Road Freight Network Capacities

Mouse over a country to see capacity availability



- Capacity
- Available
  - Moderate Constraints
  - Constrained
  - Significantly Constrained
  - Not Available

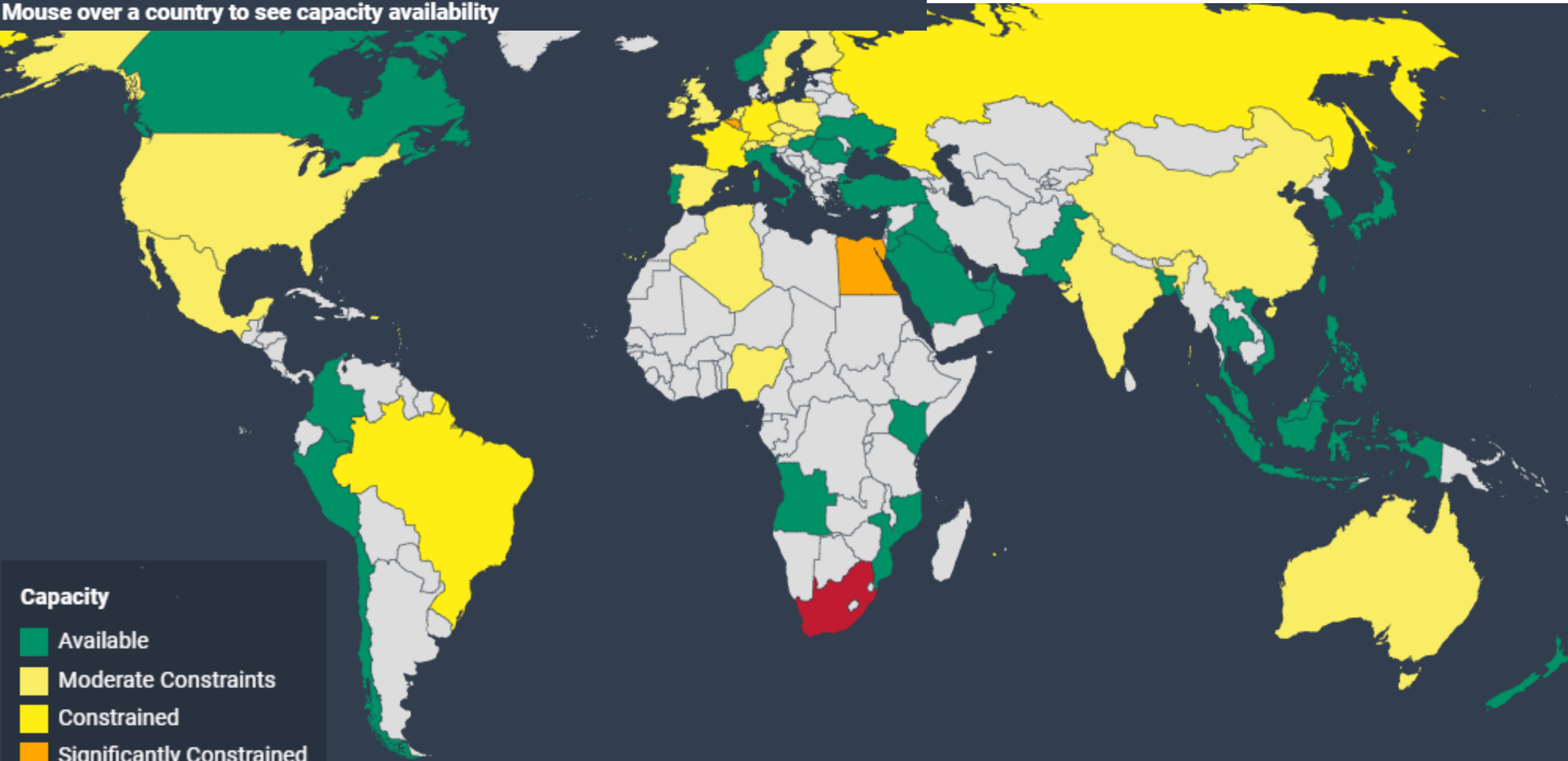
