



# The European recovery with the enemy at the gate

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# Outline

## Part I:

### what did we do in ESPON-IRIE?

1. Introduction
2. COVID19-NGEU
3. Russia invasion of Ukraine
4. A synthetic view
5. Conclusions



## Part II:

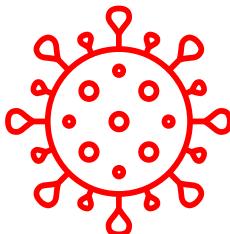
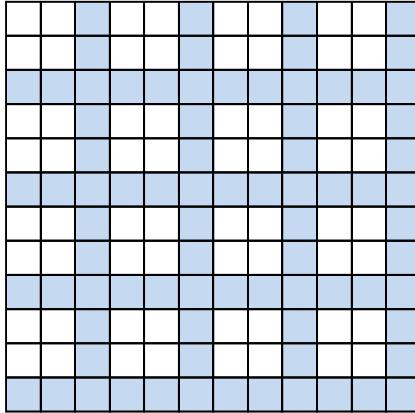
### What is going on now?

6. The conflict revisited:
  - GDP: simulation vs actual data
  - Inflation : simulation vs actual data
  - Trade: Alternative scenarios
  - Trade: current trends
7. Future research
8. Annex

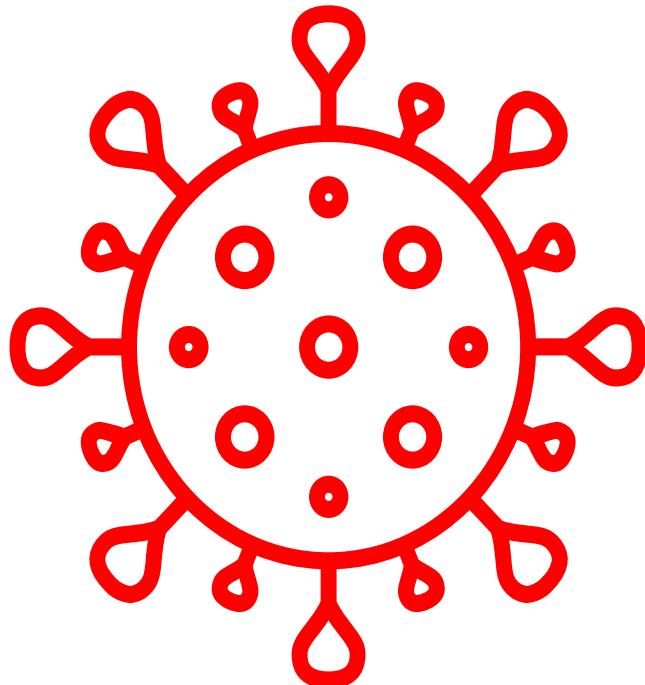


# Part I:

# What did we do in ESPON- IRIE?



- The ESPON-IRIE project has been developed with the aim of promoting knowledge of interregional flows in Europe.
- Flows of goods, services, capital, people and knowledge have been estimated, covering 297 NUTS-2 regions for the EU27, UK, Iceland, Norway, Switzerland and Liechtenstein, for the period 2010-18.
- We have also estimated the EUREGIO-2017, the most extensive inter-regional input-output tables for Europe (in collaboration with the JRC-IPTS).
- The EUREGIO-2017 have been used to simulate different scenarios: European Green Deal, New Globalization (protectionism), the economic impact of **COVID19 and NGEU funds** and the **Ukrainian conflict**.
- We now focus on these last 2 scenarios (see the Annex for more).

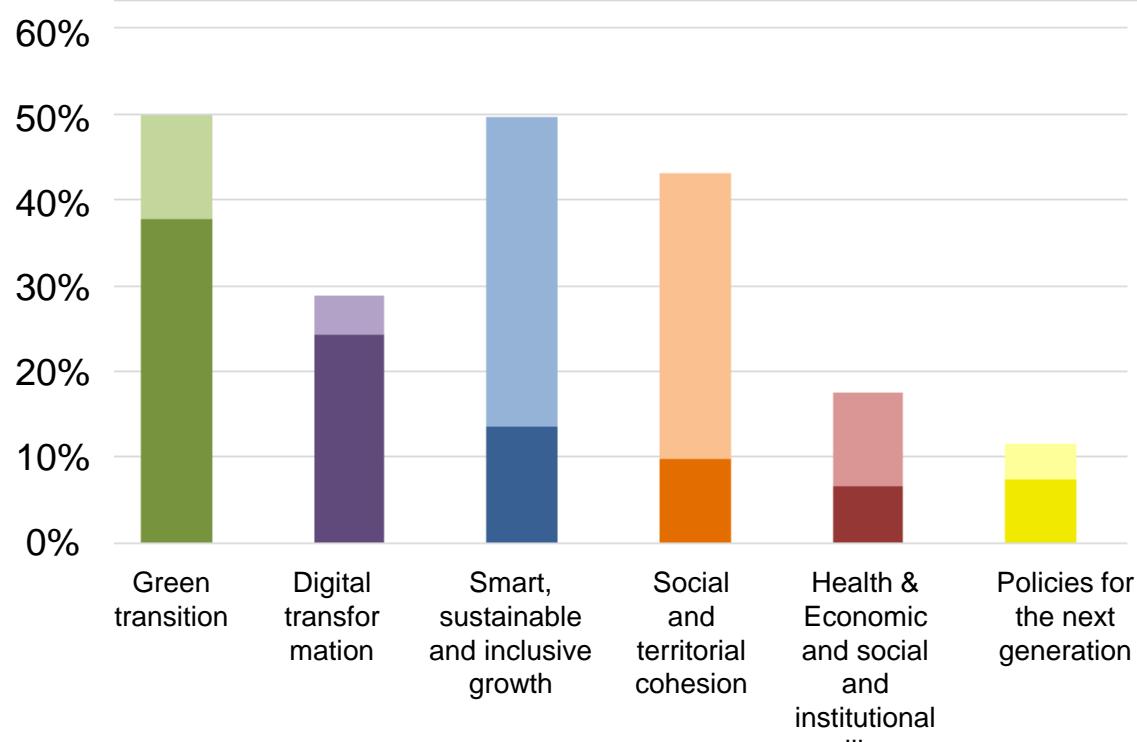


- The COVID-19 pandemic has been the worst shock to the European economy since the World War II.
- The NGEU funds represent an unprecedented package of measures, intended to foster the recovery, promoting a more digital, green and resilient economy.
- Using the EUREGIO-2017, we analyze the territorial and sectoral impact of two alternative events:
  - The negative impact of COVID-19 in 2020,
  - The positive impact of the NGEU considering 3 possible funds allocations by sectors and regions within the EU27 countries.

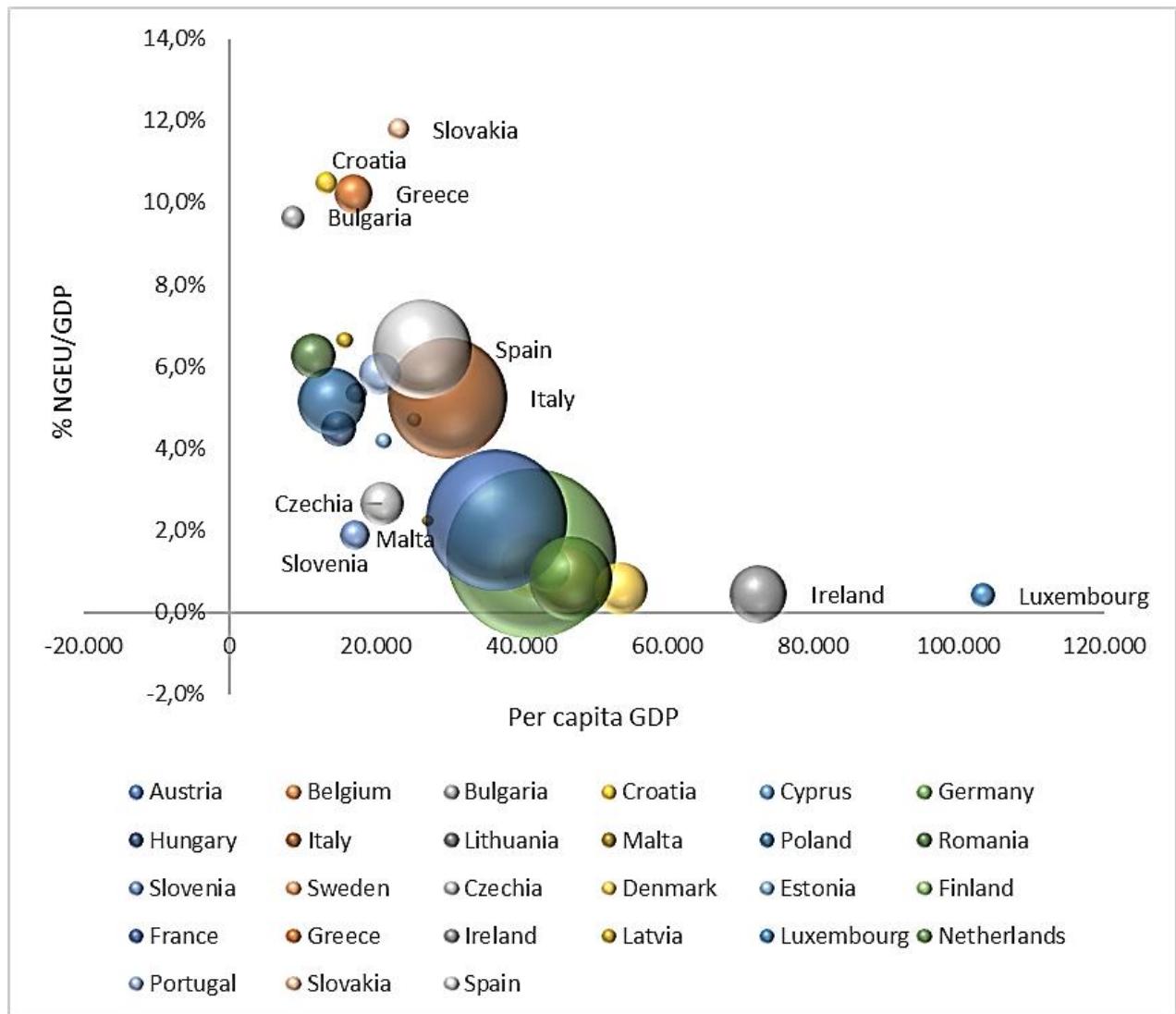
**Remark: the aim is not to predict, but to draw alternative pictures to fuel the discussion!**

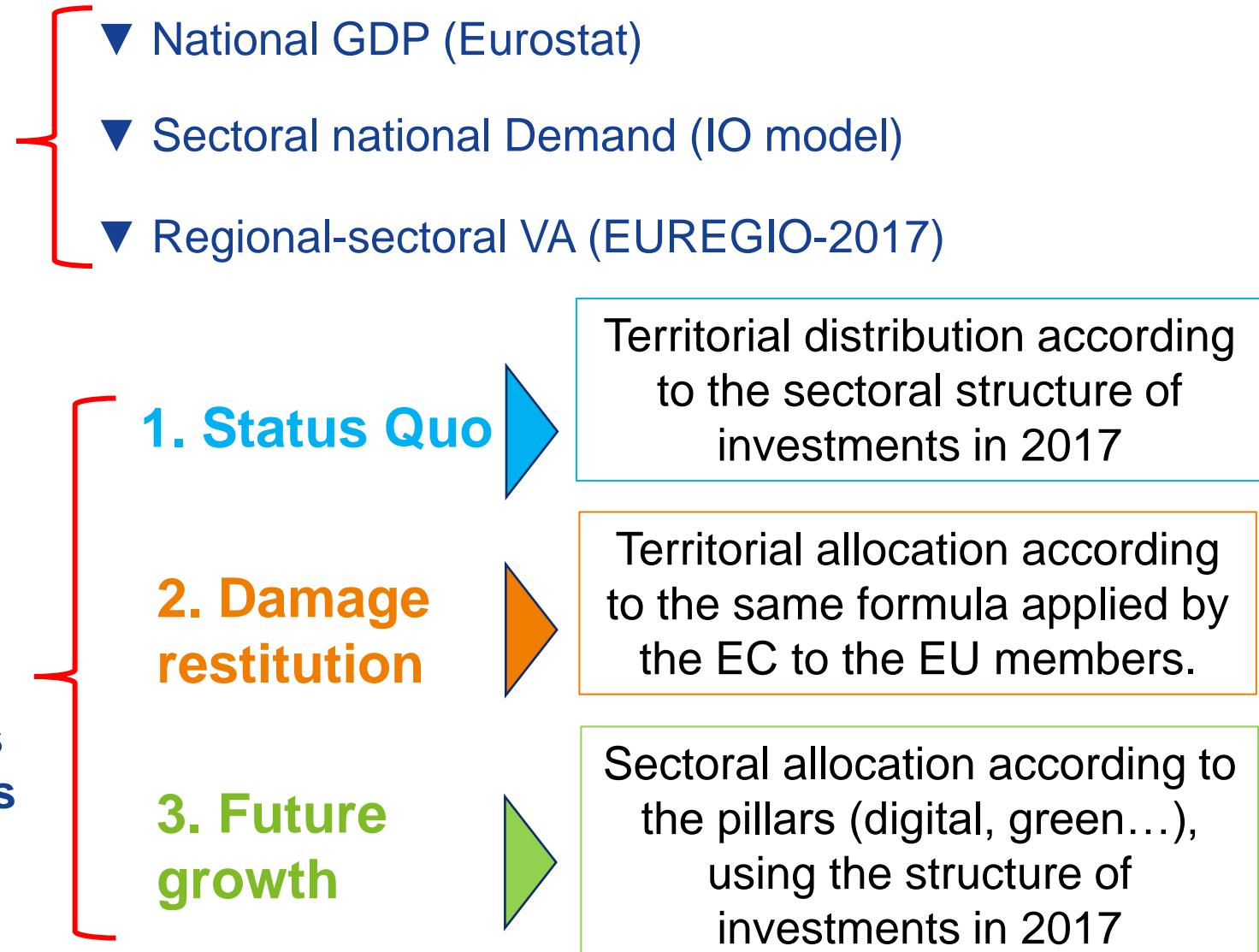
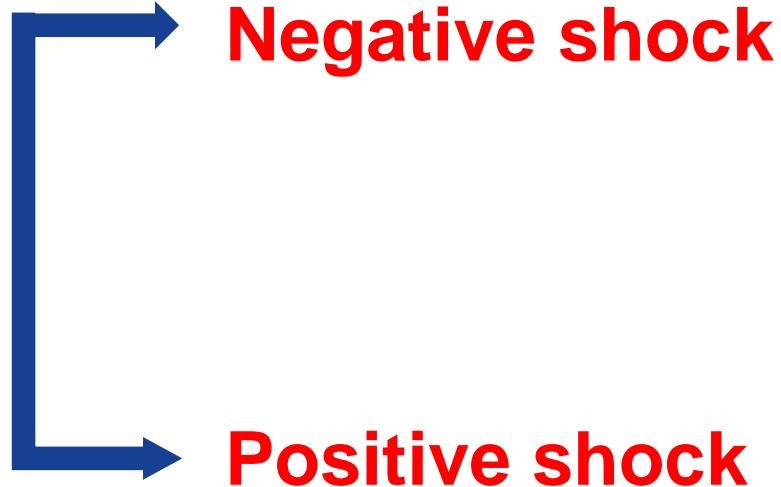


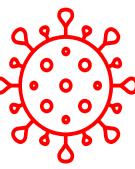
## Distribution (%) of the RRF by pillars



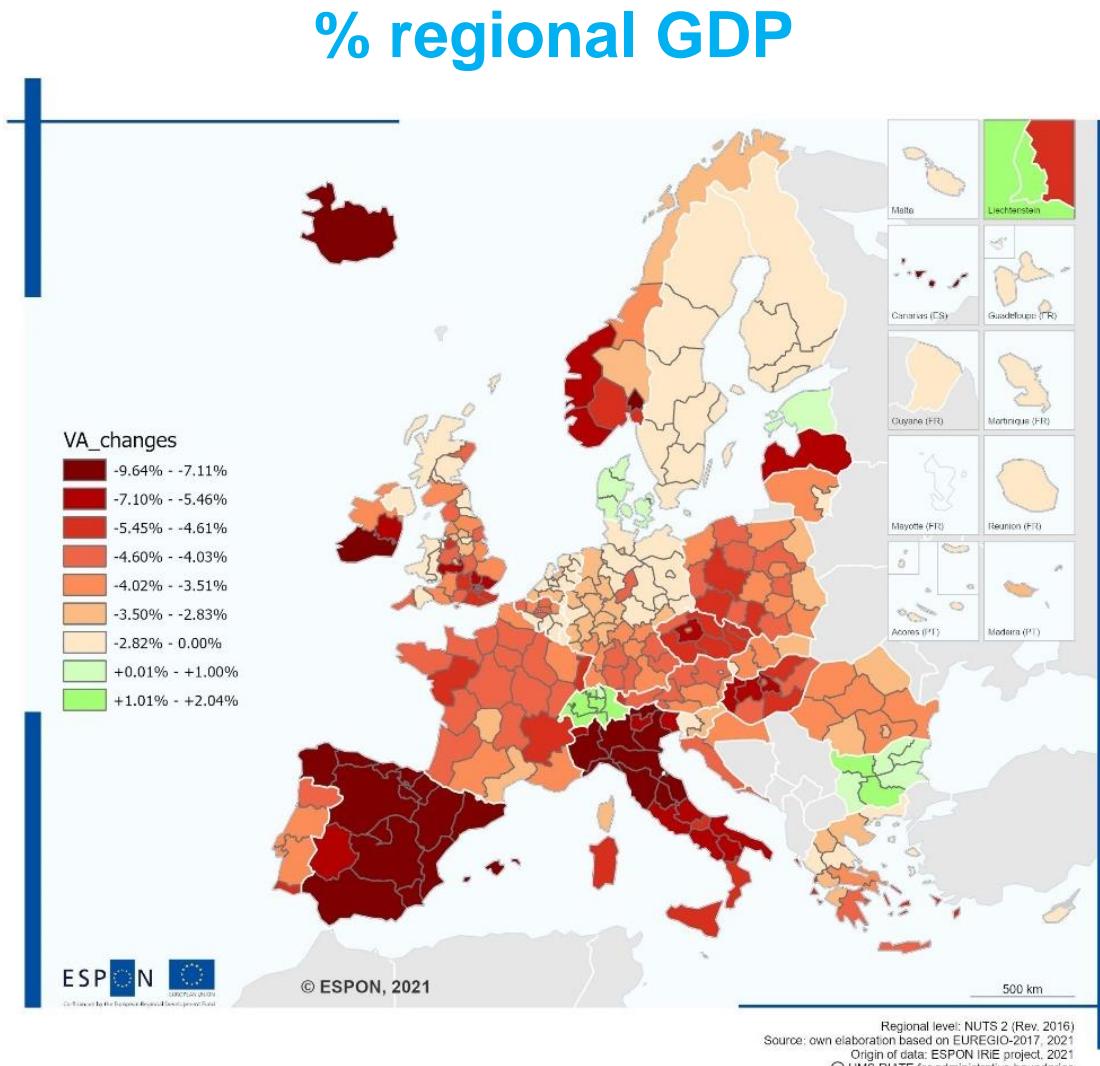
**NGEU funds (Grants) vs per capita GDP (size: GDP)**

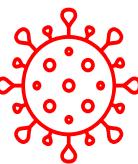






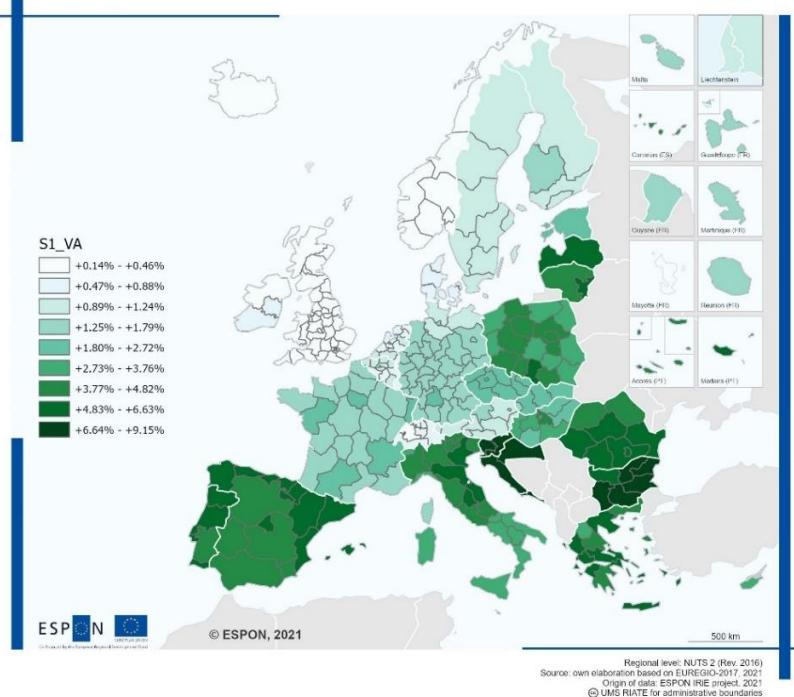
## Territorial effect due to the negative “shock” of COVID19 in 2020