14.5.2020

Source: [Agility](#), as per 13 May 2020



# Impact of COVID-19 on Global Ocean Freight Capacities

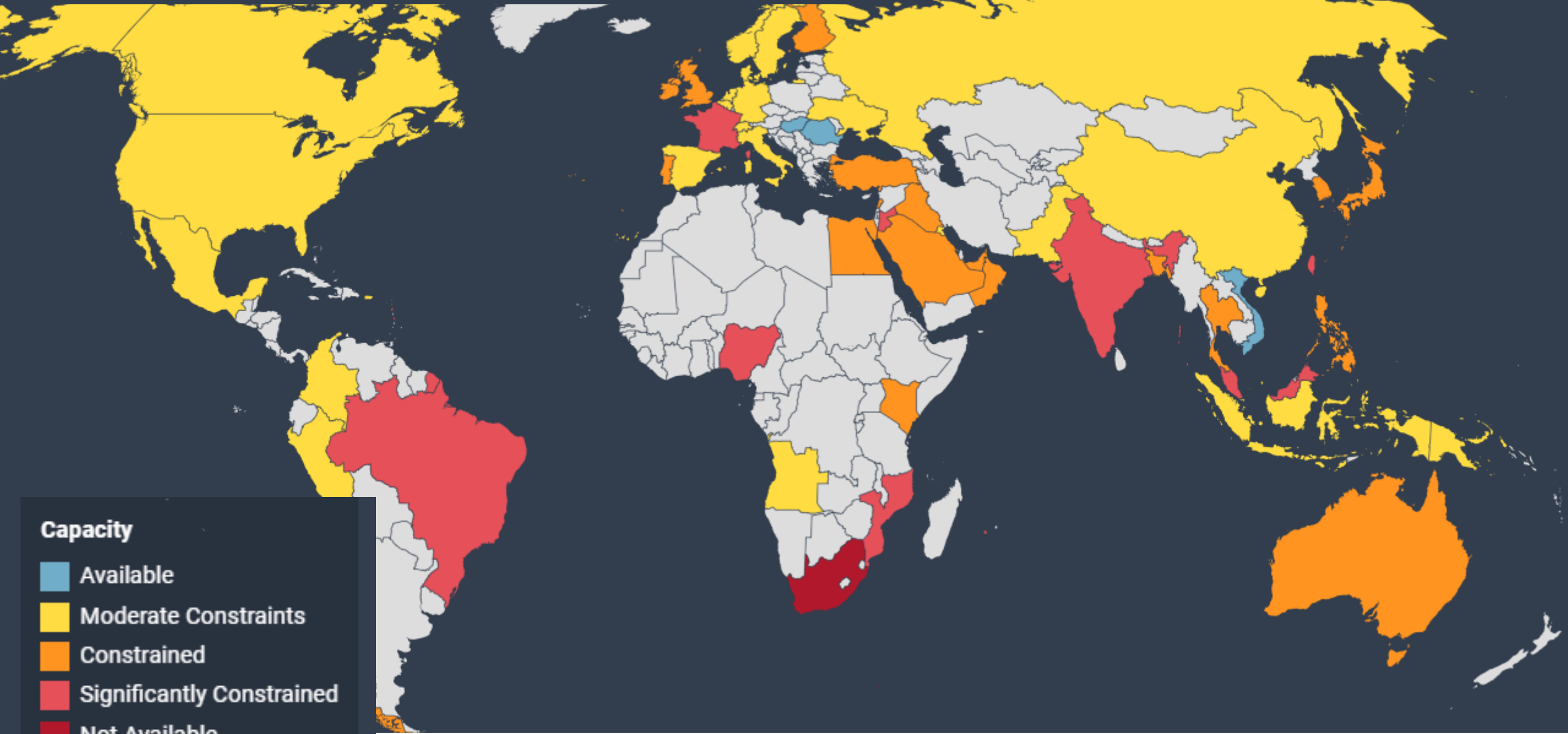
Mouse over a country to see capacity availability