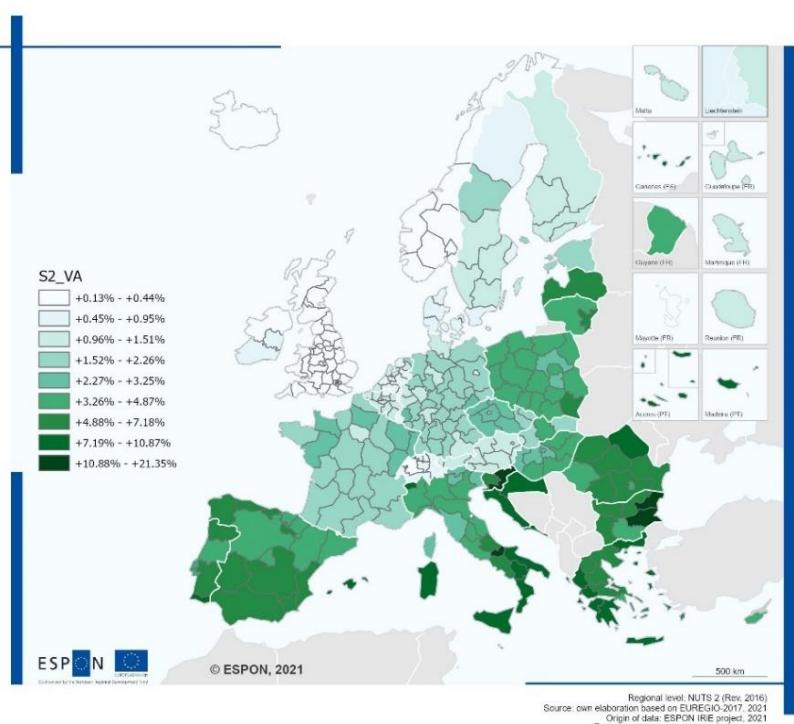


## Territorial effect due to the positive “shock” of NGEU (% regional GDP)

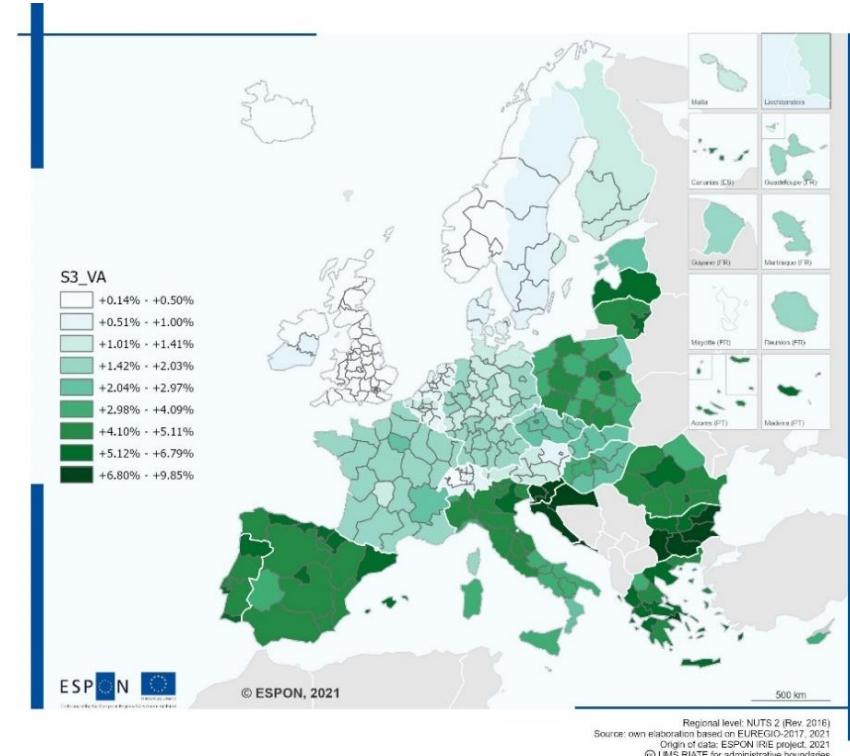
### Status Quo



### Damage restitution



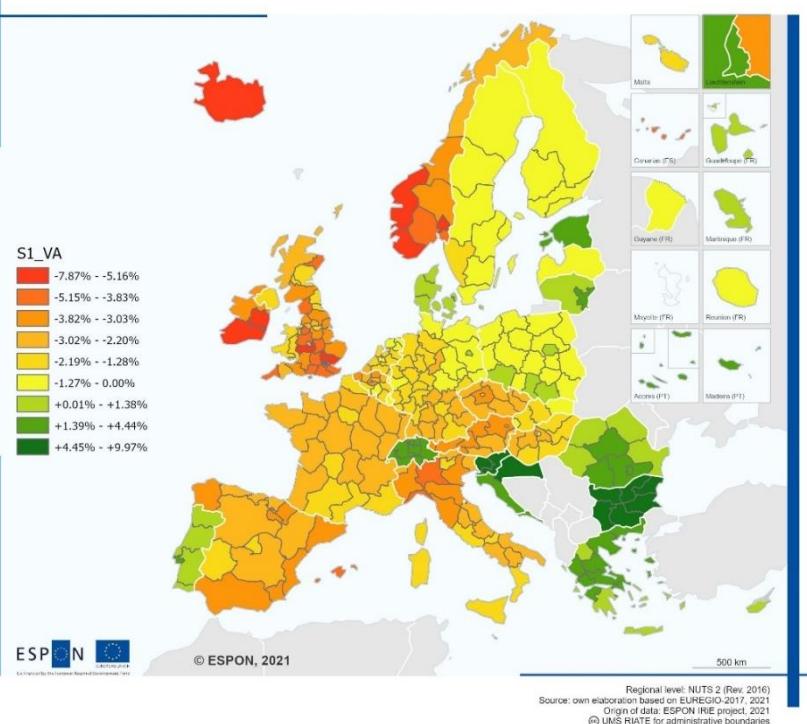
### Future growth



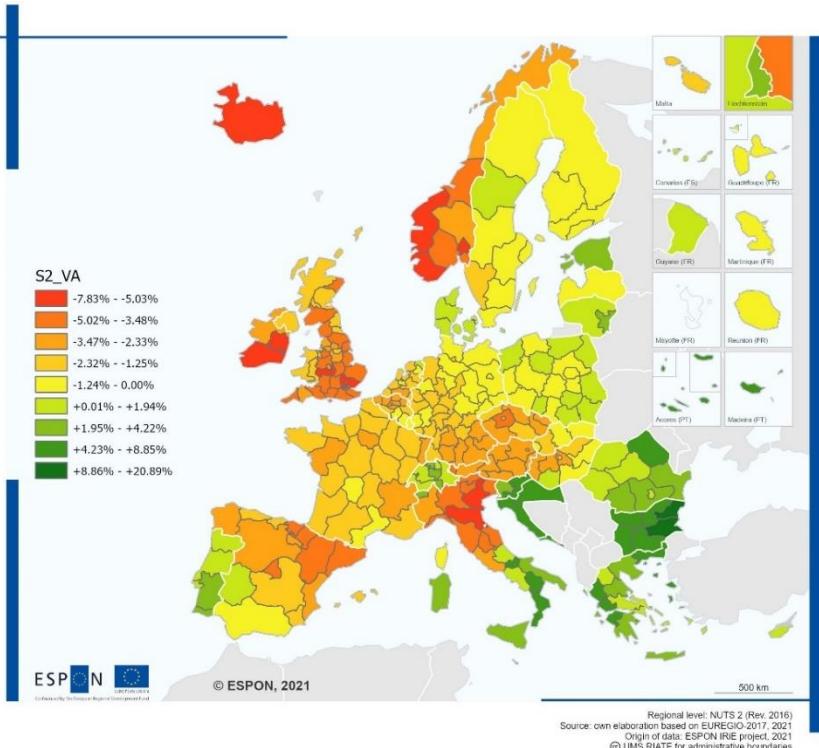


**Total effect = COVID19 shock + NGEU shock (% regional GDP)**

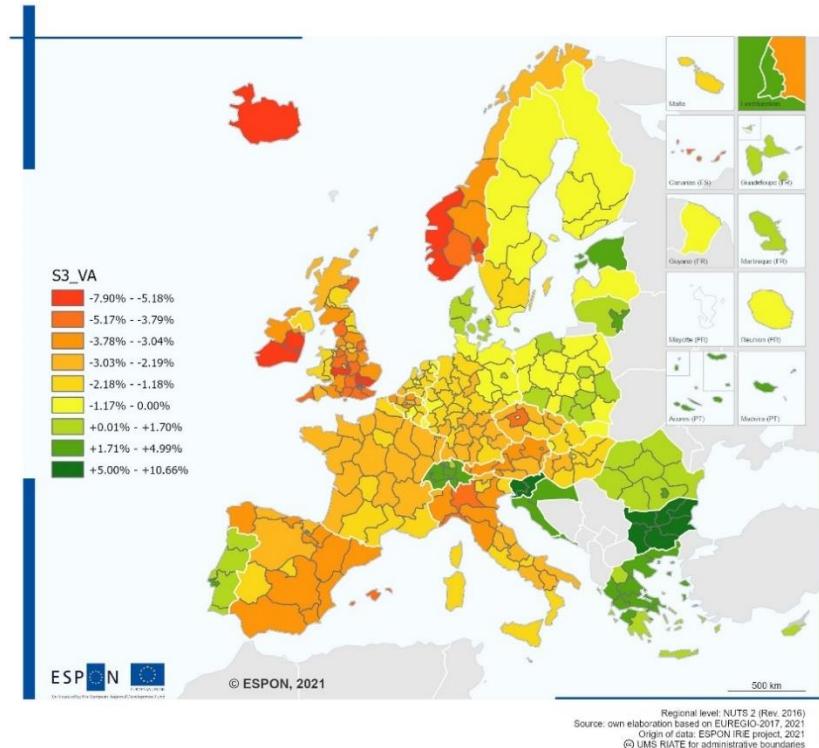
## Status Quo

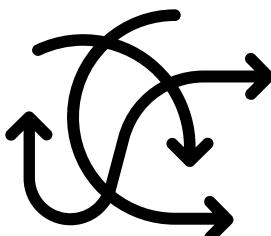


## Damage restitution



## Future growth





- NGEU funds (grants), by themselves, are not sufficient to offsetting the negative shock of COVID-19.
- The regions of Eastern Europe are the most benefited.
- There are many “negatively affected” regions, but the most impacted (% GDP) are in Ireland, Iceland, Norway and the UK.
- Certain allocation criterion may widen the territorial differences, pushing against the cohesion policy.
- Yet, reality may be more positive:
  - Our simulation is static...
  - Loans, structural reforms, national and regional measures are not included...
- However, the Ukrainian conflict is a new game changer...



- Sadly, we are all conscious of how Russia invaded Ukraine, and how (most of) the NATO countries immediately reacted, adopting economic sanctions, with effects on trade and capital flows.
- Beyond the dramatic consequences of the war in terms of human lives, the aim of this scenario is to address the economic impact.
- We use input-output analysis (EUREGIO-2017), to simulate different potential consequences.

**Warning: the analysis corresponds to the maximum shock (short run).**

**Unfortunately, it is becoming realistic.**

**The aim is not to forecast, but to fuel the debate: what if...?**



	Russia	Ukraine
GDP (Th. Mill.\$)	1,648	181
% World	1.74%	0.19%
Population (Mill.)	146	41
Per capita Income (\$ p.c.)	11,273	4,384

**Medium economic size, but specialized in very strategic items...**

### Russia:

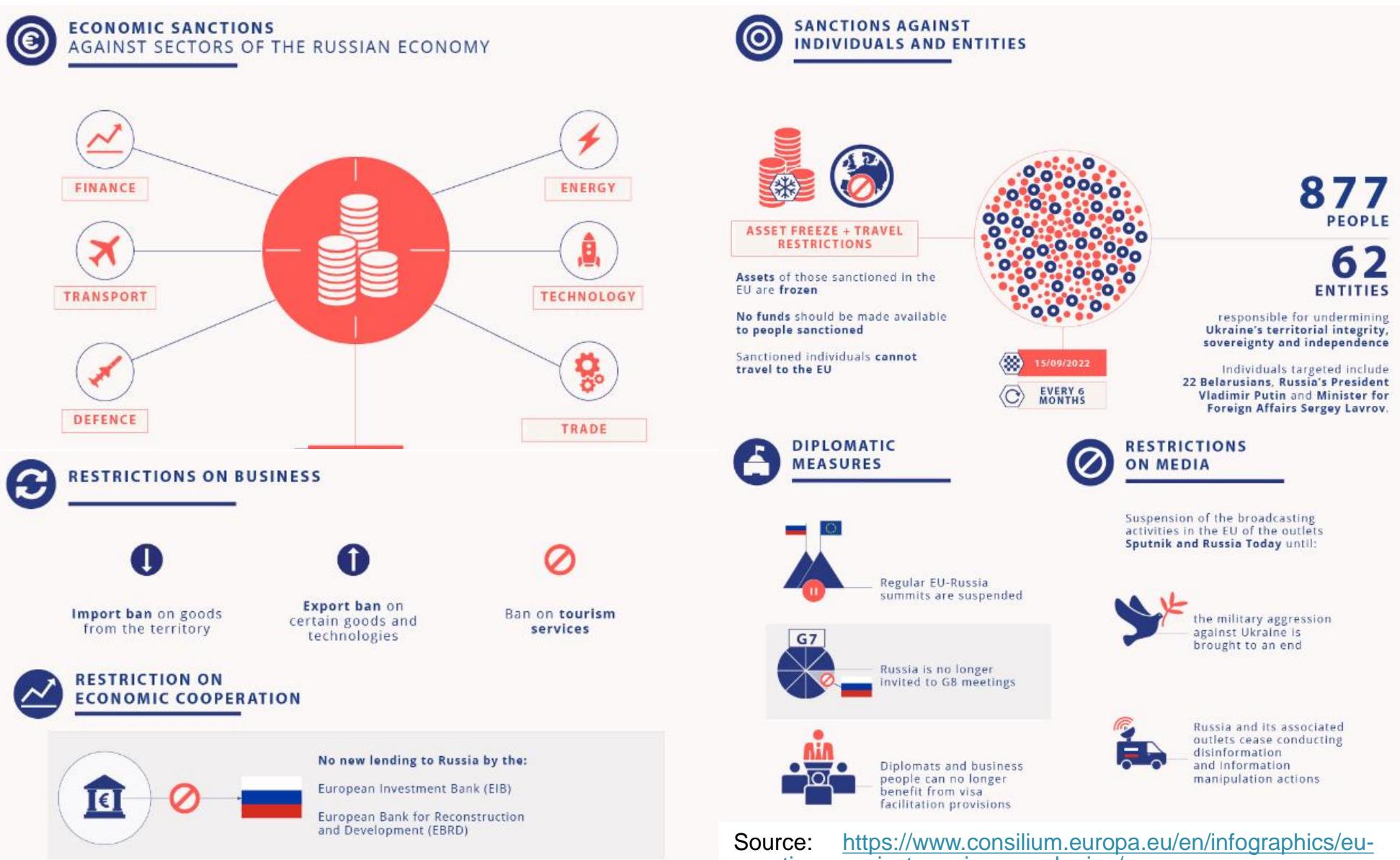
- Main supplier of oil and gas to the EU.
- World's leading producer of nickel, palladium, titanium sponge, fertilizers, nitrate, urea, nitrogen,...

### Ukraine:

- Industry: titanium sponge, inert gases...
- Agriculture: cereal, sunflower oil, pigs, poultry and butter.

## 3

# The Ukrainian conflict: Context



Source: <https://www.consilium.europa.eu/en/infographics/eu-sanctions-against-russia-over-ukraine/>



## Sanctions against Russia and other major events starting November 2021

Hover over dots for summary of events, or filter list below by sanction type and country

● Sanctions ● No sanctions

→ Nov 2021 - Jan 2022

US warns of Russia's troop buildup. Countries attempt diplomacy, threaten sanctions.

→ Feb 4 - 20, 2022

Winter Olympics in Beijing, China

**Feb 21**

Putin orders troops to Ukraine, sanctions start

**Feb 24**

Russia invades Ukraine

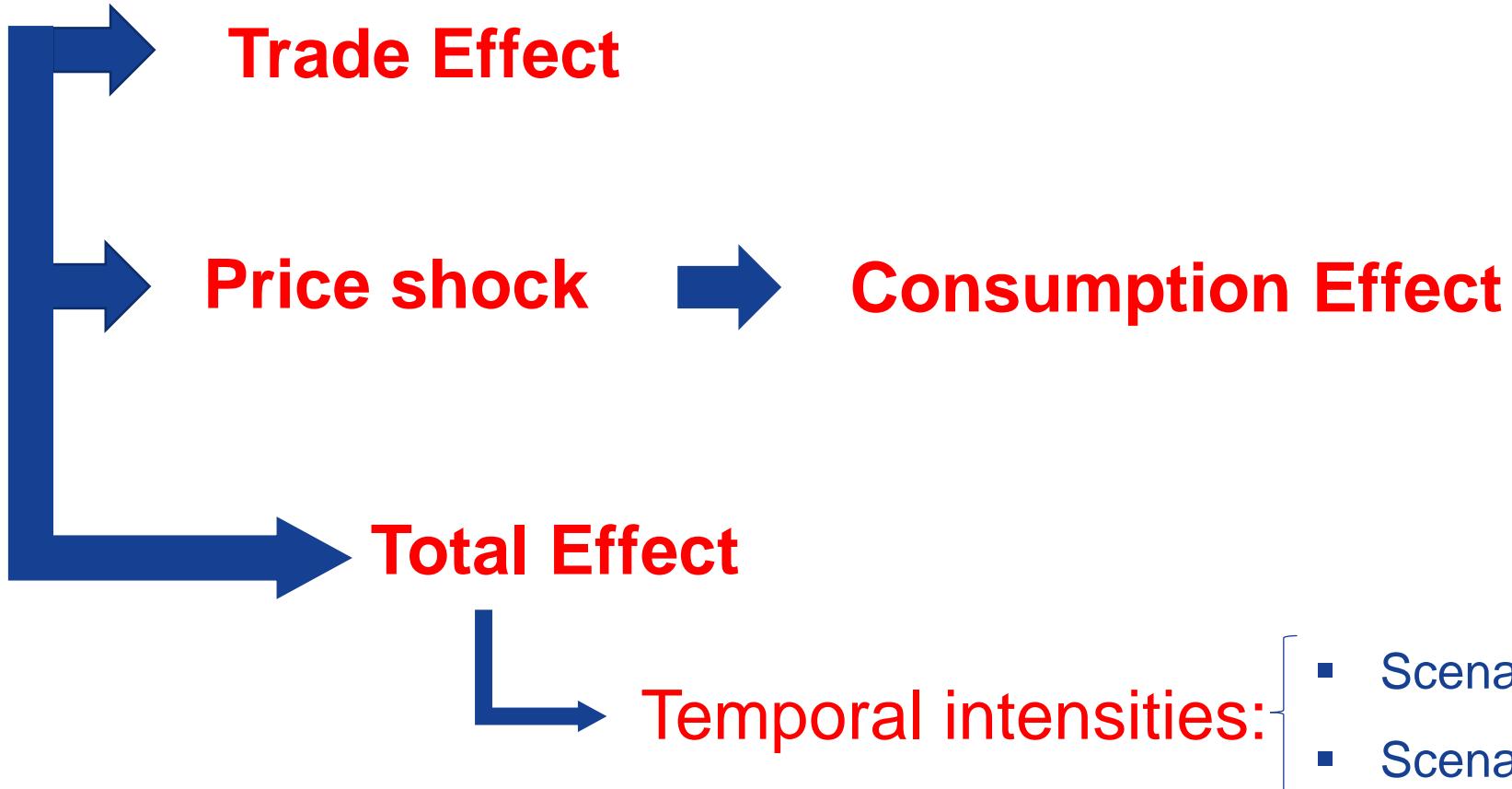


Filter by sanction type: \$financial 👤individual ←import →export ✈travel +trade support 🚫no sanction

Filter by government:  US  UK  EU  Japan  Australia  Canada  Germany  France  Italy  Russia  Switzerland

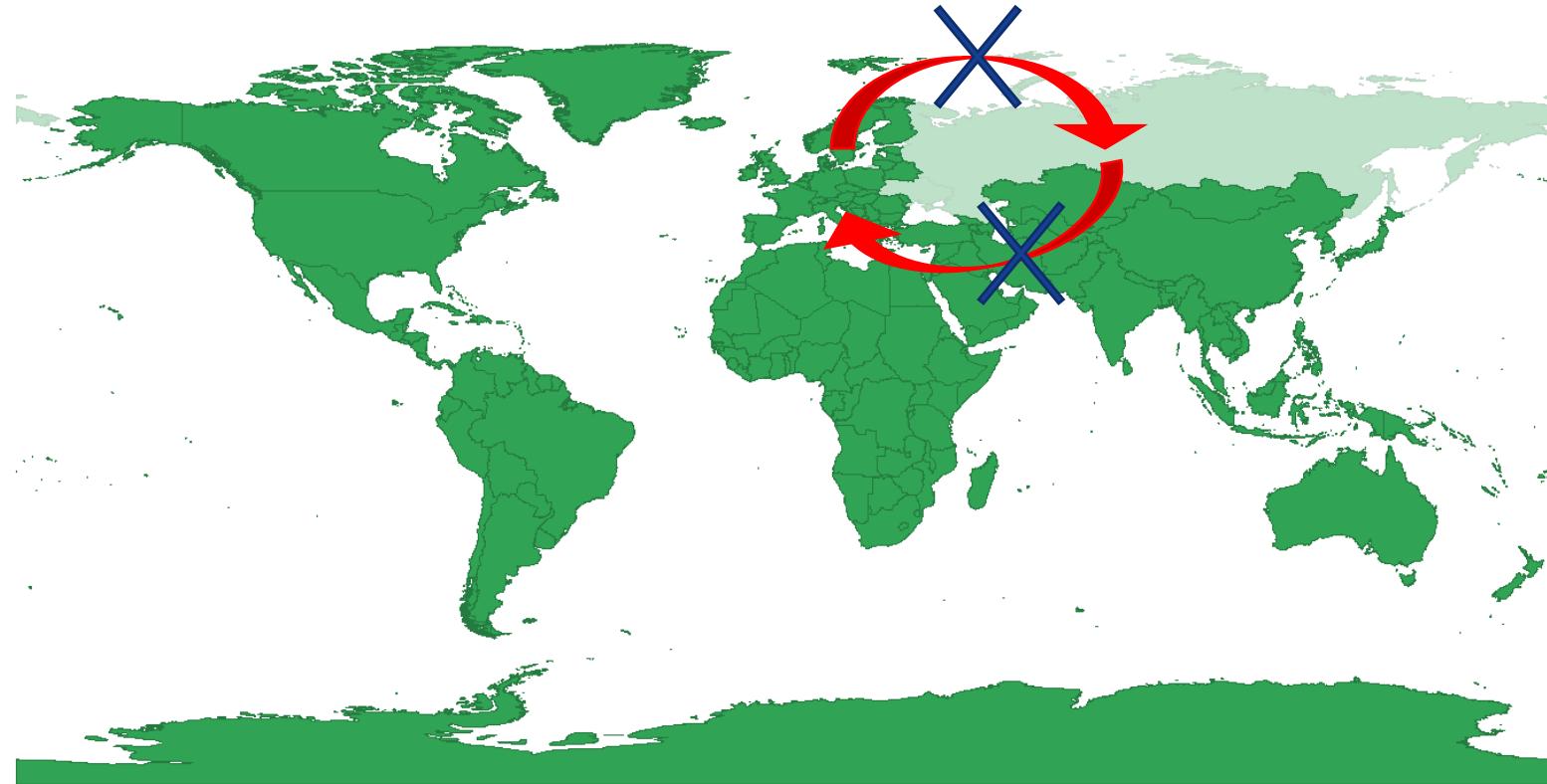
China  South Korea  Norway  Iceland  New Zealand  India  Taiwan  Ukraine  Indonesia  Turkey  Mexico

Brazil  Argentina  Singapore  South Africa  Liechtenstein  Serbia  Finland  Sweden





## S1: Baseline: Zero trade with Russia & Ukraine (all World & products)



- No exports (goods and services) to Russia/Ukraine in 1 year.
- No imports (goods and services) from Russia/Ukraine in 1 year.

## Prices shock in commodities

Metals: ▲18%

Coal ▲97%

Oil ▲30%

Electricity and gas ▲45%

Agricultural products: ▲32%



## Transmission across inputs



## Adjustment in Consumption

Raise in prices of essential goods

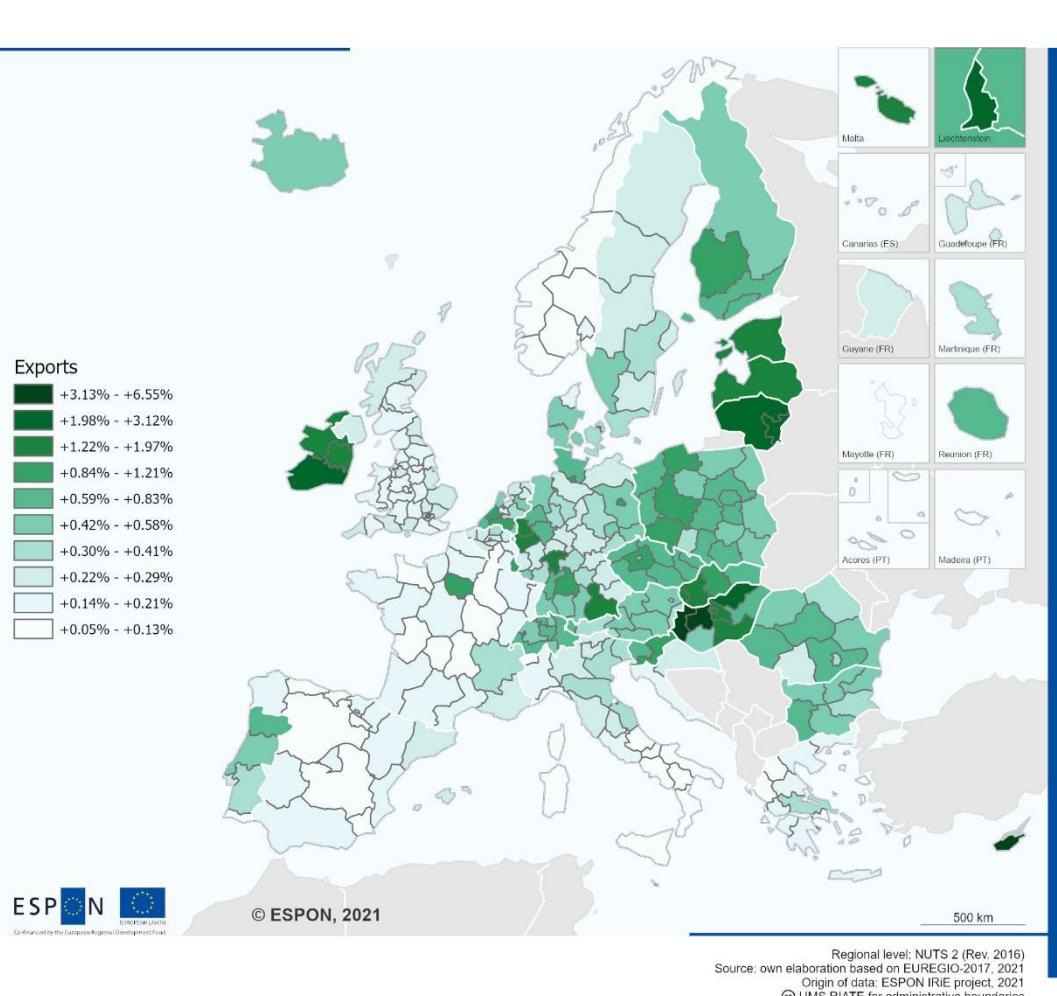
Adjustment within the consumer basket

Fall in the consumption of non-essential goods

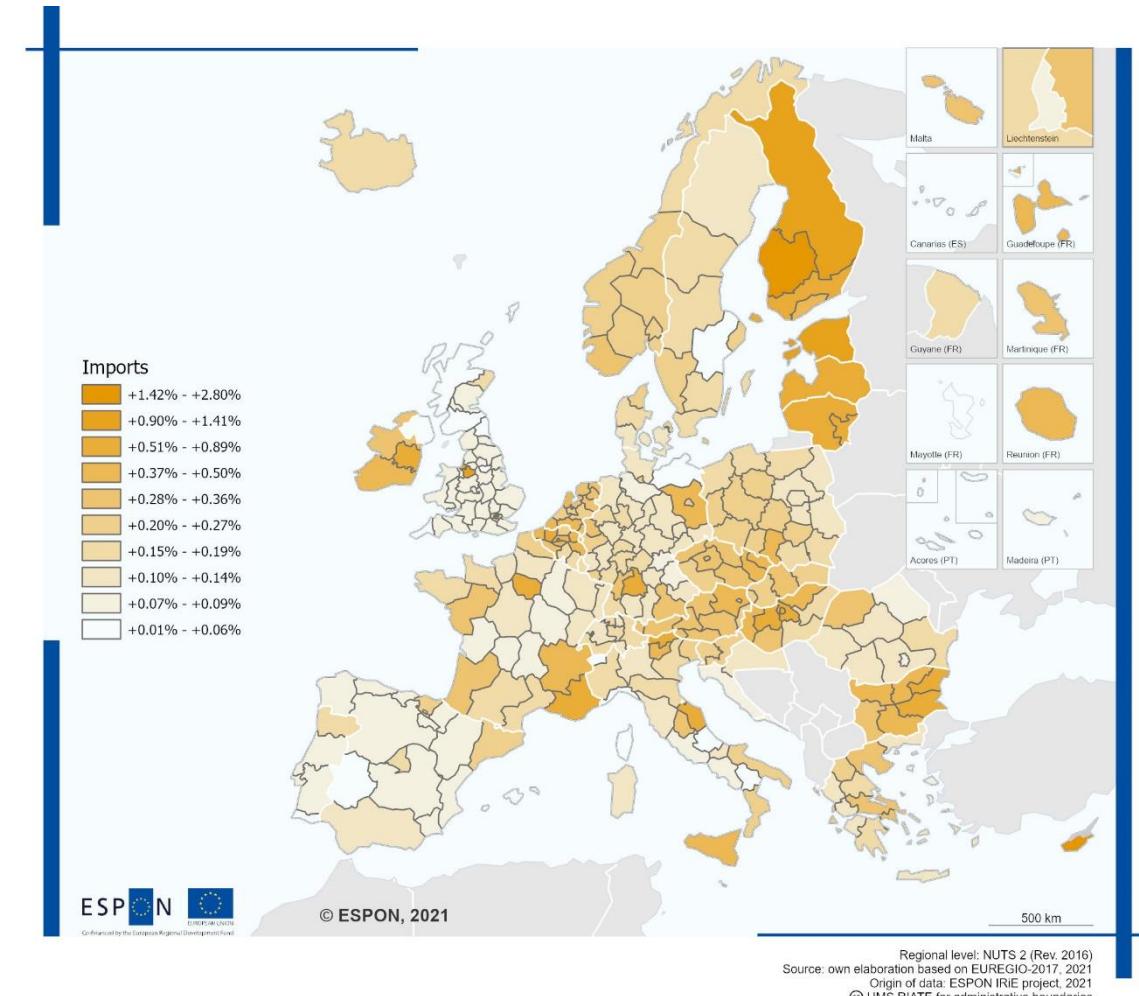
# The Ukrainian conflict: Results > trade exposure



Exports (goods & services) to Russia in % of GDP

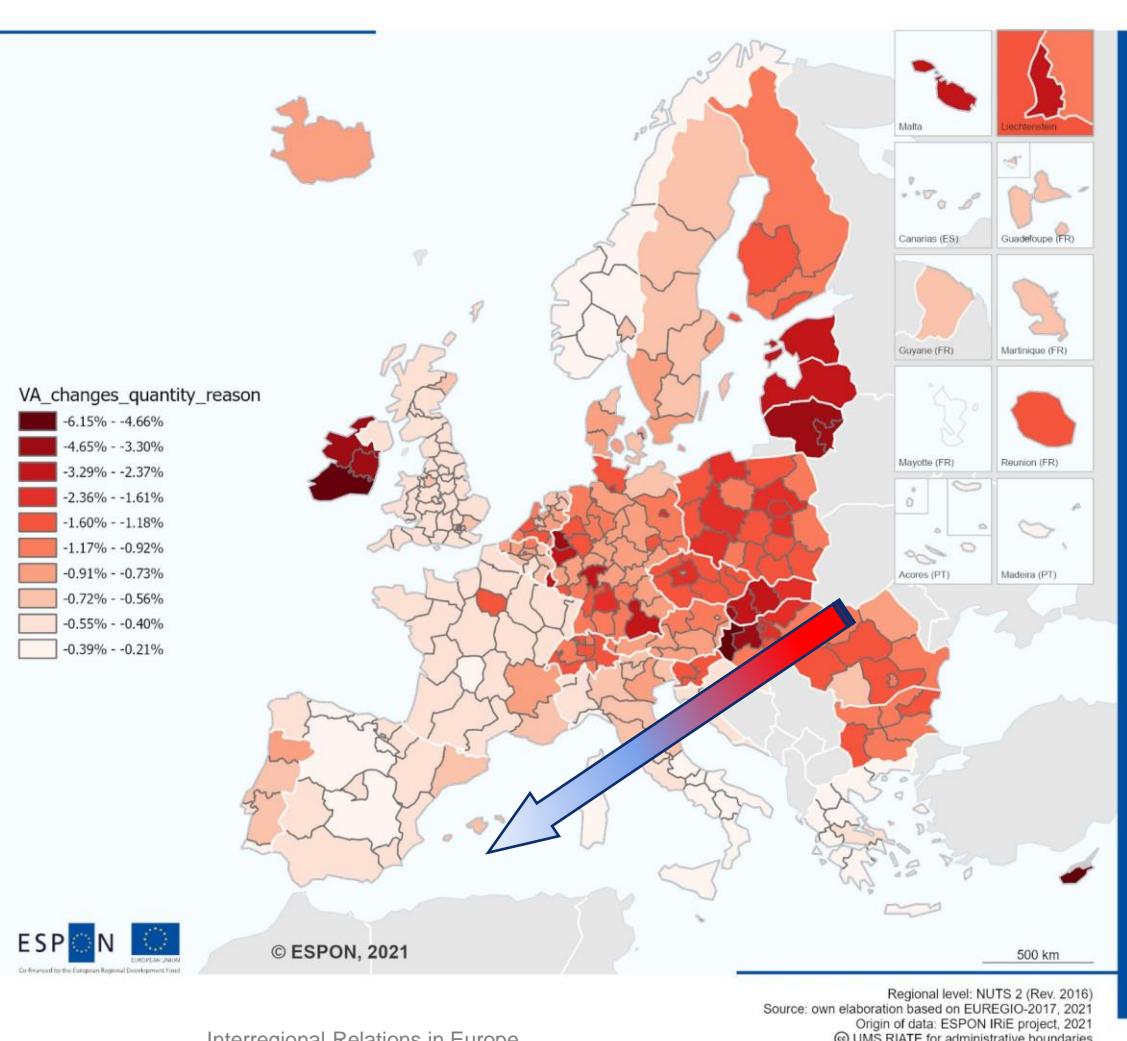


Imports (goods & services) from Russia in % of GDP

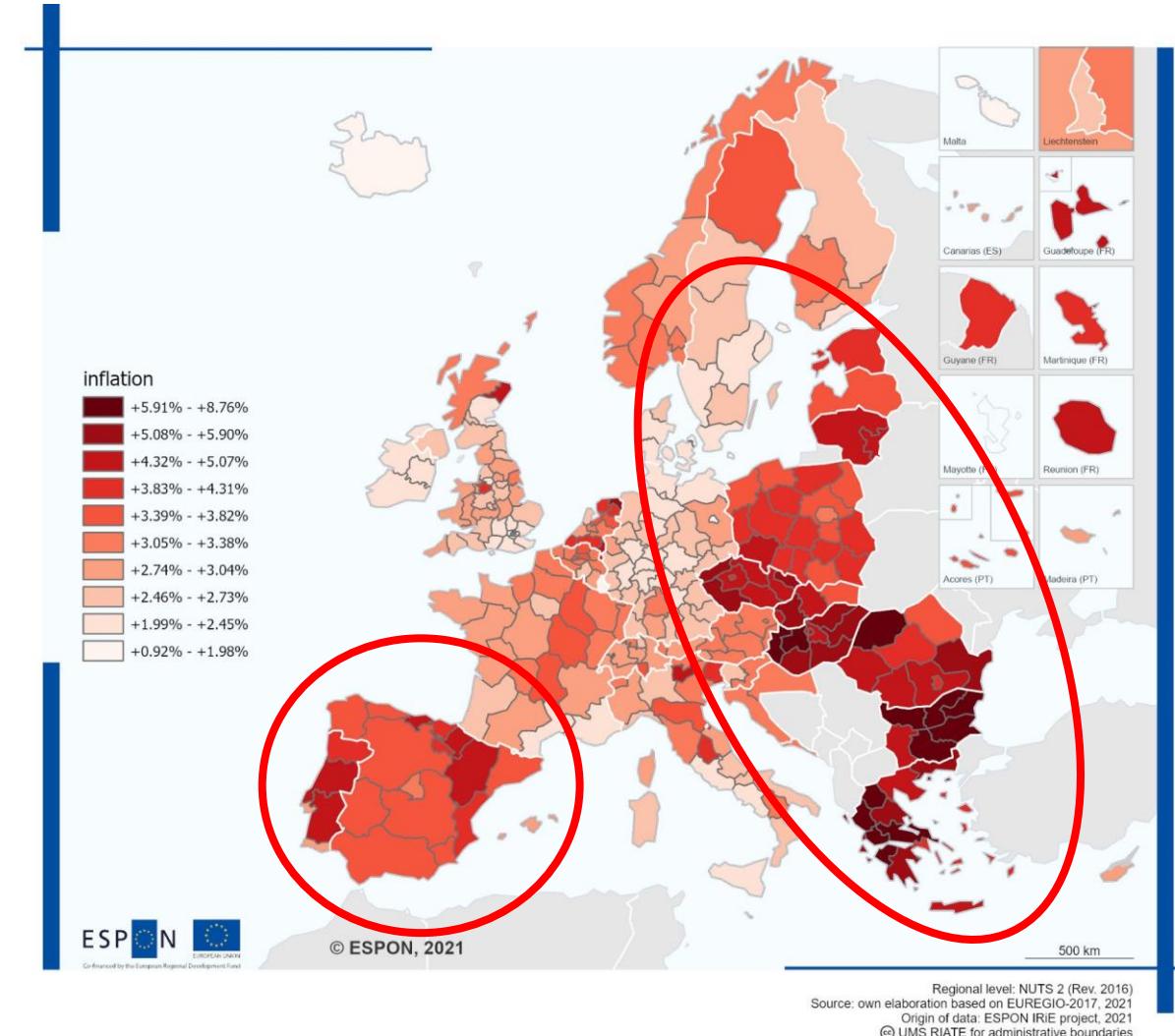




## Trade effect (% of regional GDP)

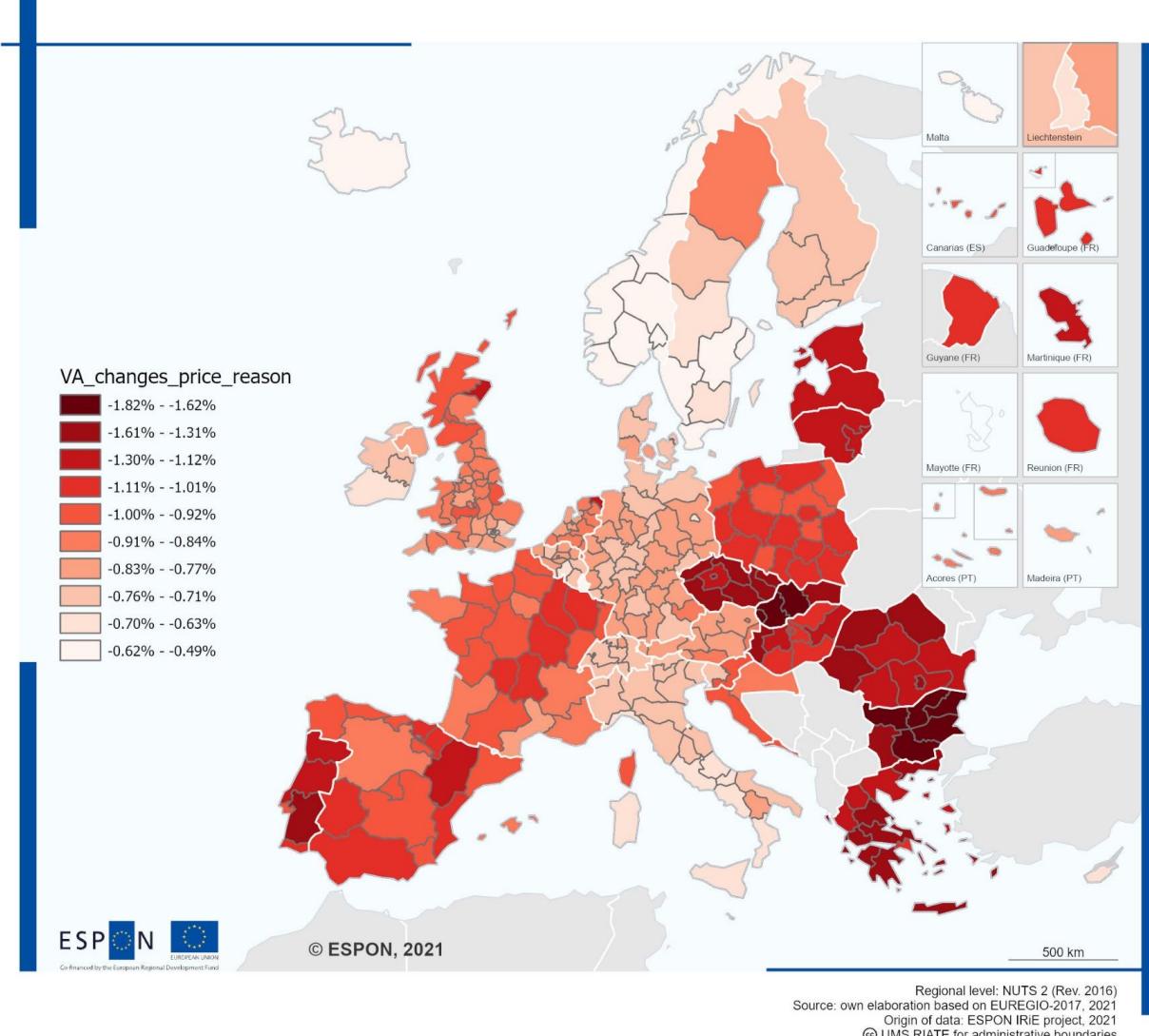


## Price effect: Inflation (p.p. over prewar rates)



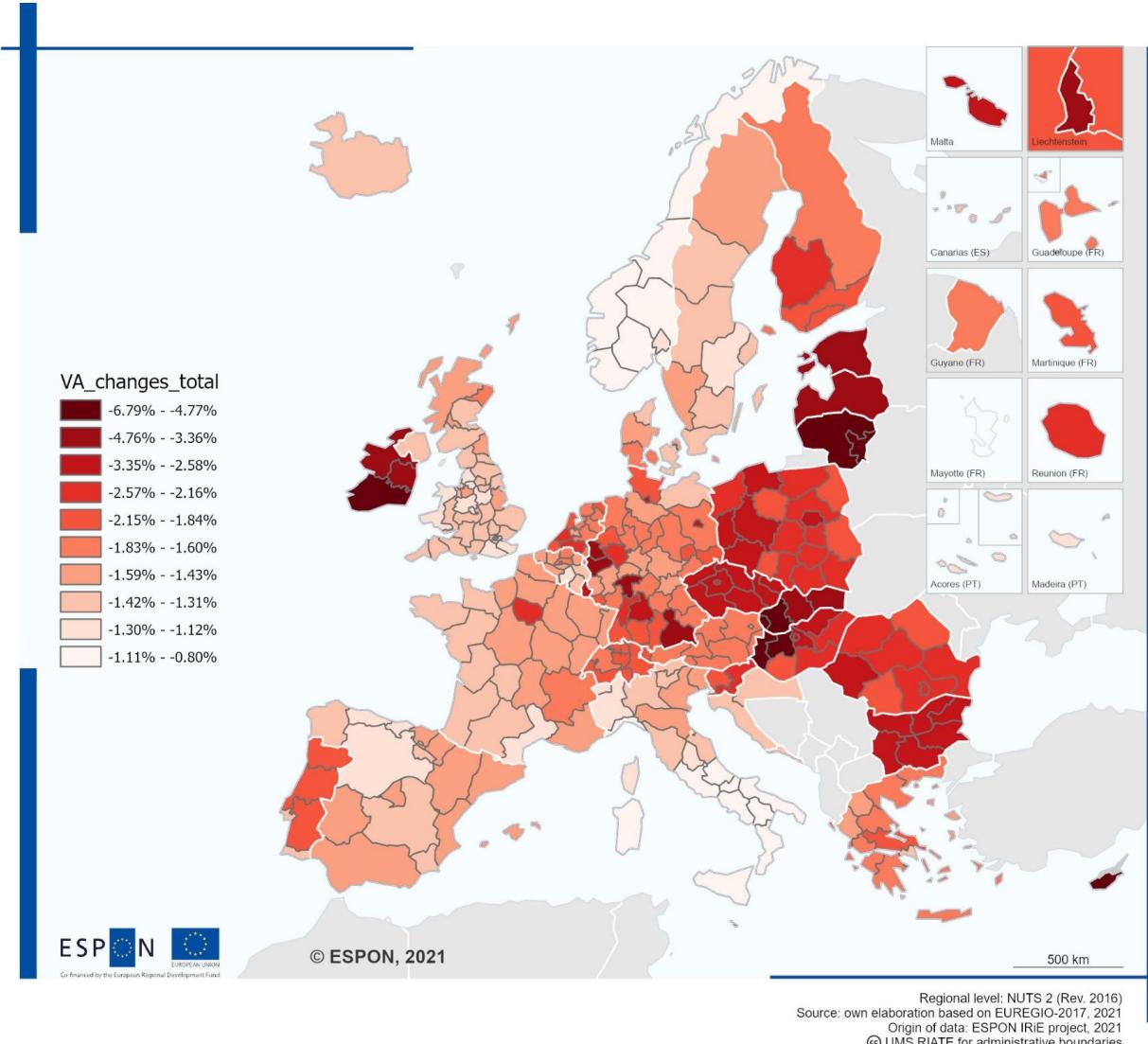


## GDP fall due to inflation (% of regional GDP)



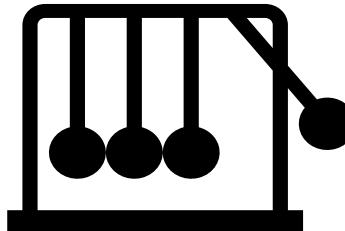


Total effect = trade + price (% of regional GDP)

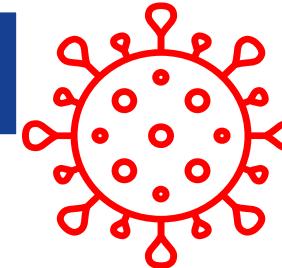




- The worst scenario suggests a:
  - -1,8 % moderation of the current Europe's GDP growth.
  - causing 3.7 million jobs losses, and...
  - a 3% additional inflation raise over prewar levels.
- The moderate scenario foreseen -0.6% GDP (0.8 million jobs) with prices raising 1.3%.
- The trade effect prevails over the price effect.
- Within the trade effect, indirect overpass direct effects.