Source: [Agility](#), as per 12 May 2020

# Impact of COVID-19 on Global Air Freight Capacities

Mouse over a country to see capacity availability



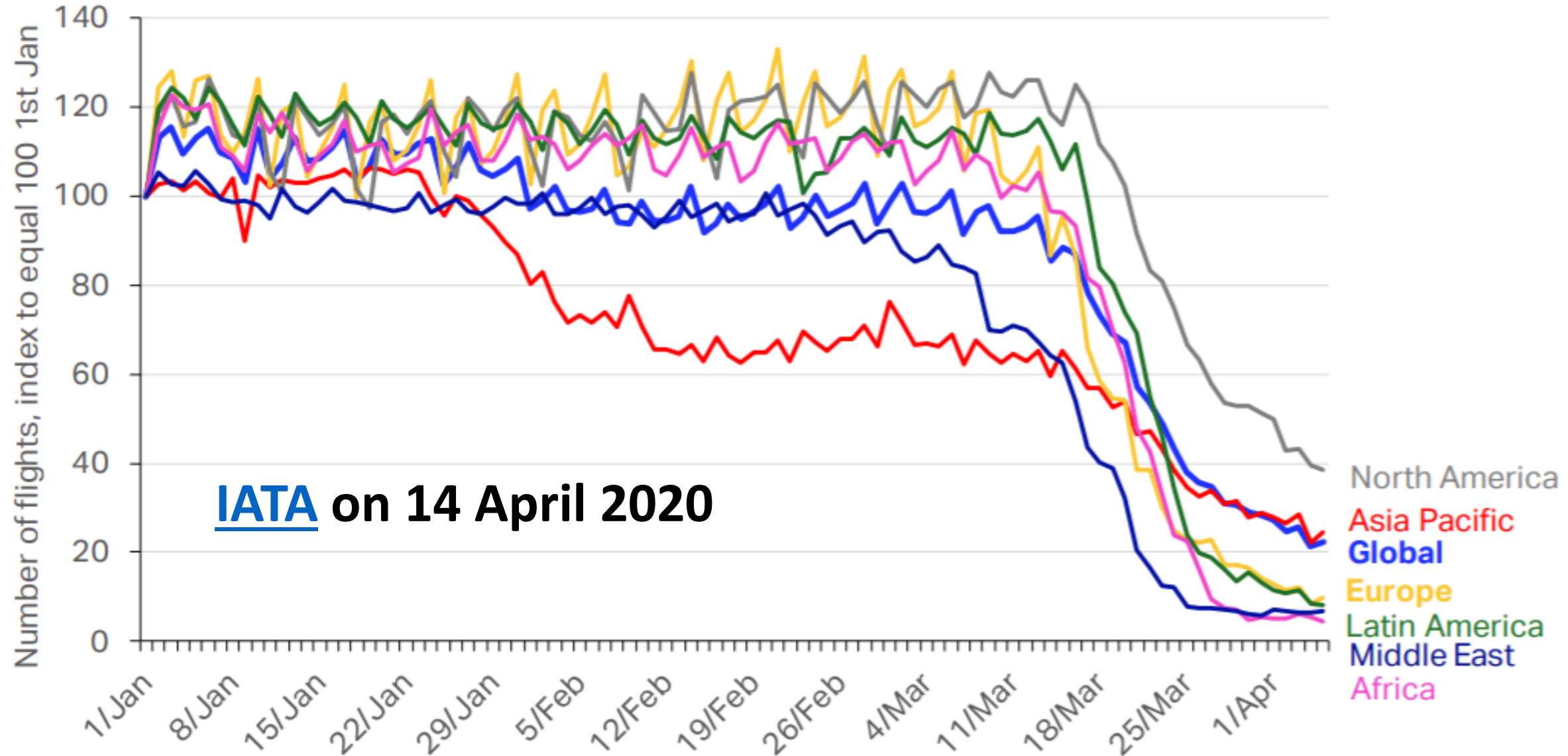
14.5.2020

Source: [Agility](#), as per 12 May 2020

IATA on 14 April 2020:

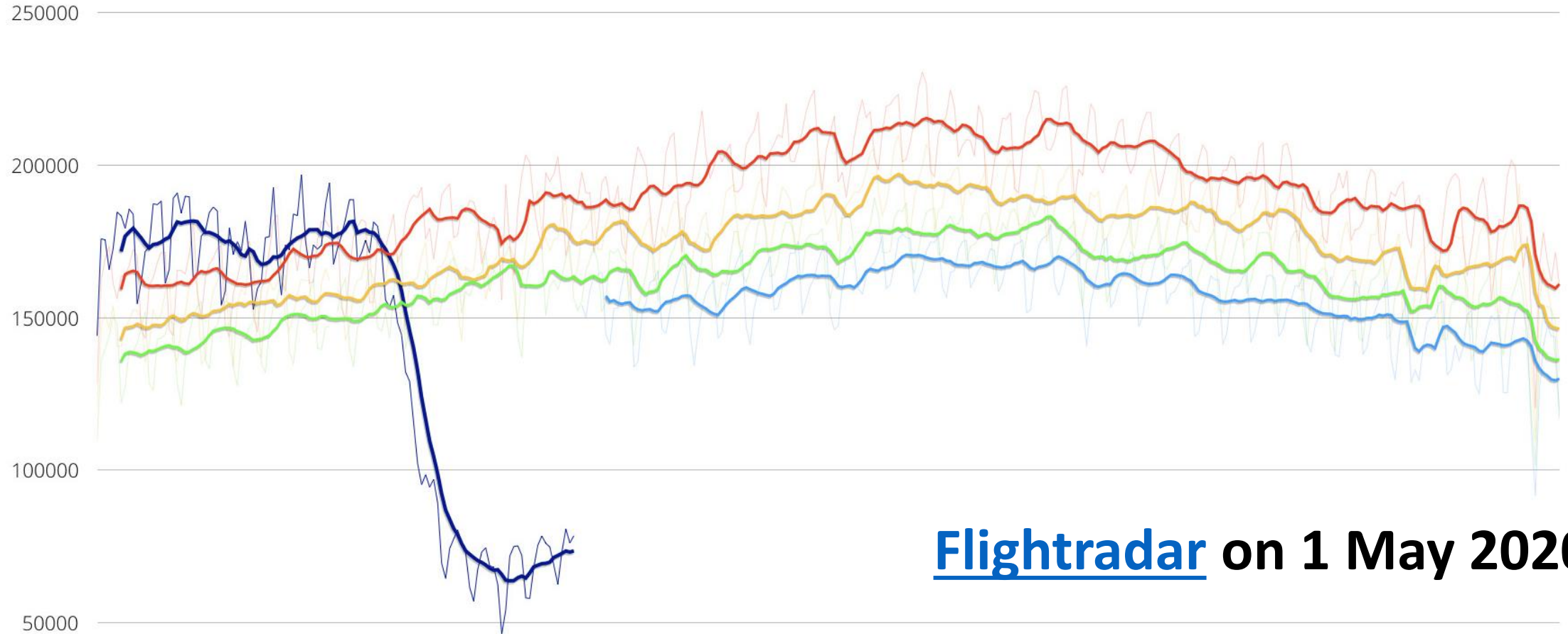
**Worldwide flights now down almost 80%  
by early April Industry virtually grounded  
outside US and Asia domestic markets**

Daily flights, indexed 1st January = 100



Source: IATA Economics analysis based on data provided under license by FlightRadar 24. All rights reserved.