# An overview across scenarios



		COVID19	NGEU	COVID19 + NGEU	War Russia Ukraine	Total
ES64	C.A. de Melilla	-0,46%	21,35%	20,89%	-1,06%	19,83%
ES63	C.A. de Ceuta	-0,63%	14,14%	13,51%	-1,08%	12,42%
ES70	Canarias	-8,09%	9,53%	1,44%	-1,42%	0,02%
ES43	Extremadura	-5,89%	6,77%	0,89%	-1,46%	-0,57%
ES61	Andalucía	-7,29%	6,67%	-0,62%	-1,43%	-2,05%
ES13	Cantabria	-8,36%	6,51%	-1,86%	-1,26%	-3,12%
ES12	P. de Asturias	-8,06%	6,36%	-1,70%	-1,27%	-2,98%
ES42	Castilla-la Mancha	-7,51%	5,64%	-1,87%	-1,36%	-3,24%
ES53	Illes Balears	-9,64%	7,69%	-1,95%	-1,49%	-3,44%
ES62	Región de Murcia	-7,76%	5,75%	-2,02%	-1,43%	-3,45%
ESPON	UE28+EEE	<b>-4,09%</b>	<b>2,13%</b>	<b>-1,96%</b>	<b>-1,89%</b>	<b>-3,85%</b>
ES23	La Rioja	-8,46%	5,86%	-2,60%	-1,35%	-3,95%
ES41	Castilla y León	-7,34%	4,50%	-2,84%	-1,22%	-4,05%
ES11	Galicia	-8,15%	5,25%	-2,90%	-1,37%	-4,27%
ES52	Comunidad Valenciana	-8,52%	5,44%	-3,08%	-1,50%	-4,58%
ES30	C. de Madrid	-7,36%	3,85%	-3,51%	-1,50%	-5,00%
ES24	Aragón	-8,05%	4,12%	-3,92%	-1,56%	-5,49%
ES22	C.F. de Navarra	-8,84%	4,42%	-4,41%	-1,52%	-5,94%
ES21	País Vasco	-8,63%	4,13%	-4,51%	-1,50%	-6,01%
ES51	Cataluña	-8,96%	4,15%	-4,80%	-1,57%	-6,37%

\* NGEU: damage restitution allocation criterion (pro-cohesion)

- **No room for naivety:** we have been through the worst shock ever the EU27 exists (COVID19), but the recovery is getting complicated.
  - In search for a new “steady state”; the “pre-covid” one is gone!
  - Uncertainty is raising, affecting future growth.
- Putin has changed the rules of the game.
  - Distrust in certain countries. Cut-back to self-autonomy in critical sectors. Protectionism.  
**Security vs Efficiency.**
- **The cold gradient:** Eastern Europe suffers the most from the war.
  - Political tensions there; indirect effects elsewhere.
  - Towards a "New Cold War"?
  - It is time to prioritize the **European Open Strategic Autonomy?**
- How will the conflict affect the **European Green Deal?**
  - Should we accelerate or delay the European Energetic Transition?



# **Part II:**

# **What is going on now?**

## **The Ukrainian conflict revisited**

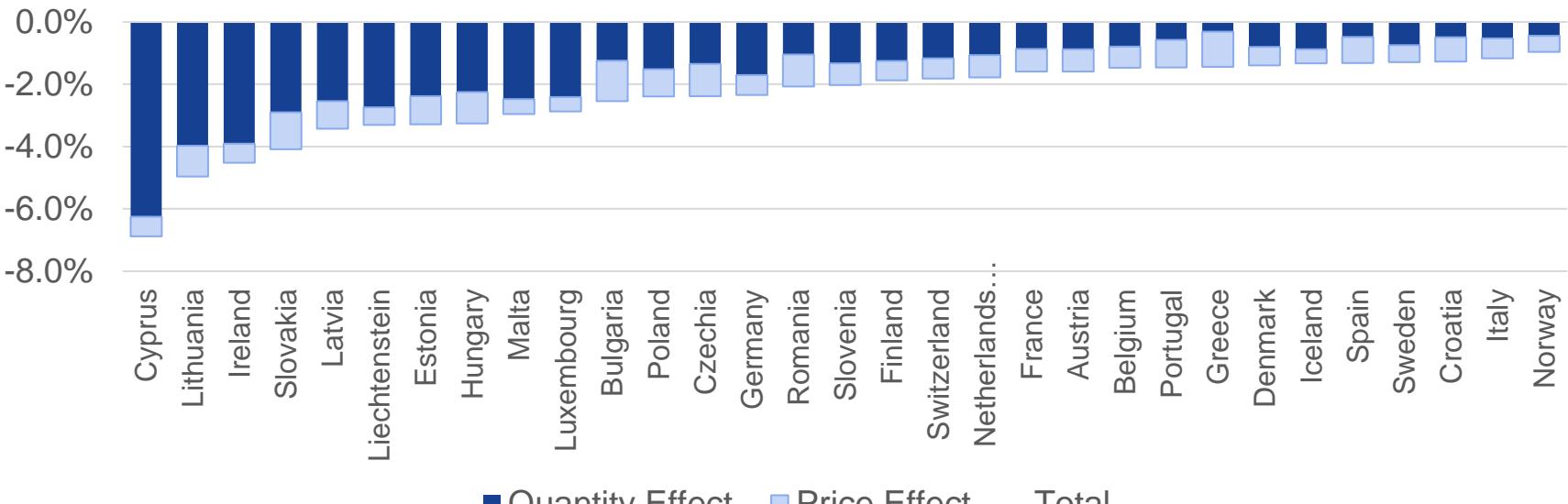
## Simulation

## Current situation

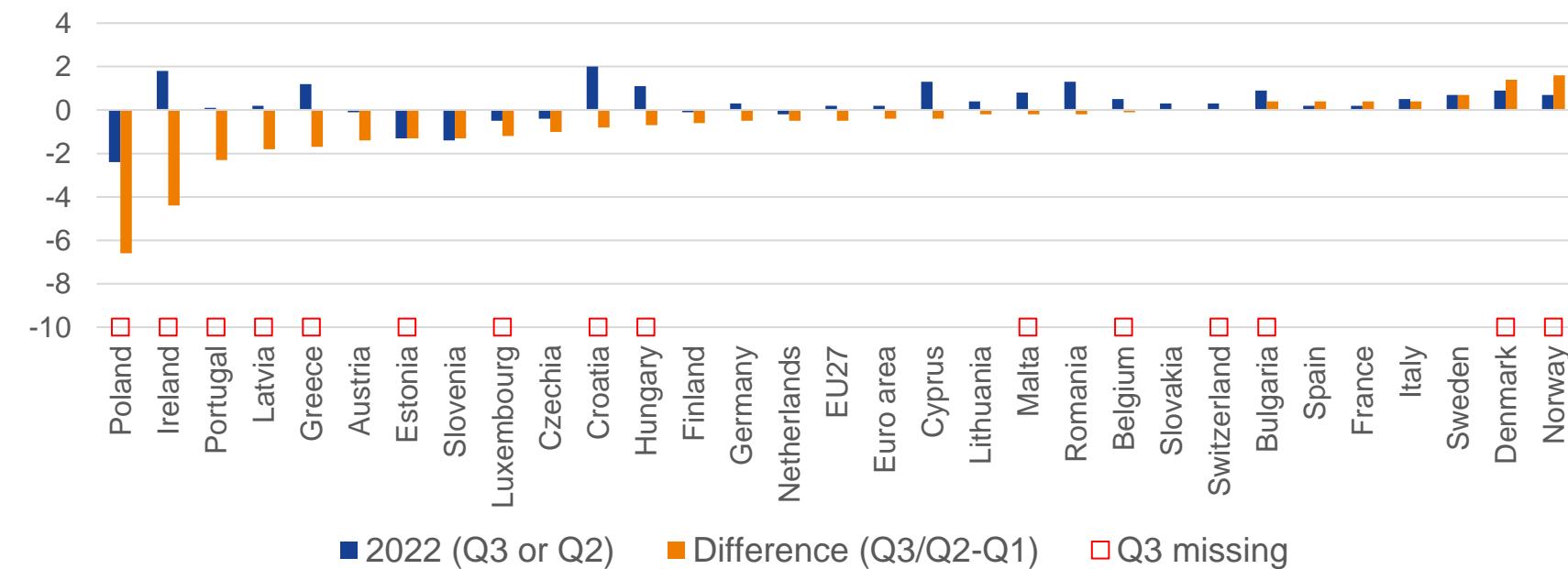
GDP  
(Const; Seasonal Adj.)  
Source: Eurostat

- GDP (Q3-Q1)
- EU27= -0.5%
- Euro Area= -0.4%

## GDP



■ Quantity Effect ■ Price Effect Total



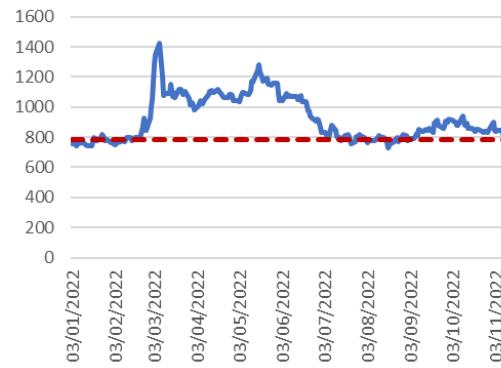
■ 2022 (Q3 or Q2)

■ Difference (Q3/Q2-Q1)

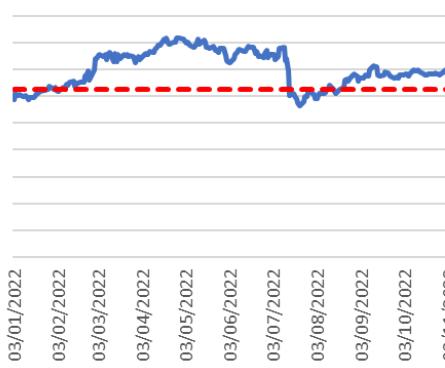
■ Q3 missing

## International price shock: commodities and energy

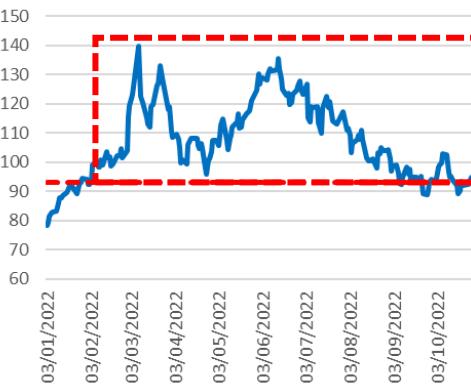
Wheat



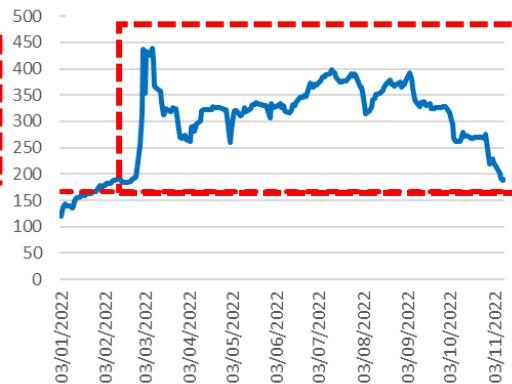
Corn



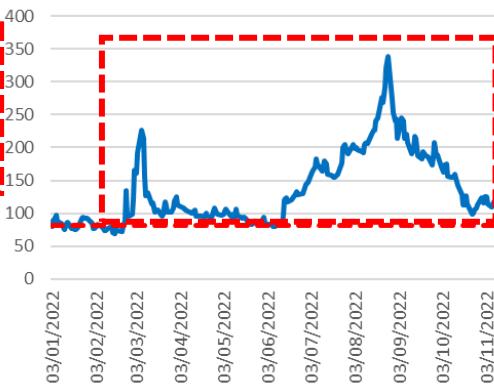
Oil (Brent)



Coal



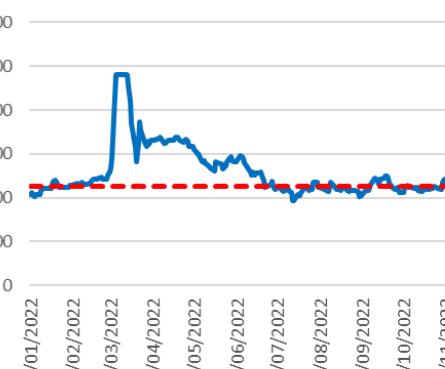
Natural Gas (TIF)



Aluminum



Nickel



Tin



Zink



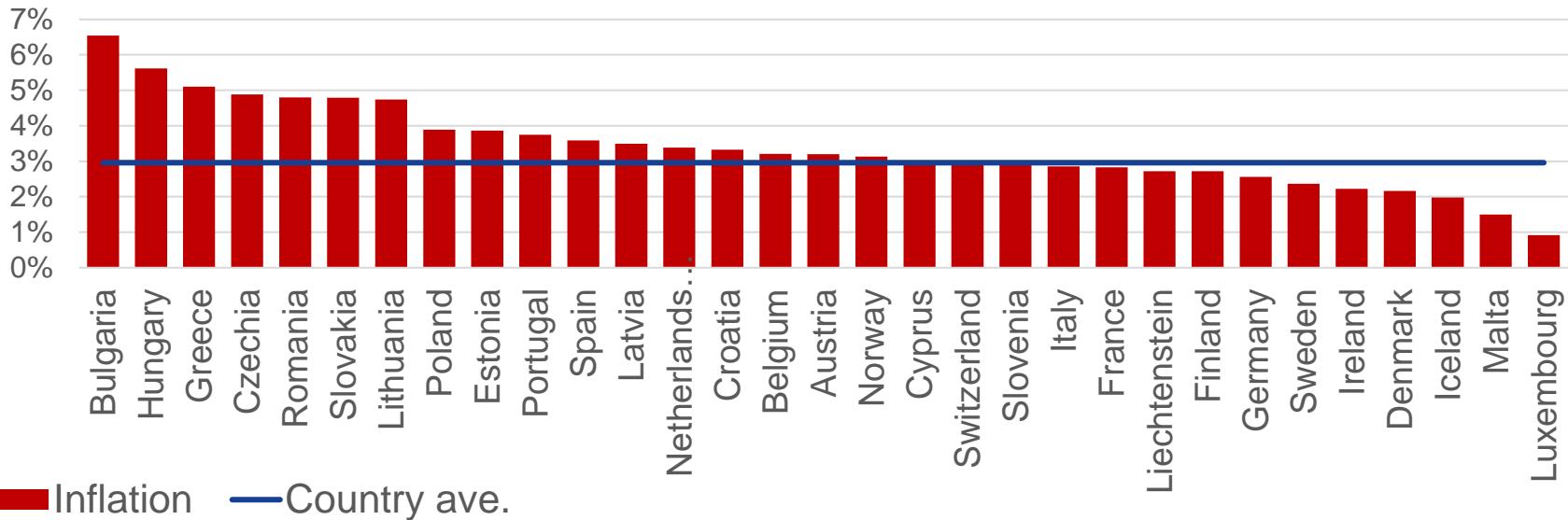
Cooper (spot)



## Simulation

p.p. over prewar rates

## Inflation



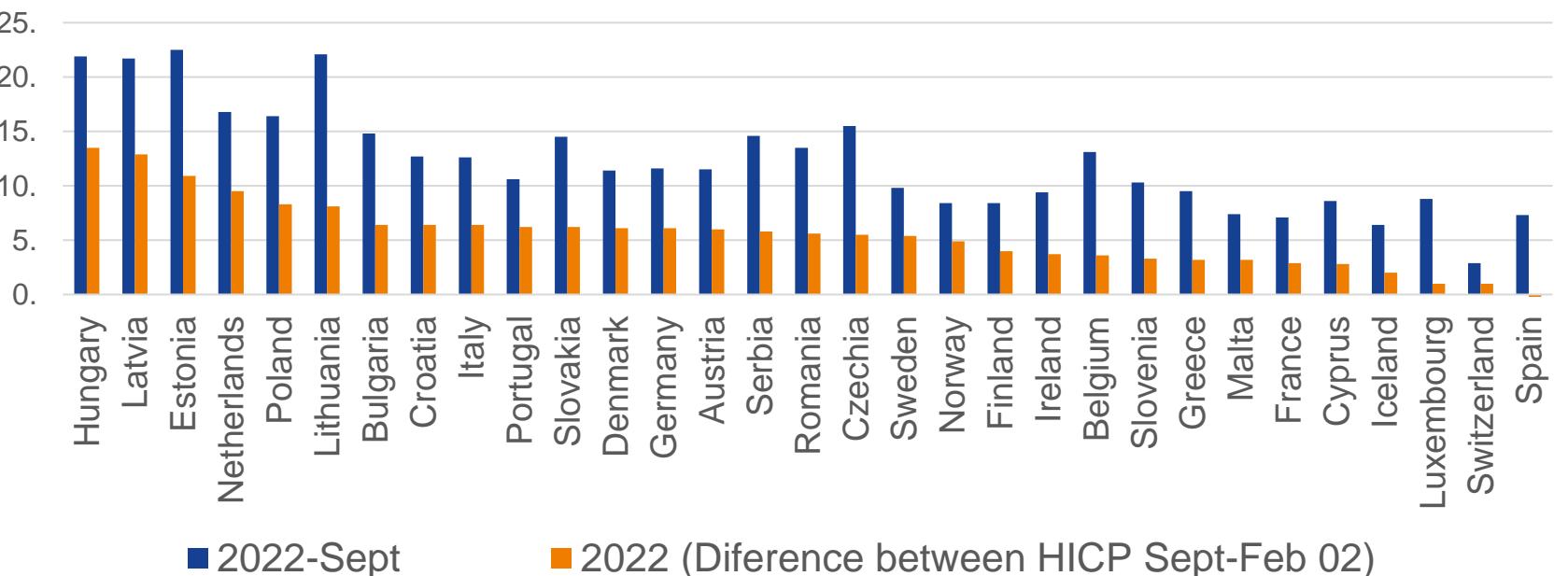
## Current situation

HICP - monthly data  
(annual rate of change).

Source: Eurostat

## HICP 2022-10:

- EU27= 11.5;
- Euro Area= 10.6

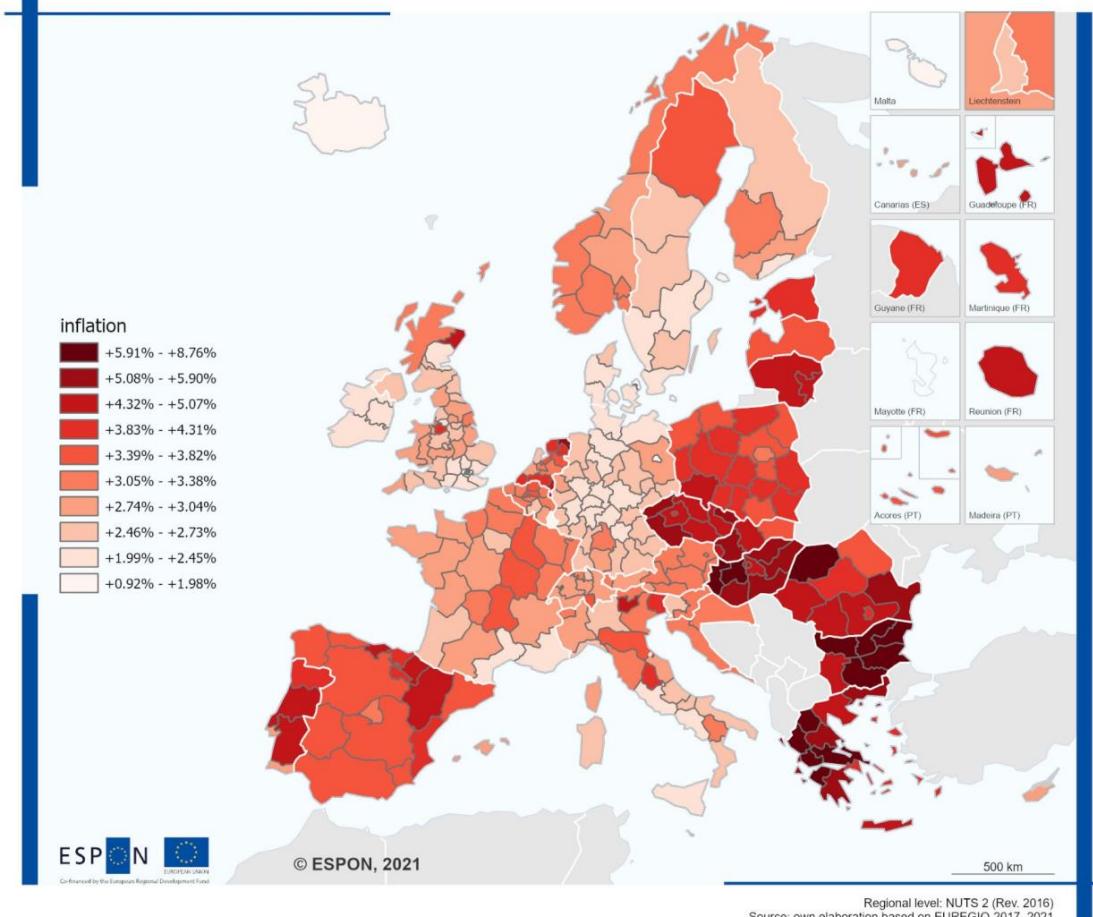


# 6 Ongoing situation

## Inflation

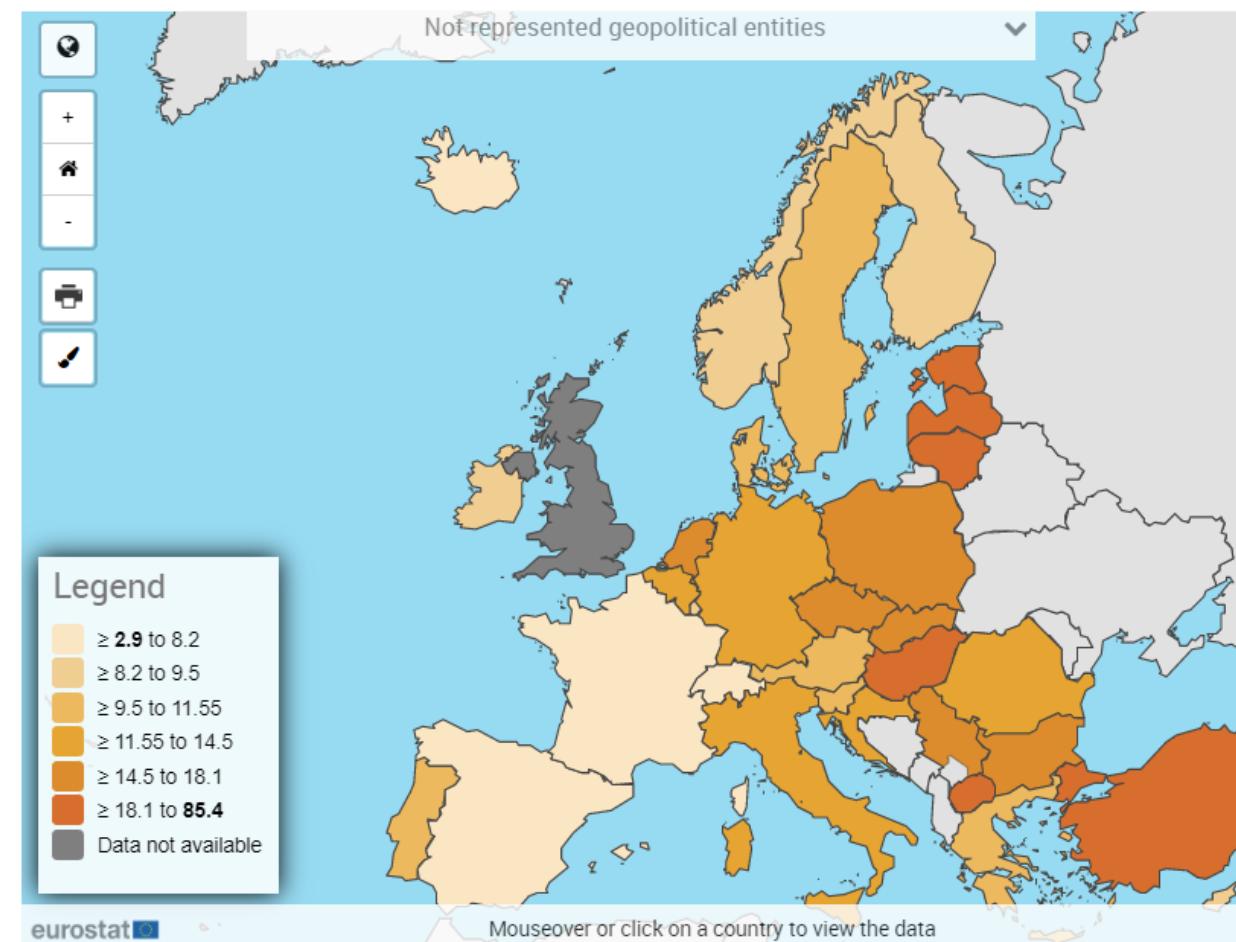
### Simulation

p.p. over prewar rates



### HICP - monthly data

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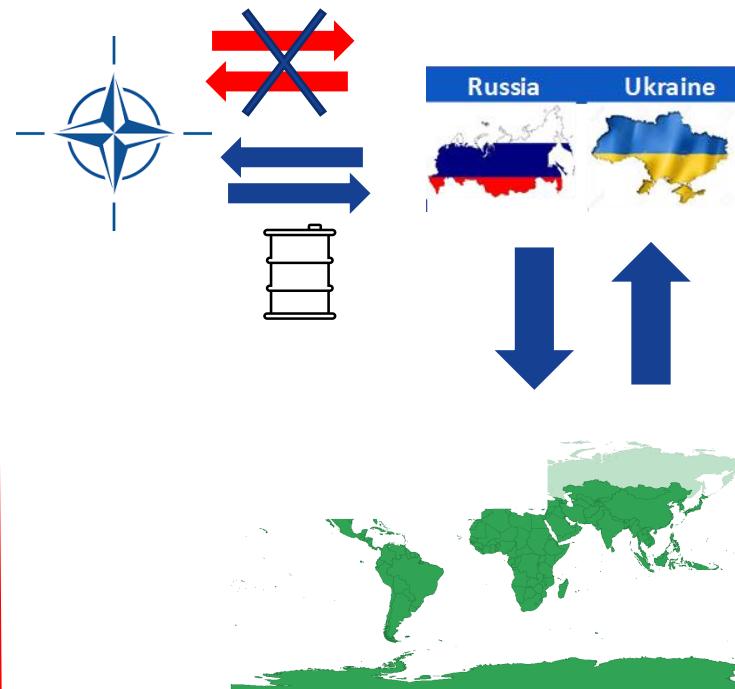


## 3 alternative scenarios related to the “trade effect”

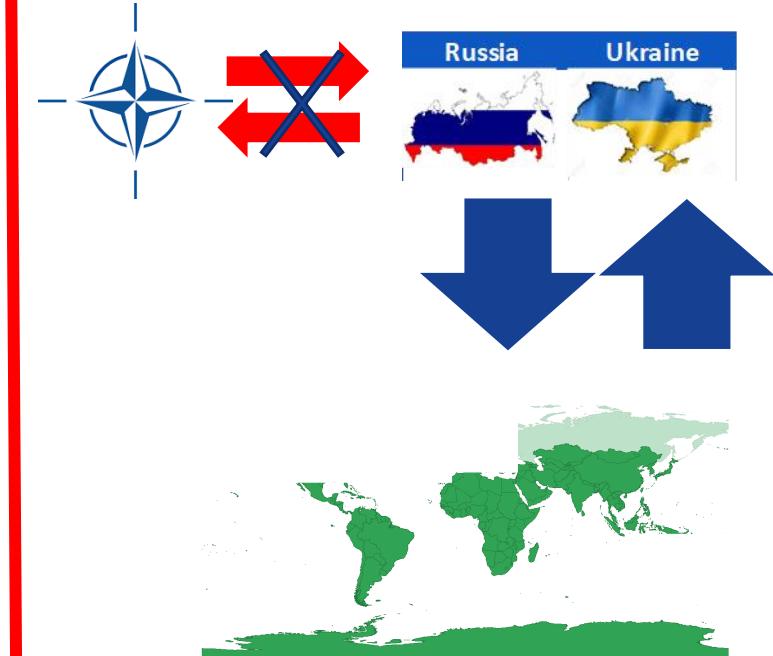
**S2: US+EU27 cancel trade of all products**



**S3: US+EU27 cancel trade except for oil and gas**



**S4: Russia and Ukraine deviate trade to third no-NATO countries**



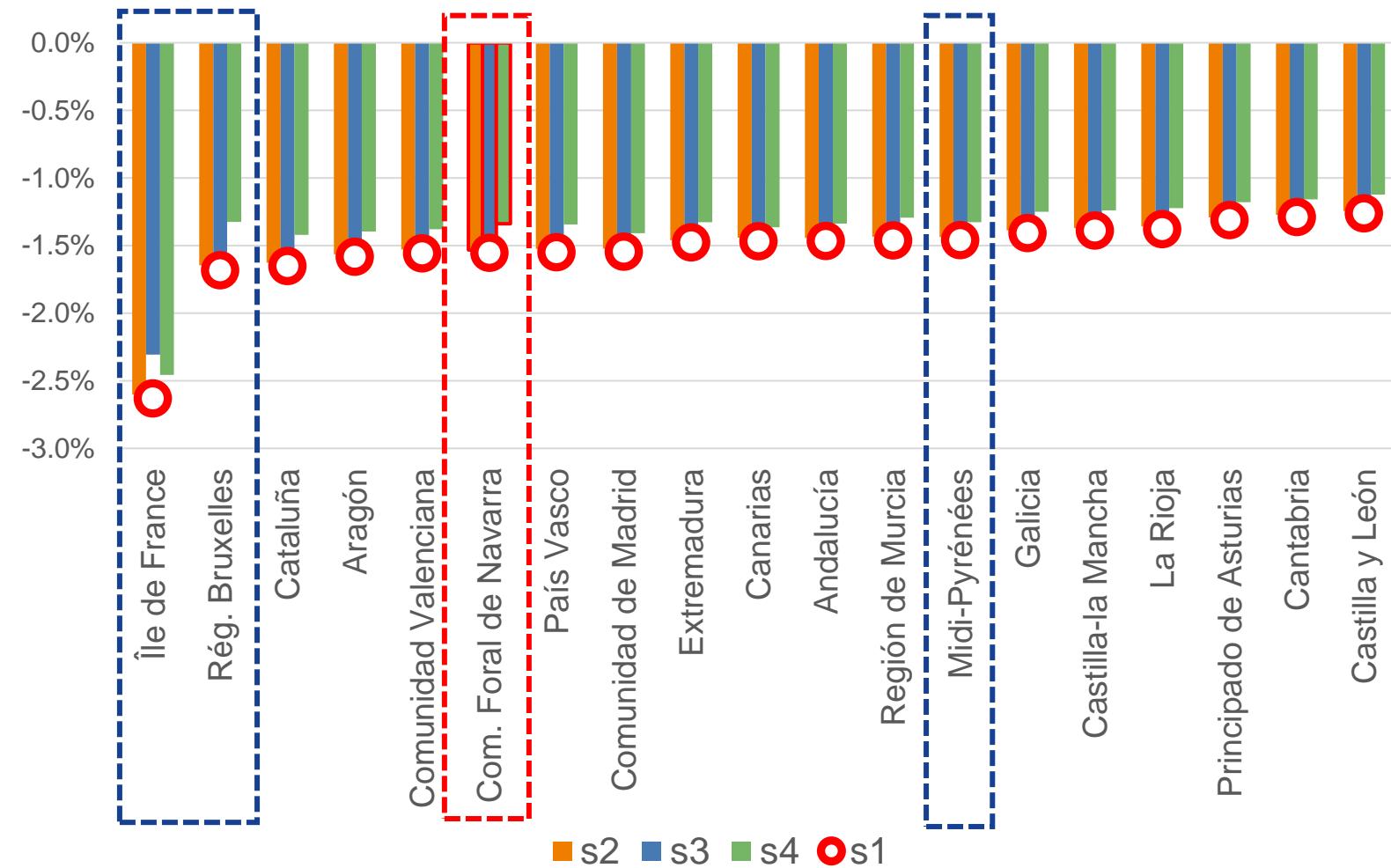
## Differences across scenarios: total impacts (% of regional output)

S1: baseline

S2: US+EU27 cancel  
trade in all sectorsS3: US+EU27 cancel trade  
in all sectors but oil & gasS4: Russia and Ukraine deviate  
trade to/from No-NATO countries.

GDP

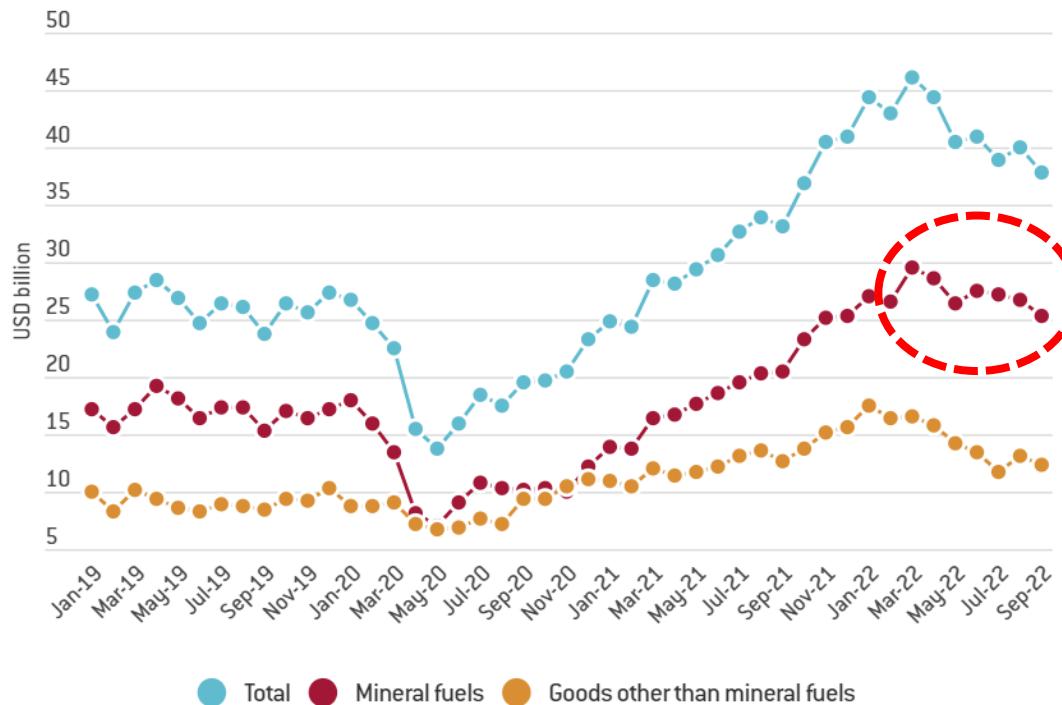
S1: baseline

S2: US+EU27 cancel  
trade in all sectorsS3: US+EU27 cancel trade  
in all sectors but oil & gasS4: Russia and Ukraine  
deviate trade to/from No-  
NATO countries.

- The deviation of Russian exports to other countries will reduce the severity of the impact, but also the effectiveness of the sanctions, with the risk of enlarging the war.

## How Russian trade is doing since March 2022?

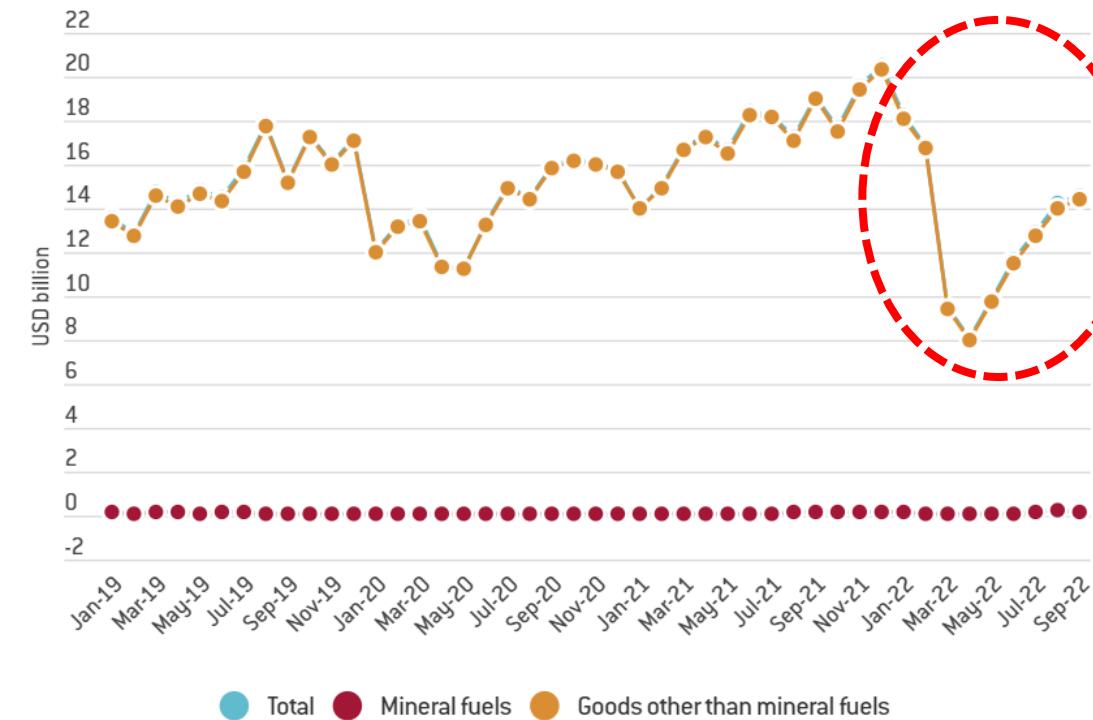
Russia's exports to 34 selected countries



Source: Bruegel based on Eurostat, General Administration of Customs - People's Republic of China, United States Census Bureau, Korea Customs Service, Ministry of Finance - Trade Statistics of Japan, Ministry of Commerce and Industry - Government of India, ONS (UK), Turkish Statistical Institute. Note: The 34 countries comprise the 27 European Union countries, China, the United States, South Korea, Japan, India, the United Kingdom and Turkey, which together accounted for around 75% of both Russian exports and imports in 2019.



Russia's imports from 34 selected countries



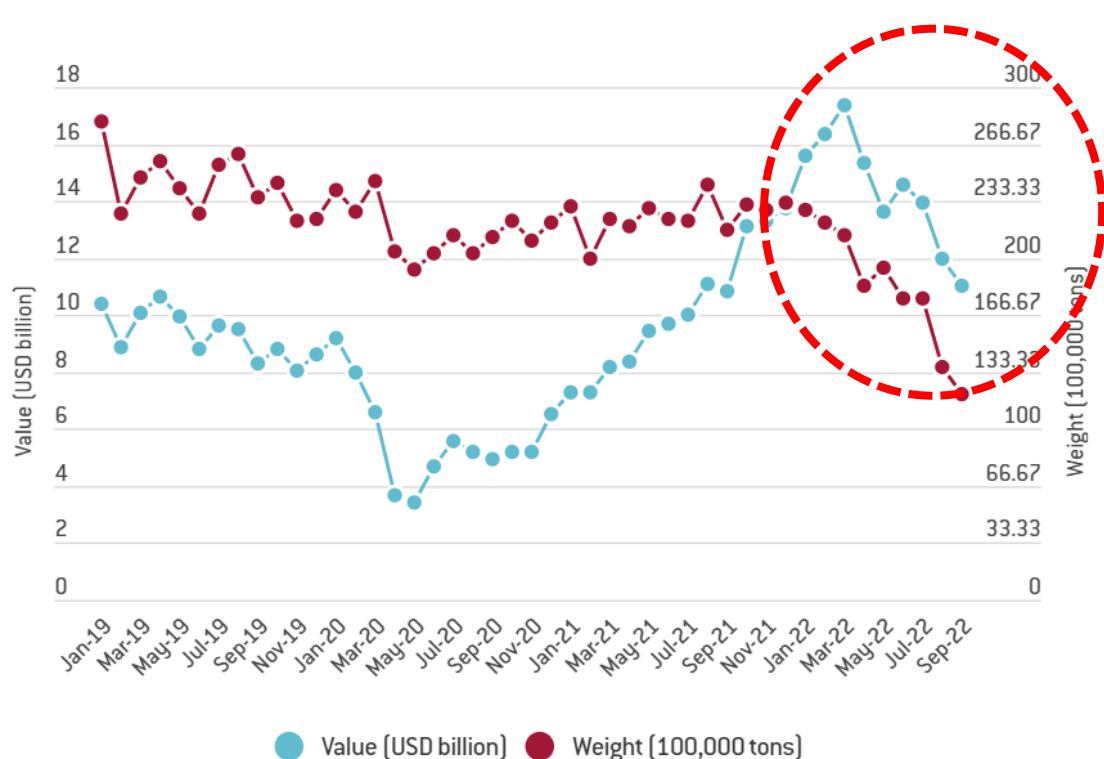
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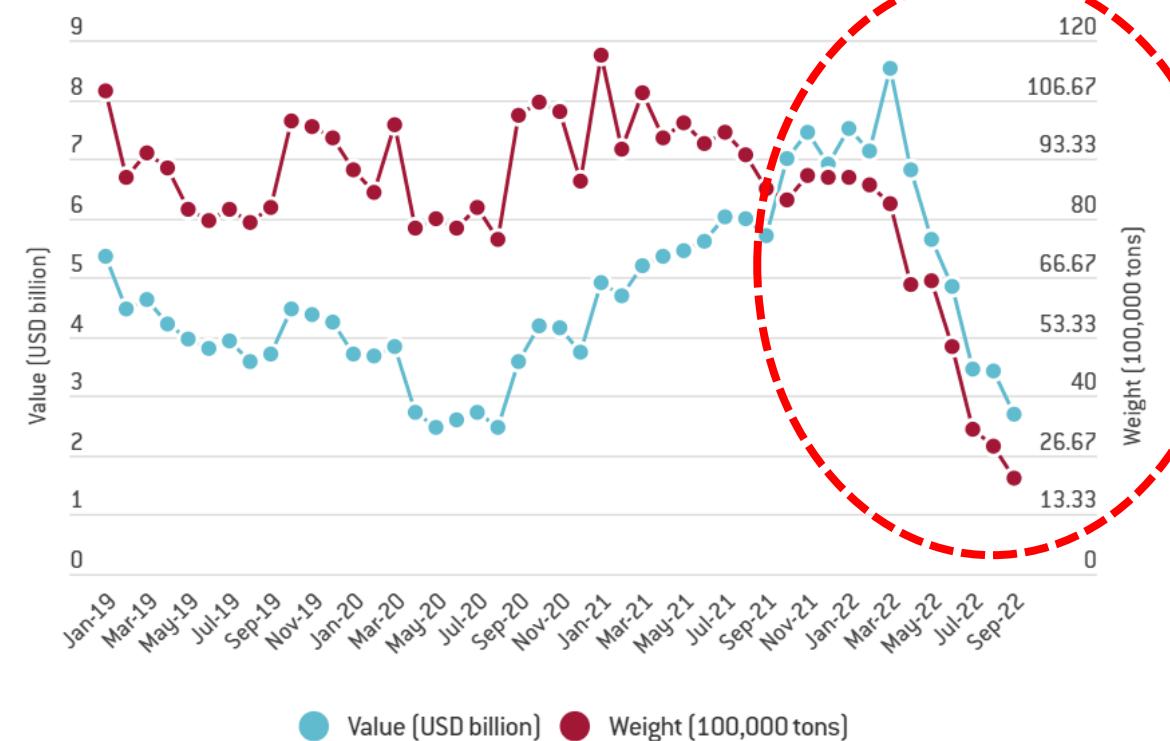
Russia's exports to the EU27 (value vs weight)

Mineral fuels



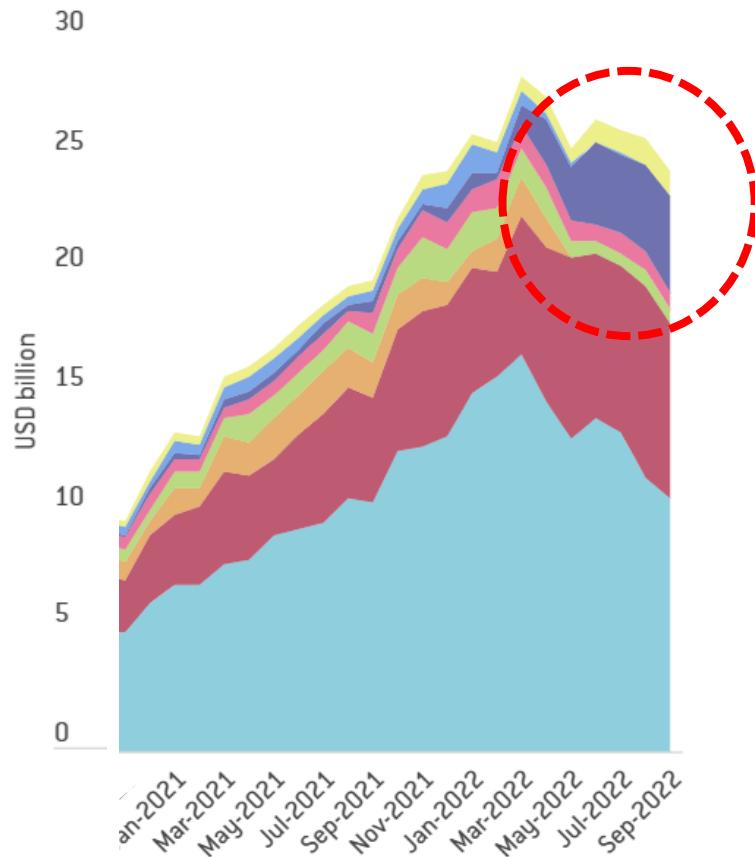
Russia's exports to the EU27 (value vs weight)

Goods other than mineral fuels

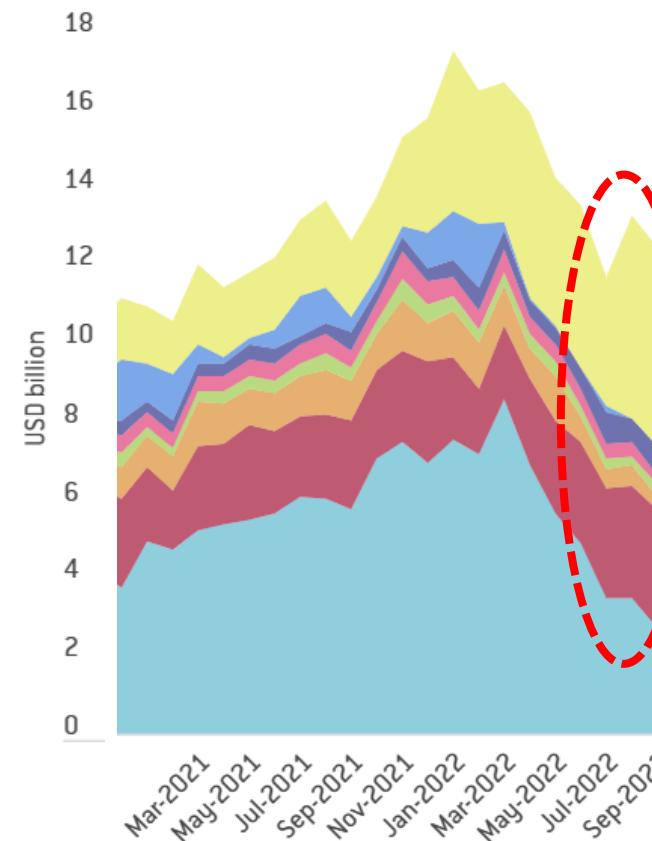


Source: Bruegel based on Eurostat.