## 7-day moving average of total flights tracked by Flightradar24 May 2016-April 2020



**Flightradar on 1 May 2020**



— 2016 — 7-Day moving average — 2017 — 7-Day moving average — 2018 — 7-Day moving average — 2019 — 7-Day moving average — 2020 — 7-Day moving average

0

1-Jan 13-Jan 25-Jan 6-Feb 18-Feb 2-Mar 14-Mar 26-Mar 7-Apr 19-Apr 1-May 13-May 25-May 6-Jun 18-Jun 30-Jun 12-Jul 24-Jul 5-Aug 17-Aug 29-Aug 10-Sep 22-Sep 4-Oct 16-Oct 28-Oct 9-Nov 21-Nov 3-Dec 15-Dec 27-Dec

# **Anecdotal shipping freight indications**



# The impact on worldwide shipping; selected anecdotal findings in mid-May 2020

**Global container volumes declined 7.9% in March (Source: [Lars Jensen](#))**

**Bulk shipping: Capesize shipping rates sink 21% in a single day on May 11 (Source: [Freightwaves](#))**

The Baltic Dry Index fell 8% on Mon. 11 May, to 474 points. This marks a 37% plunge since April 20. The all-time low, 291 points, was in February 2016.

Rates for Capesizes (bulkers with capacity of around 180,000 deadweight tons or DWT) collapsed on Monday, falling 21% in a single trading session, to \$3,842 per day, according to the Baltic Exchange's 5TC index of time-charter equivalent (TCE) rates.

Selling accelerated on Tuesday, with the 5TC shedding a further 25%, to \$2,893 per day marking the fastest two-day plunge in at least a half-decade.

# Anecdotal dry bulk shipping findings in mid-May 2020

Dry bulk rate seasonality is strong, as evident by the performance of the Dry Bulk shipping ETF which follows freight rates.

The next two quarters will see average rates well above recent levels, and we would not be surprised if they match last year's levels. The accumulated demand for transportation is significant and will coincide with seasonal pick-up in activity.

An inventory rebuilding cycle for bulk commodities could further boost volumes, aiding mainly tankers and dry bulk, predicting a “sharp” rebound in freight rates towards more sustainable levels.

Source: [Thanos Sofios](#) on mid-April 2020

14.5.2020



# **Summary of COVID-19 generic impact by transport sub-sectors**

Transport sub-sectors		COVID-19 impacts by mid-May 2020			
Mode	Vehicle / service	Mobility	Financial	Social inclusion	Environmental
Road passengers	Bus, Taxi, Minivans	Very negative	Catastrophic	Very Negative	Neutral to Very Positive, at least in the immediate to short term
	Local distribution	Negative to Mixed	Negative to Positive (parcel and home delivery)	n.a.	
Road freight	Domestic road freight		Negative to neutral		
	Int'l road freight				
Rail passengers	Commuter rail, Metro, Tram	Very negative for passengers	Catastrophic	Very negative	
	Inter-city & Int'l				
Rail freight	Domestic	Negative to neutral		n.a.	
	International				
Air passengers	Domestic	Catastrophic		Very negative	
	Intra-continental				
	Intercontinental				
Air freight	Belly cargo	Mainly Negative; also Neutral to Positive routes		n.a.	
	Cargo only				
Maritime passengers	Cruise	Catastrophic		Very negative	
	Liner routes	Catastrophic to Negative			
Maritime freight	Bulk shipping	(Very) Negative		n.a.	
	Shortsea liner				
	Deepsea liner				

# Some useful sites to follow

# Macroeconomic (country) estimates based on COVID-19 impacts\*:

- [IMF](#), International Monetary Fund, **the latest estimate released on 14 April 2020**
- [The World Bank](#), key [site on COVID-19](#)
- [ECB](#) European Central Bank
- [EIB](#) European Investment Bank
- [ILO](#) International Labour Organization
- [OECD](#)
- ITF (International Transport Forum) at the OECD
- [ASEAN](#)
- [Fitch](#) ratings\*
- [Standard & Poors](#)\*
- Centre for Global Development on [Africa](#), 3 April 2020
- McKinsey, [Implications for Business](#), 13 April 2020

**Note:**

An annotated and updated repository of International Organizations' websites dealing with COVID-19 issues can be found [here](#)

*\*) All other Open access, but these may require registration*



# Thank you – and take care!



**-Lauri**

Photo of Bonn U-Bahn: Lauri Ojala