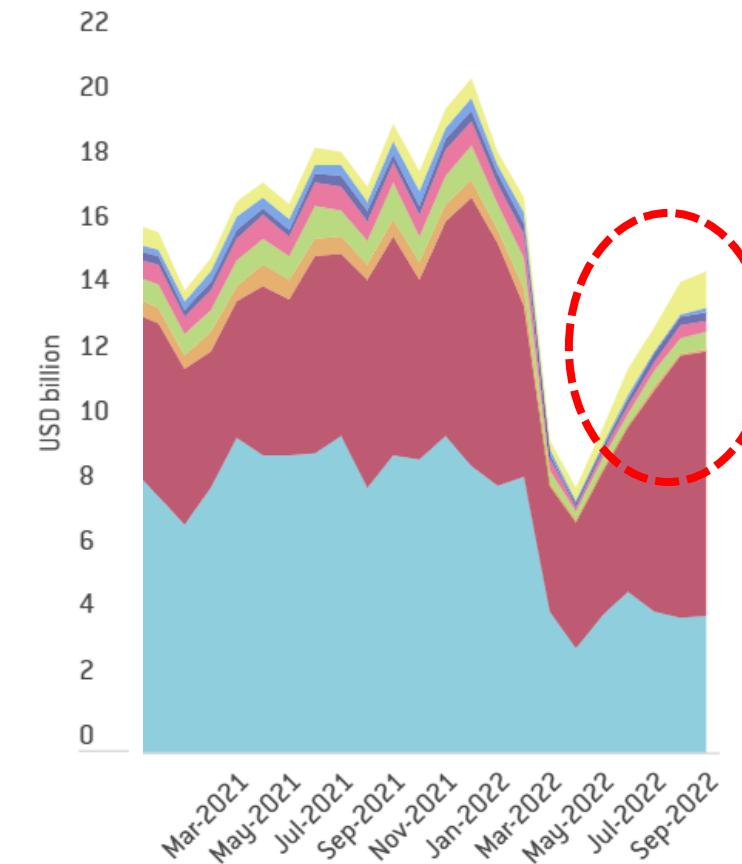
### Destination of Russia's mineral fuel exports



### Destination of Russia's exports of goods other than mineral fuels



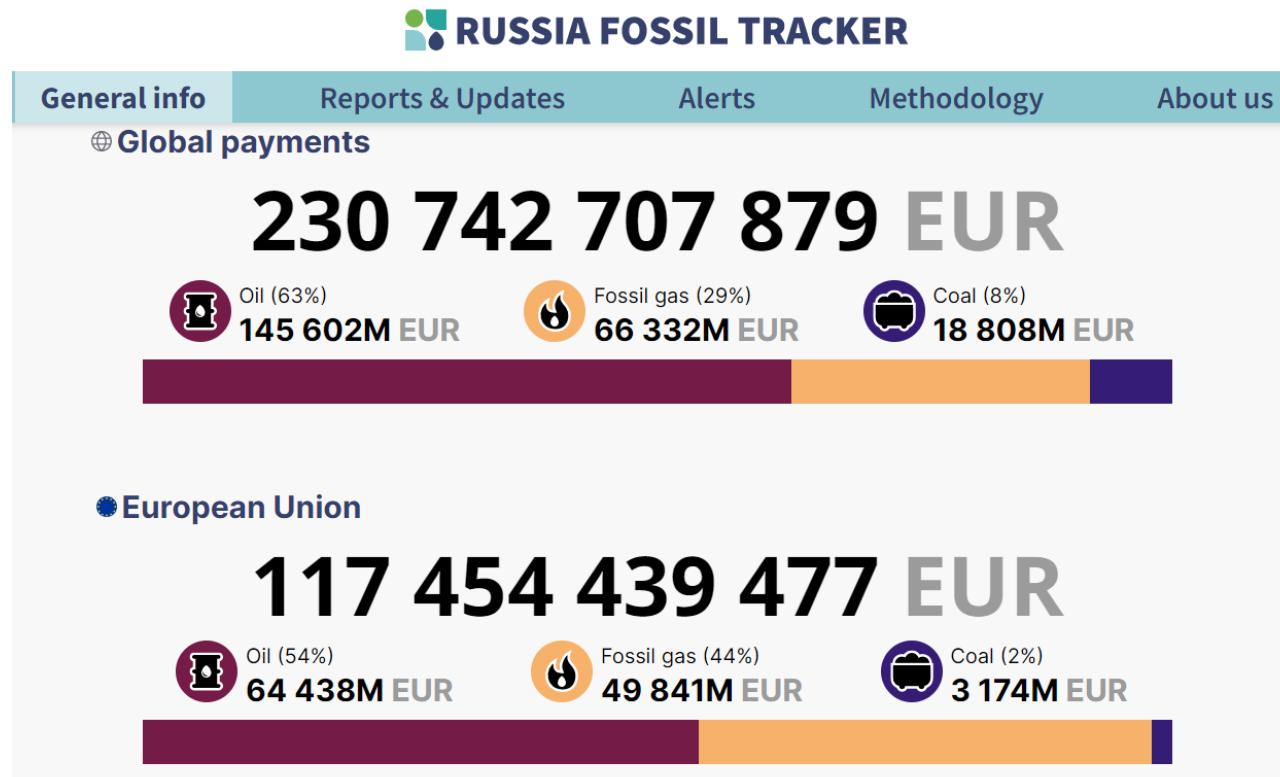
### Source of Russia's imports



● EU27 ● China ● US ● South Korea ● Japan ● India ● UK ● Turkey

Source: Bruegel based on Eurostat, General Administration of Customs - People's Republic of China, United States Census Bureau, Korea Customs Service, Ministry of Finance - Trade Statistics of Japan, Ministry of Commerce and Industry - Government of India, ONS (UK), Turkish Statistical Institute.

## How much Russia is earning through trade in energy?



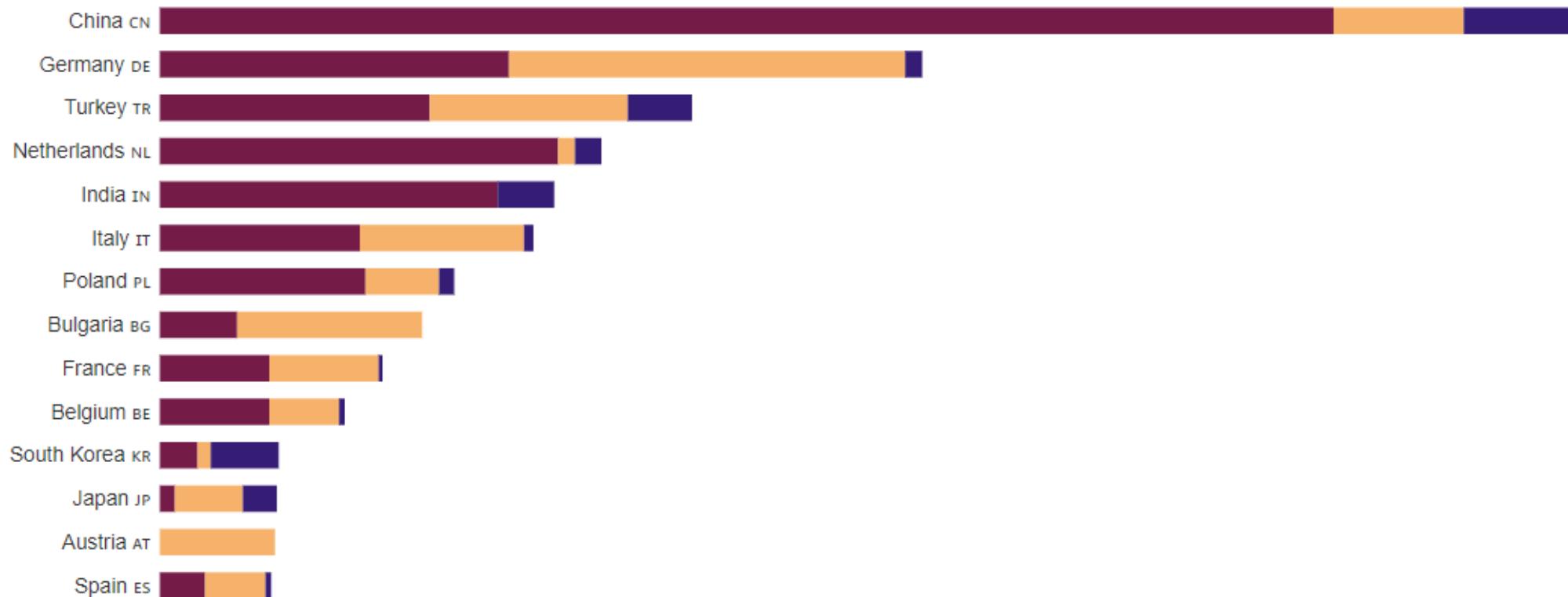
<https://www.russiafossiltracker.com/en>

## Who is paying (indirectly) the bill?

### Largest importers of fossil fuels from Russia

Source: CREA analysis. Download data here [!\[\]\(601b98b71de866467fbdeacf1ccbac3e\_img.jpg\)](#)

24/02/22 - 14/11/22 

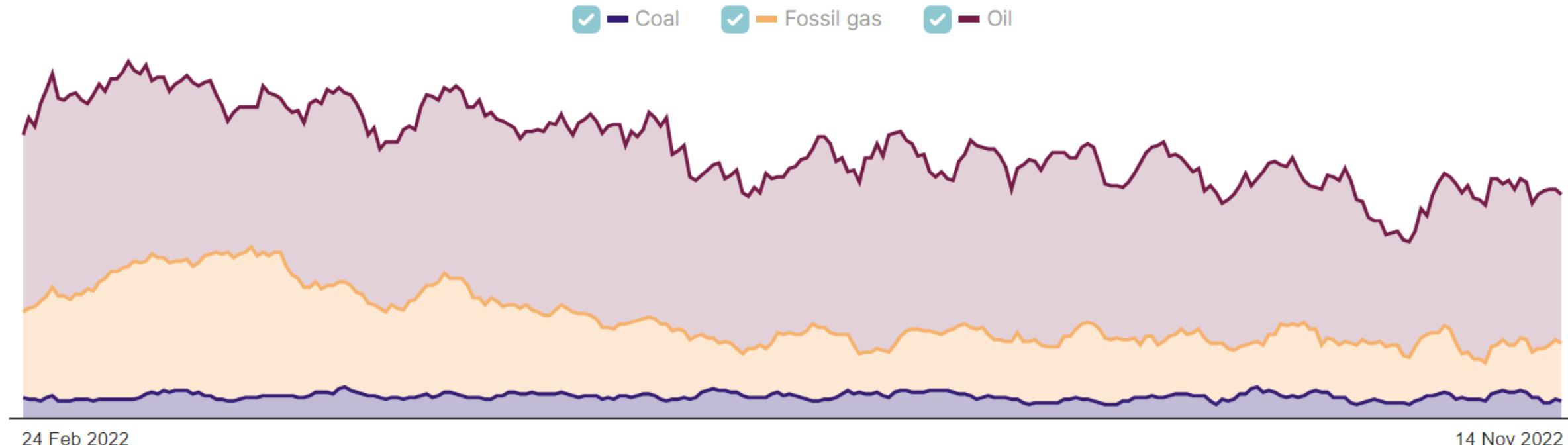


<https://www.russiafossiltracker.com/en>

## Daily payment amounts by fuel type

Source: CREA analysis. Download data here [!\[\]\(e1fb41f4b2b70194bf6a365468b84fdd\_img.jpg\)](#)

24/02/22 - 14/11/22 

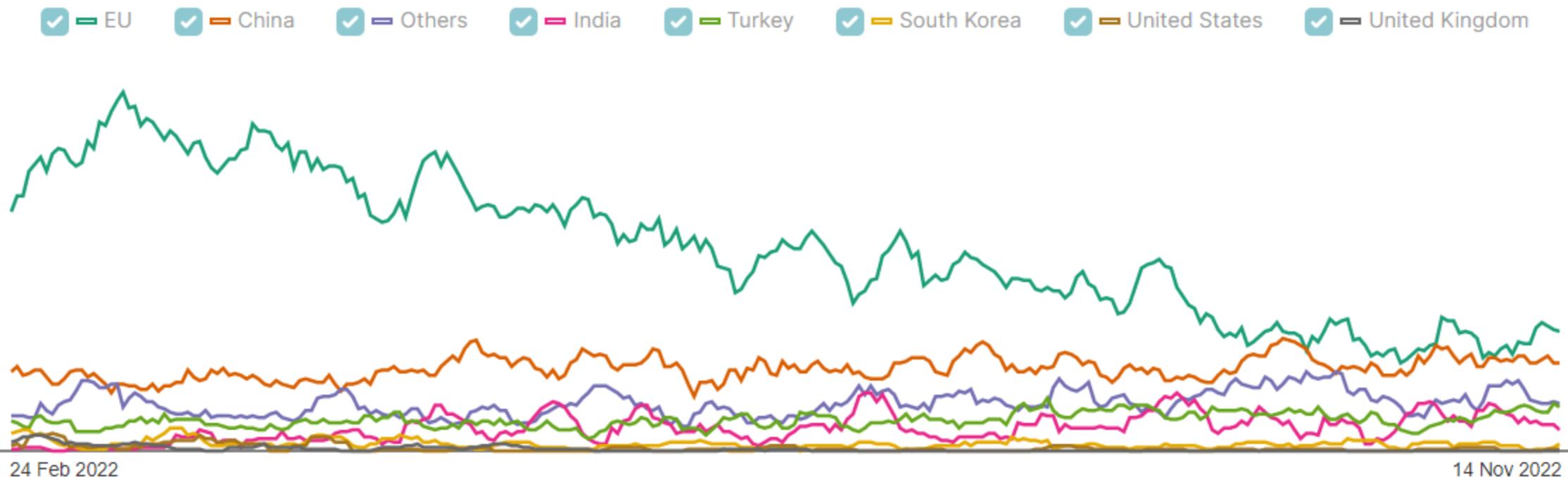


<https://www.russiafossiltracker.com/en>

## Daily payment amounts by geography

Source: CREA analysis. Download data here [↓](#)

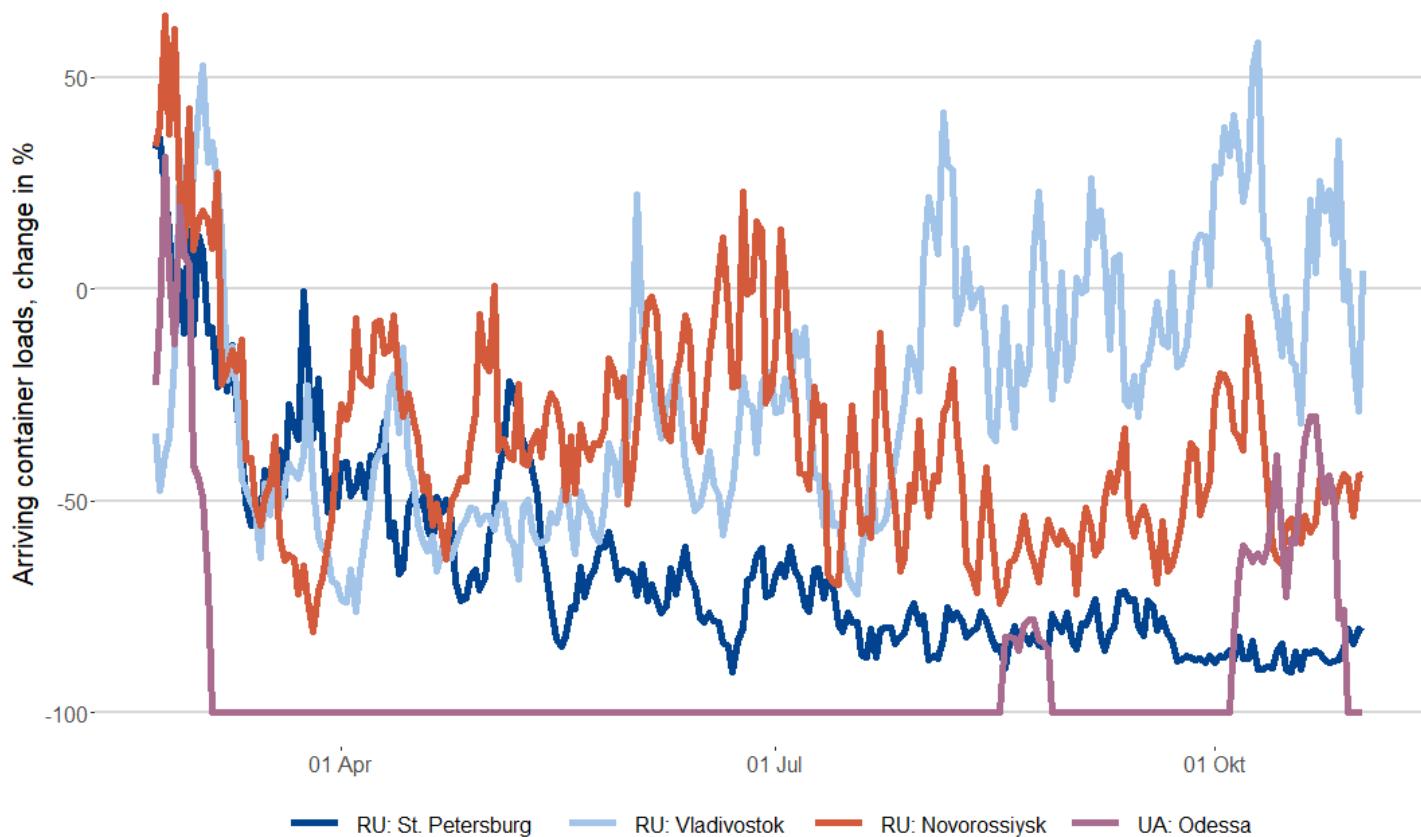
24/02/22 - 14/11/22



<https://www.russiafossiltracker.com/en>

Logistics:  
How such flows  
are being  
delivered?

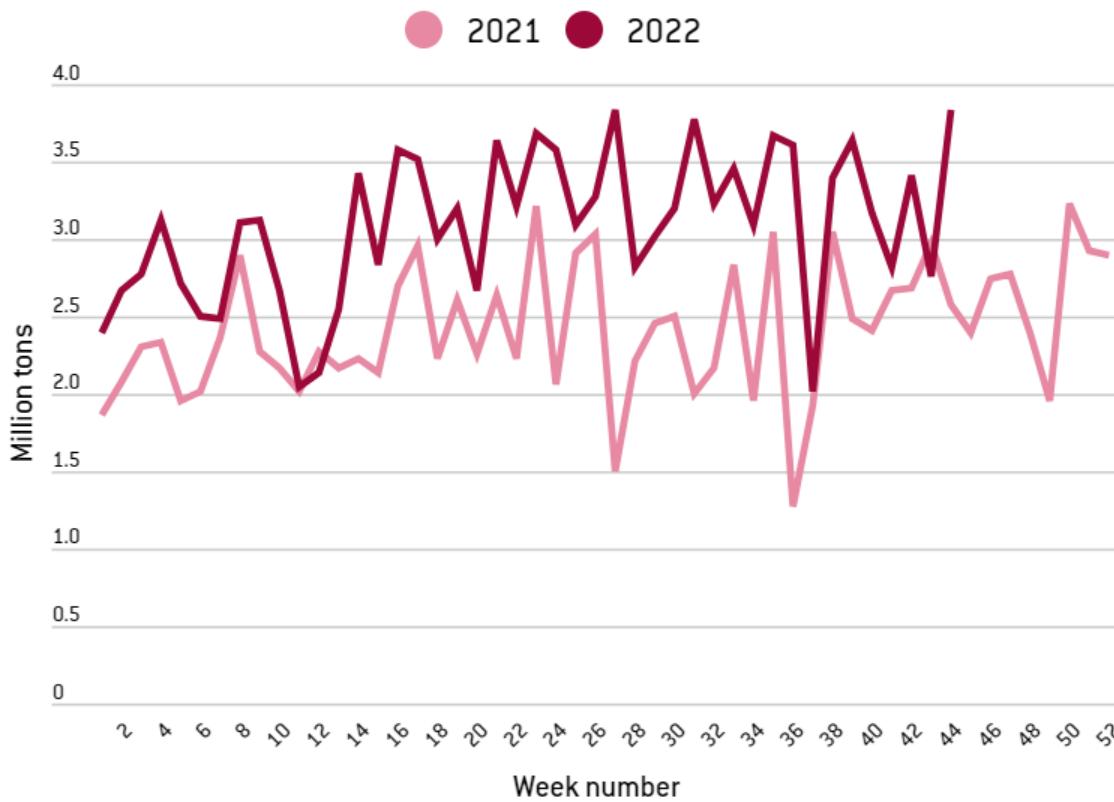
Arriving container loads in Russia and Ukraine  
Comparison to previous year. Last Update: 06.11.2022



Quelle: Fleetmon, own calculations. 10-days moving average

Kiel Trade indicator

### Weekly Crude Oil Leaving Russian Ports

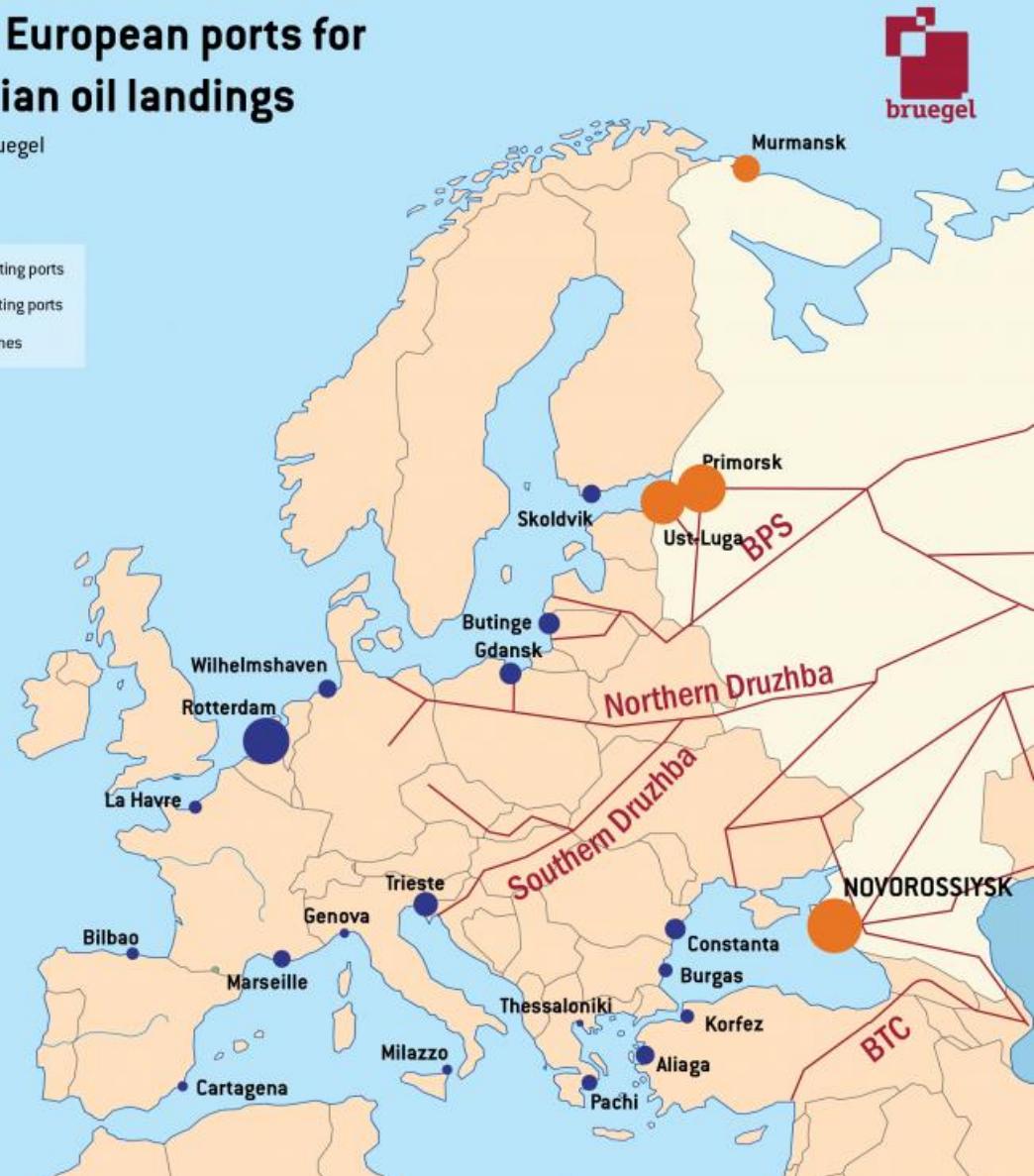


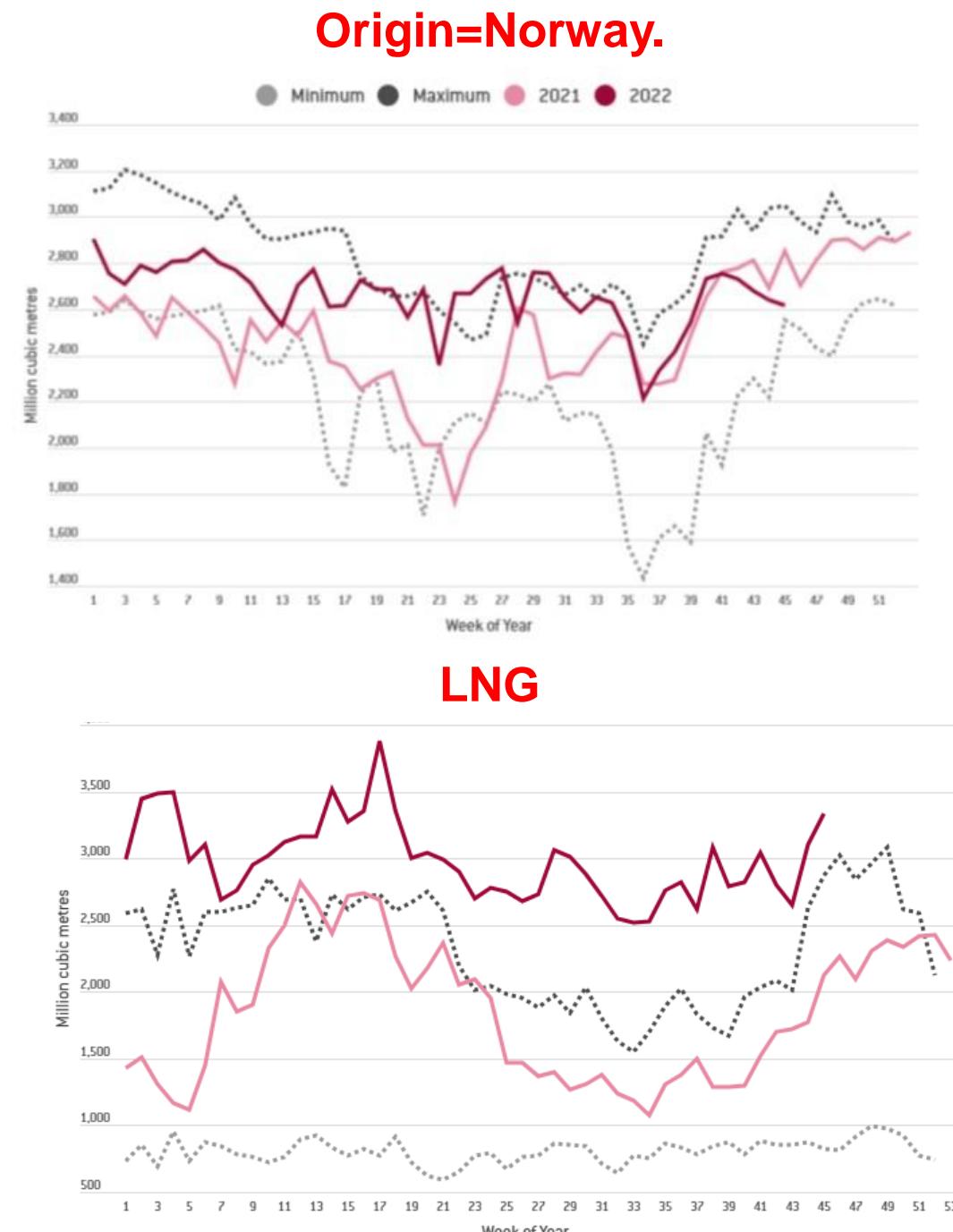
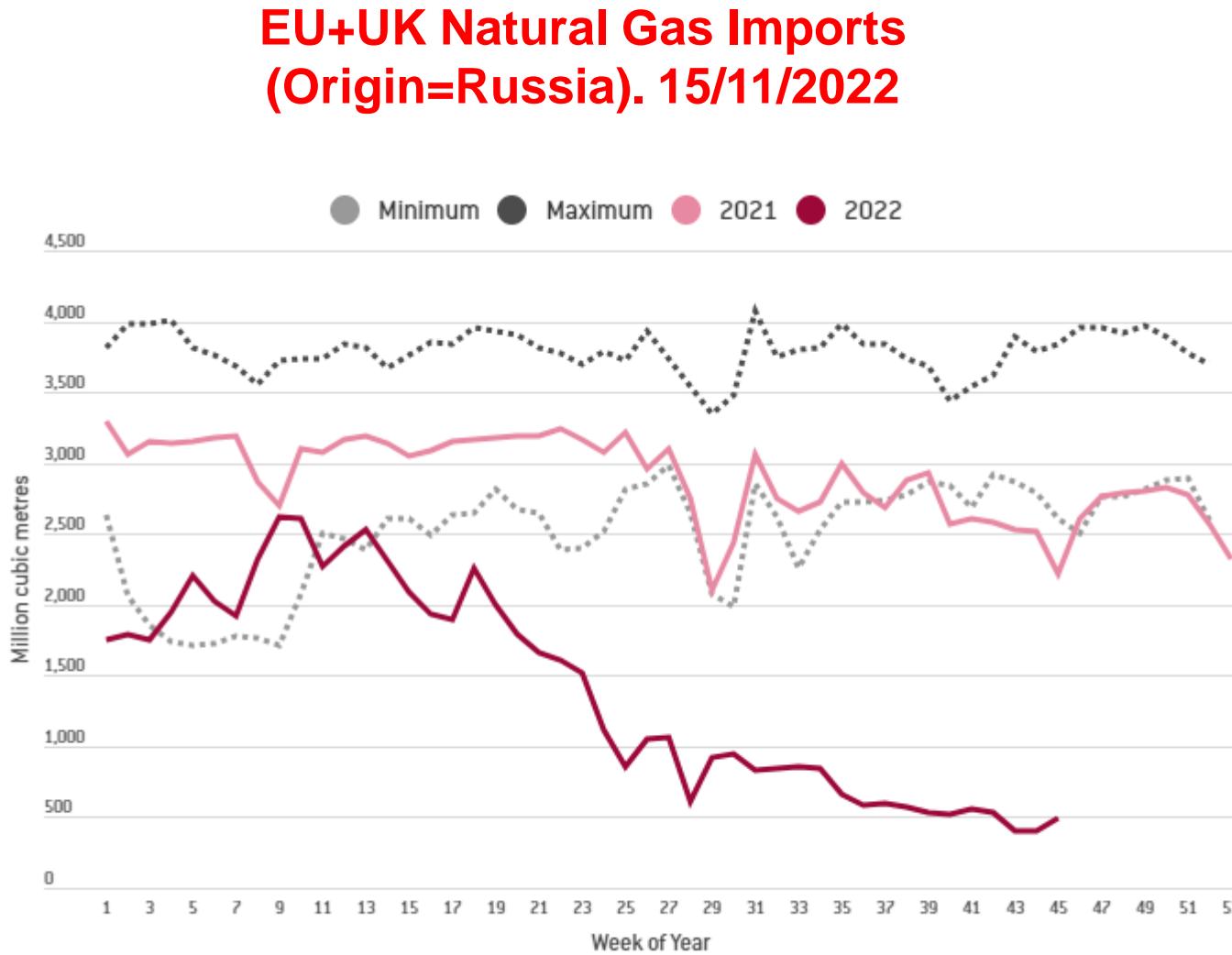
Source: Bloomberg, CREA, Bruegel computations

### Main European ports for Russian oil landings

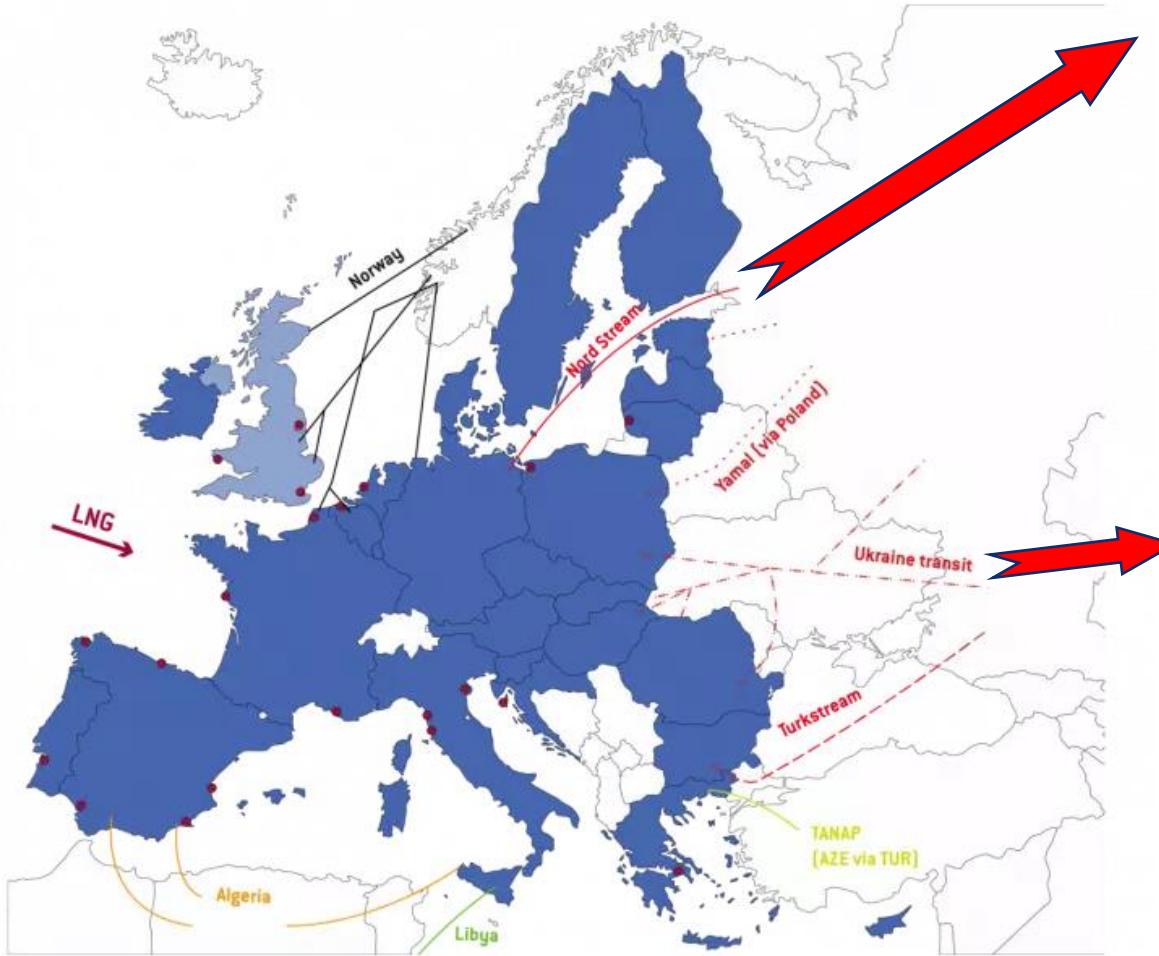
Source: Bruegel

- Importing ports
- Exporting ports
- Pipelines

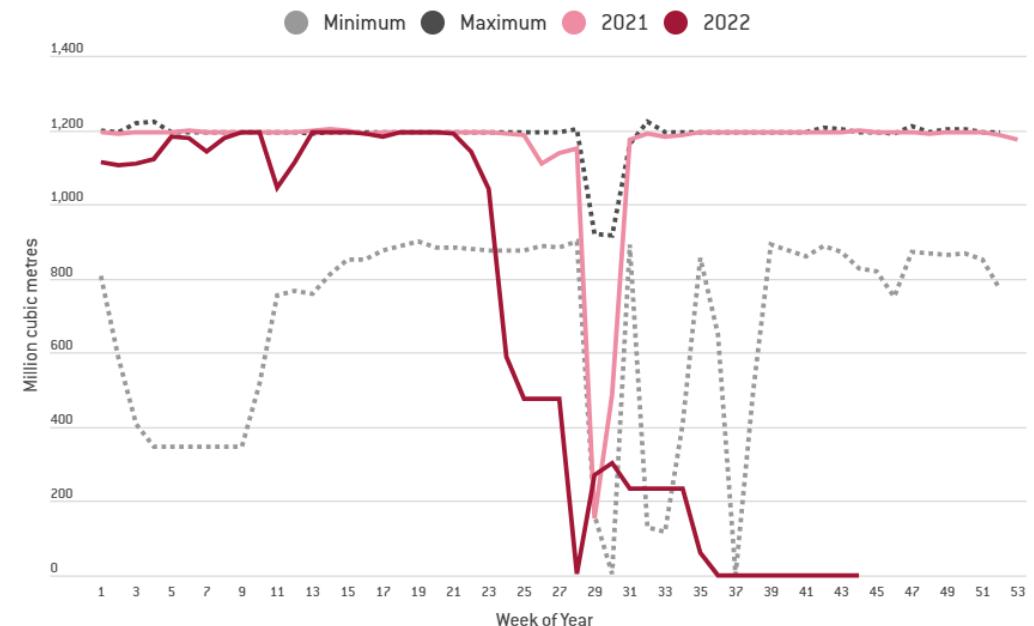




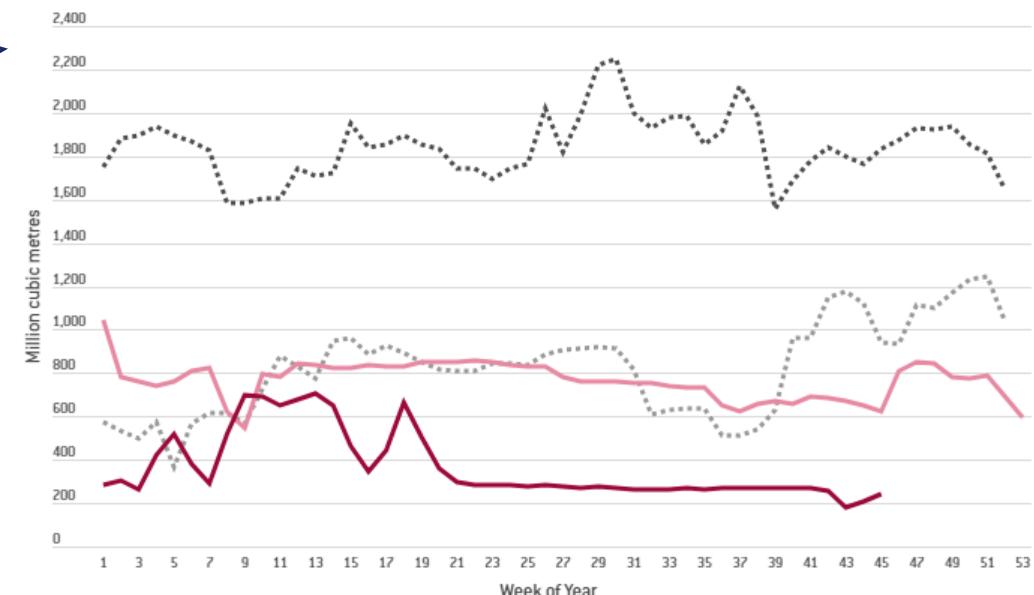
## Main Natural Gas Imports routes



## Nord Stream

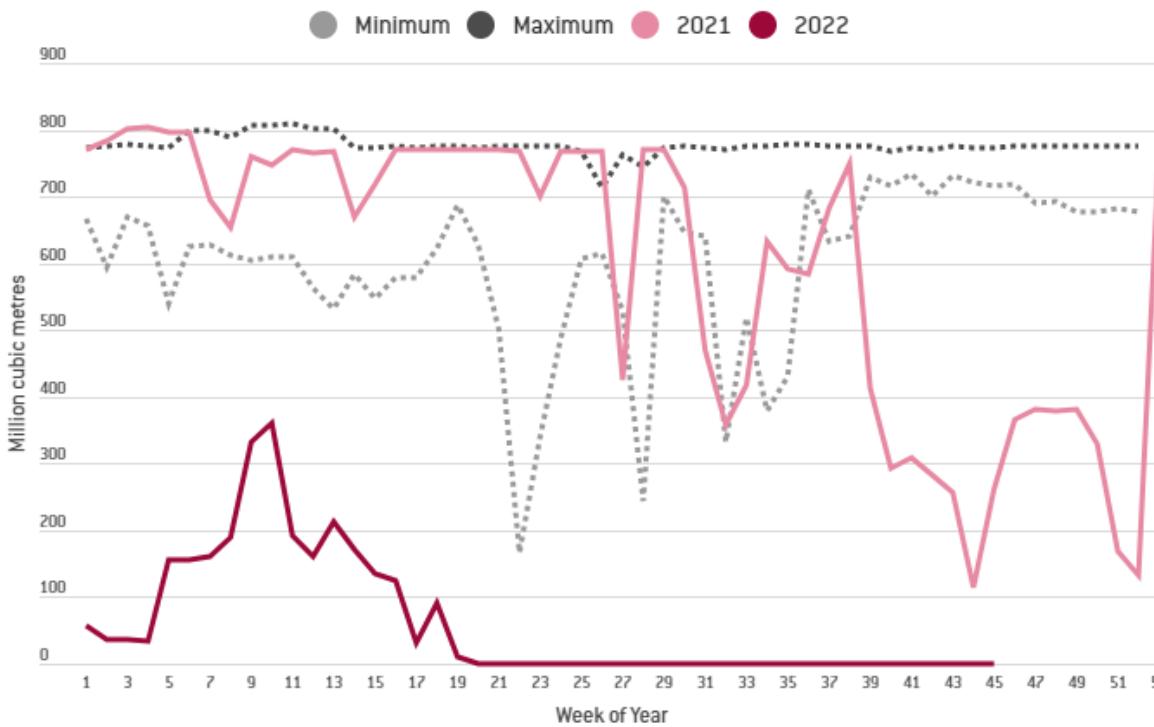


## Ukraine transit

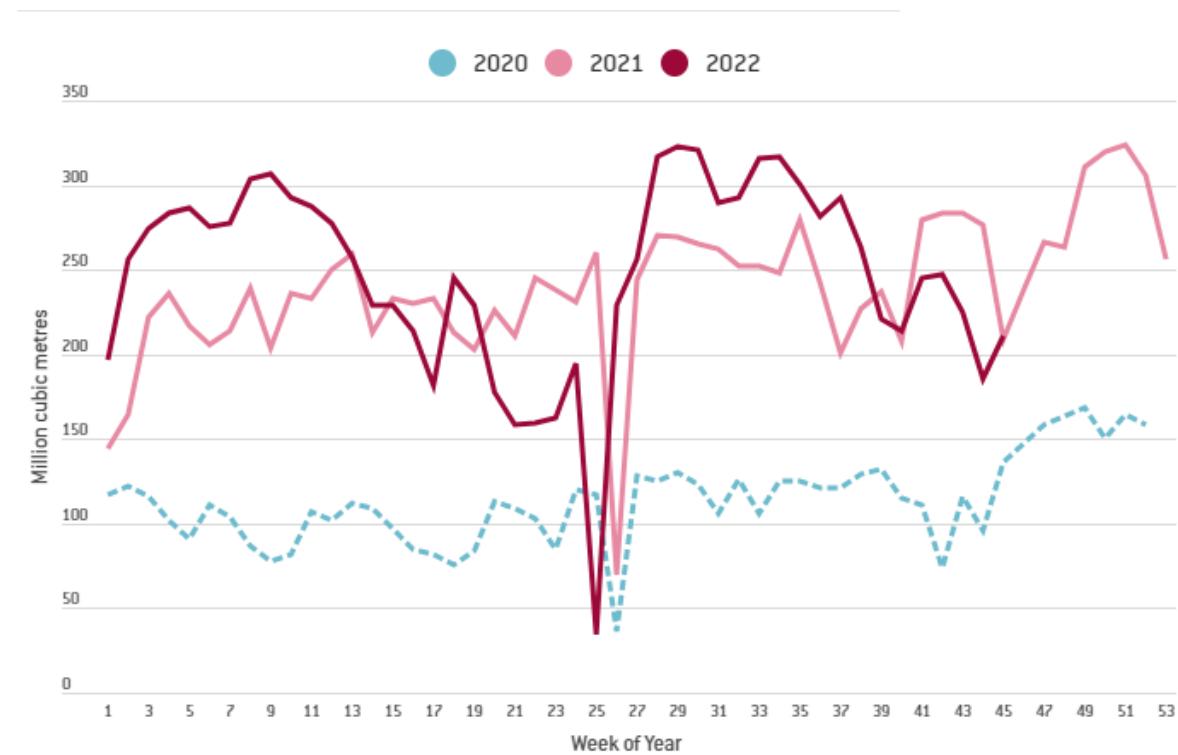


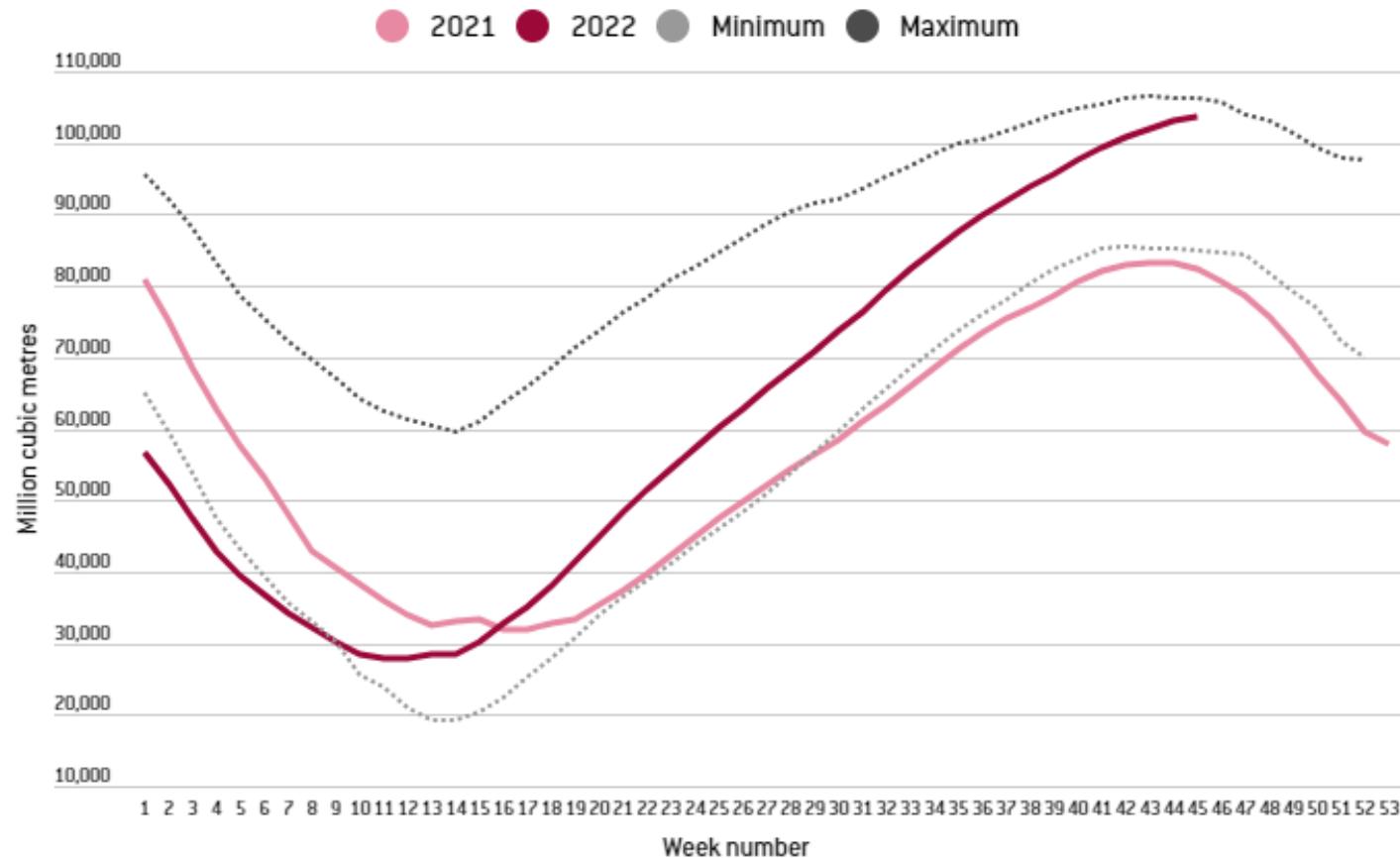
### EU+UK Natural Gas Imports from Russia by route

**Yamal (via Poland)**



**Turkstream**



**EU Gas Storage (15/11/2022)**

**What about financial flows?**

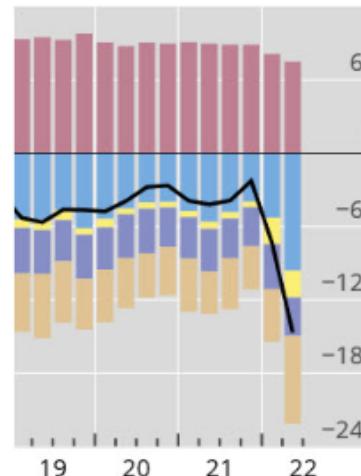
Source: BIS

### Foreign and cross-border exposures to Russia

Outstanding amounts, in billions of US dollars

Graph 6

A. Cross-border positions



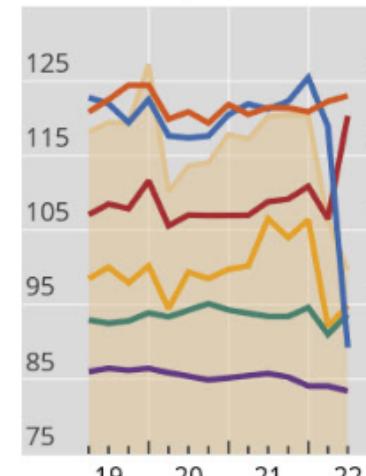
Liabilities:<sup>1</sup>

- Net
- Central banks
- NBFIs
- Non-financials
- Other sectors

Claims:

- Total

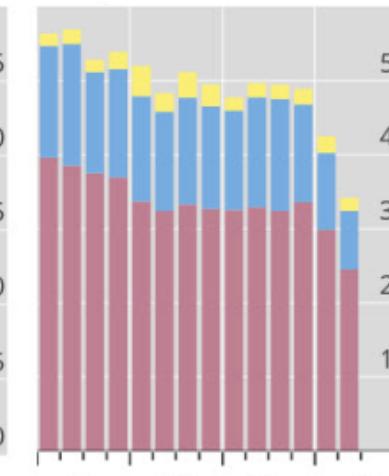
B. Foreign claims, by bank nationality<sup>2</sup>



All banks (CBSI, lhs)<sup>3</sup>

- AT (rhs)
- US (rhs)
- FR (rhs)
- IT (rhs)
- JP (rhs)
- GB (rhs)

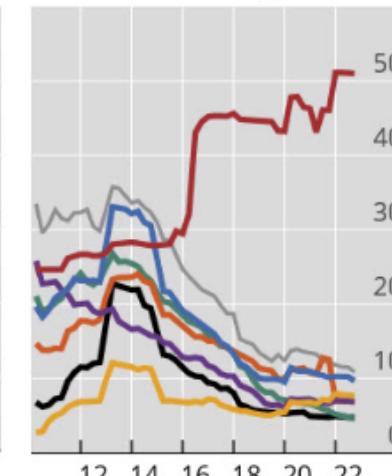
C. Other potential exposures<sup>4</sup>



■ Guarantees

- Credit commitments
- Derivatives

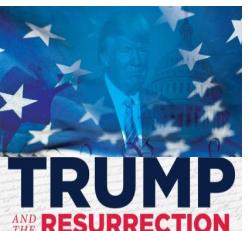
D. Syndicated loans, by bank nationality<sup>5</sup>



- CN
- DE
- FR
- IT
- JP
- GB
- US
- Other

<sup>1</sup> Liabilities (by counterparty sector) are shown as negative figures on the vertical scale. <sup>2</sup> Foreign claims by individual nationalities are on a guarantor basis. <sup>3</sup> On an immediate counterparty basis (CBS/I). <sup>4</sup> On a guarantor basis (CBS/G). <sup>5</sup> Lines track the cumulative outstanding amount of cross-border syndicated loans originated by banks of the nationalities listed in the legend. Banks may sell these loans after origination, and thus the cumulative outstanding amounts are not necessarily the amounts carried on banks' balance sheets.

Sources: Dealogic; BIS consolidated and locational banking statistics.



- Update previous analysis considering:
  - Russian trade deviation effects through China, India and Turkey.
  - European trade deviation effects of oil & Gas (LNG).
- Incorporate effects from ECB's interest rates raises.
- Link the current crisis with:
  - The “New Green Deal”.
  - “Energetic Transition”, adding geopolitics to the “environmental” dimension.
  - Carbon Border Adj. Mechanism + New protectionism waves

**ESPON**



// Thank you

**Nasuvinsa**   
Navarra de Suelo y Vivienda, S.A.

CEPREDE



Institute of Geography  
and Spatial Organization  
Polish Academy of Sciences

S&W

TU Delft

UNIVERSITY OF  
EASTERN FINLAND

UNIVERSITY OF  
THESSALY

## The structure of the EUREGIO-2017

Year: 2000

Final Demand (FD) Matrix																	
	T matrix	Country 1				Country 2				Country 3				Country 1	Country 2	Country 3	Gross Output
		Sector 1	Sector 2	Sector 3	Sector 4	Sector 1	Sector 2	Sector 3	Sector 4	Sector 1	Sector 2	Sector 3	Sector 4	Households	Households	Households	
Country 1	Sector 1	346	156	95	594	819	154	832	397	409	562	241	554	394	902	446	6,901
Country 1	Sector 2	354	443	7	908	42	92	561	839	470	770	83	368	514	694	512	6,657
Country 1	Sector 3	291	795	243	825	753	2	340	232	251	605	526	610	384	753	909	7,518
Country 1	Sector 4	637	259	289	813	500	716	947	645	856	221	898	41	91	653	301	7,868
Country 2	Sector 1	547	466	910	276	518	149	779	553	197	285	305	828	630	565	857	7,864
Country 2	Sector 2	752	936	822	638	611	496	98	924	608	689	872	972	847	209	37	9,511
Country 2	Sector 3	295	444	7	828	929	52	367	257	890	429	641	26	165	419	886	7,117
Country 2	Sector 4	113	518	791	459	79	748	254	218	586	673	424	157	800	355	501	6,677
Country 3	Sector 1	46	457	552	572	632	680	730	607	796	186	15	958	338	320	194	7,082
Country 3	Sector 2	962	96	544	96	675	113	711	337	787	571	241	211	479	14	608	6,445
Country 3	Sector 3	531	190	686	191	374	615	788	738	351	32	565	622	269	814	559	7,326
Country 3	Sector 4	857	776	897	18	915	482	308	458	253	145	982	270	700	822	729	8,612
															89,578		
VA matrix																	
Country 1	Value Added	1,172	1,120	1,676	1,648	-	-	-	-	-	-	-	-				
Country 2	Value Added	-	-	-	-	1,019	4,73	V	401	471	-	-	-				
Country 3	Value Added	-	-	-	-	-	-	-	-	626	1,278	1,532	2,995				
Total input		6,901	6,657	7,518	7,868	7,864	9,511	7,117	6,677	7,082	6,445	7,326	8,612	89,578			

Z = Intermediate demand  
Y = Final demand  
V = Primary Inputs

## The IO model in 2 minutes

$$\begin{bmatrix} \mathbf{x}^1 \\ \mathbf{x}^2 \\ \vdots \\ \mathbf{x}^N \end{bmatrix} = \begin{bmatrix} \mathbf{A}^{11} & \mathbf{A}^{12} & \dots & \mathbf{A}^{N1} \\ \mathbf{A}^{21} & \mathbf{A}^{22} & \dots & \mathbf{A}^{N2} \\ \vdots & \vdots & \ddots & \vdots \\ \mathbf{A}^{N1} & \mathbf{A}^{N2} & \dots & \mathbf{A}^{NN} \end{bmatrix} \mathbf{x} \begin{bmatrix} \mathbf{x}^1 \\ \mathbf{x}^2 \\ \vdots \\ \mathbf{x}^N \end{bmatrix} + \begin{bmatrix} \mathbf{f}^1 \\ \mathbf{f}^2 \\ \vdots \\ \mathbf{f}^N \end{bmatrix}$$

$$\begin{bmatrix} \mathbf{x}^1 \\ \vdots \\ \mathbf{x}^N \end{bmatrix} = \left( \begin{bmatrix} \mathbf{I} & \dots & 0 \\ \vdots & \ddots & \vdots \\ 0 & \dots & \mathbf{I} \end{bmatrix} - \begin{bmatrix} \mathbf{A}^{11} & \dots & \mathbf{A}^{1N} \\ \vdots & \ddots & \vdots \\ \mathbf{A}^{N1} & \dots & \mathbf{A}^{NN} \end{bmatrix} \right)^{-1} \times \begin{bmatrix} \mathbf{f}^1 \\ \vdots \\ \mathbf{f}^N \end{bmatrix}$$

$$a_{ij}^{rs} = \frac{z_{ij}^{rs}}{x_j^s}$$

How much the output of each region and sector in the system will decreases, when there is an drop in 1 € of the final demand in sector j region S?

How much of this fall is in the sector where the initial shock took place (direct effect) or in all the other sectors used as inputs by j in s to produce its output?

How much employment will be lost by this total (direct + indirect effect)?

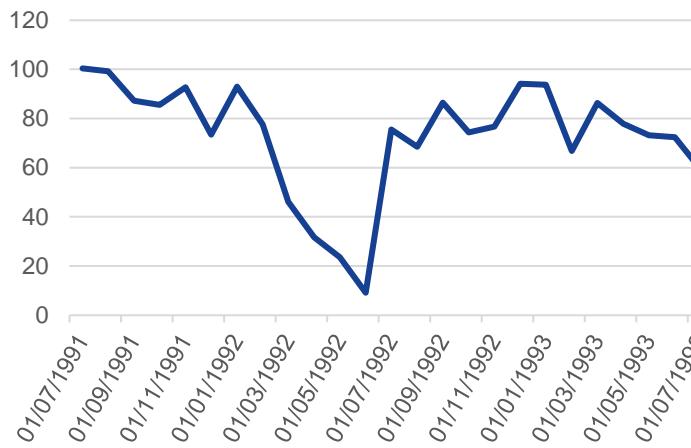
$$\Delta \mathbf{x} = (I - A)^{-1} \Delta \mathbf{f}$$

$$\Delta \mathbf{o} = \Delta \mathbf{x} - \Delta \mathbf{f}$$

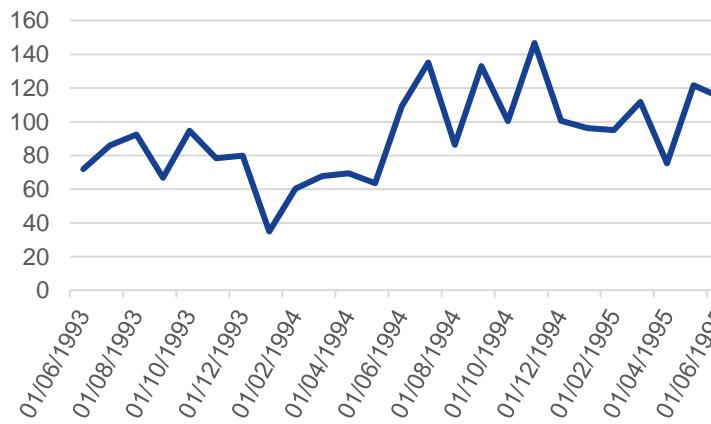
$$\Delta \mathbf{e} = \Delta \hat{\mathbf{e}} \mathbf{x} = \hat{\mathbf{e}} (I - A)^{-1} \Delta \mathbf{f}$$

## How trade reacted in other wars?

Yugoslavia  
1992



Croatia  
1994

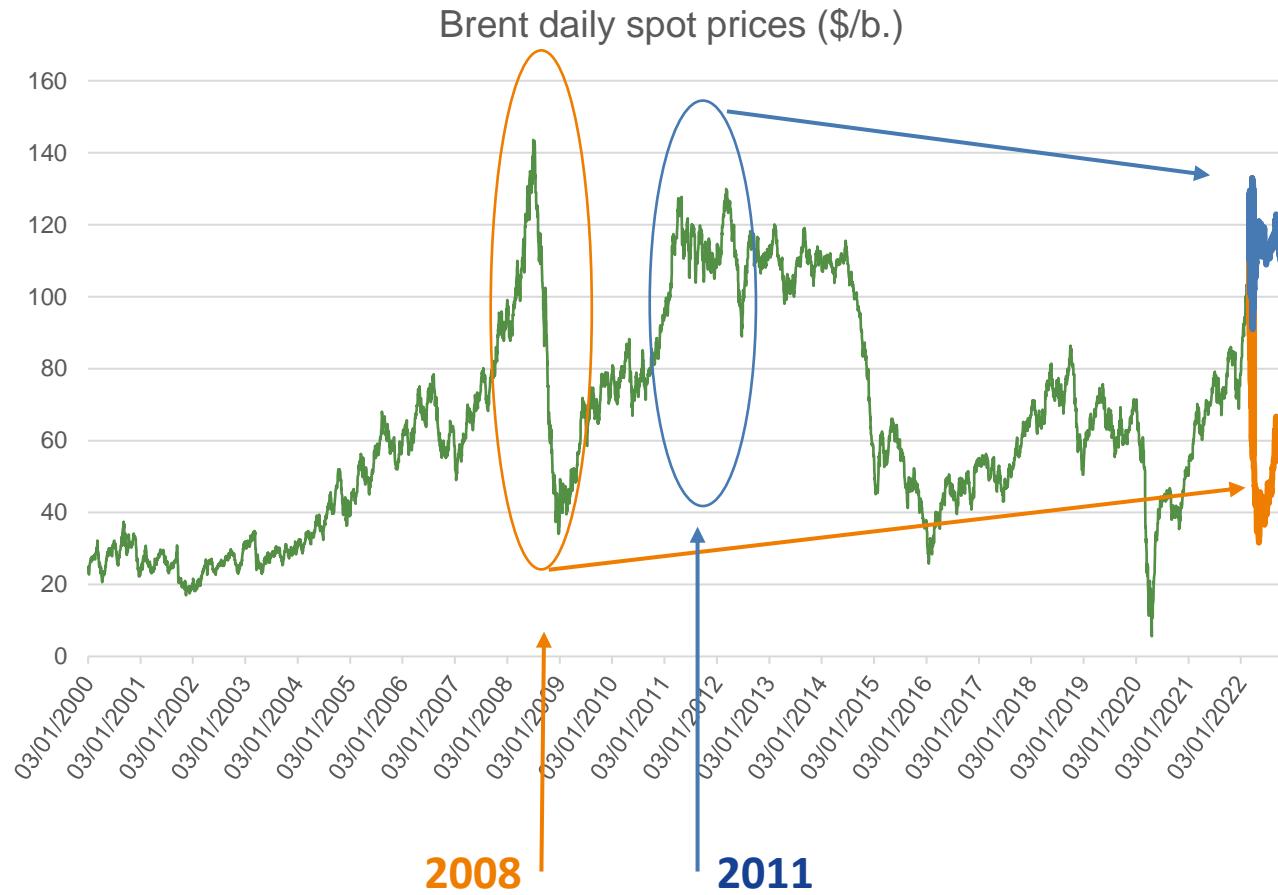


## Two alternative intensities for trade

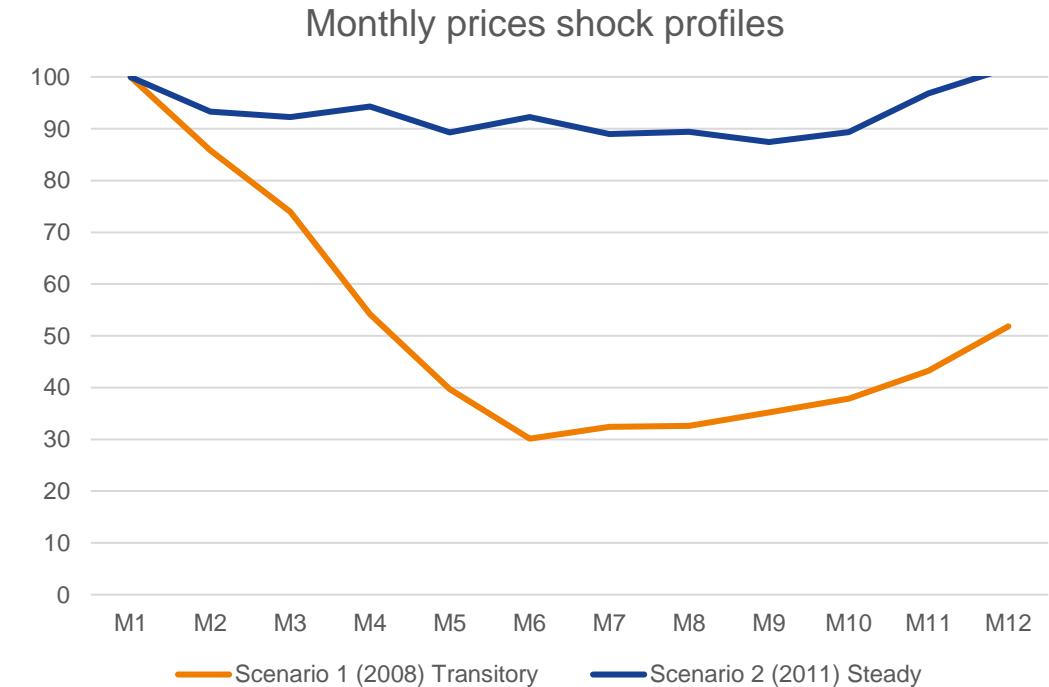
Monthly Trade Profile



## How oil prices reacted after previous shocks?



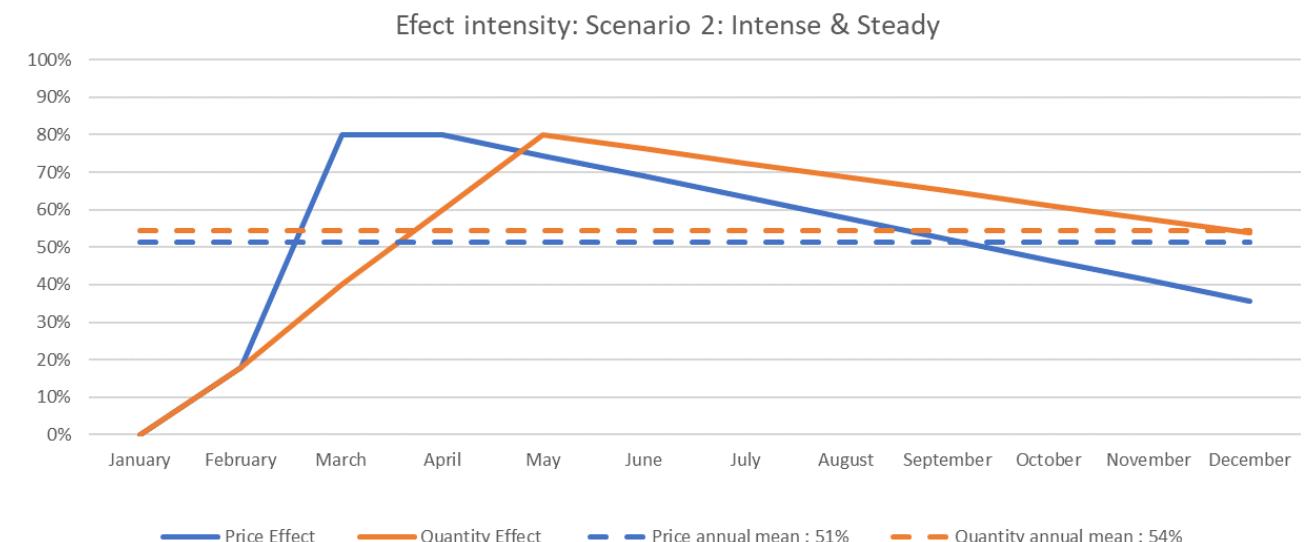
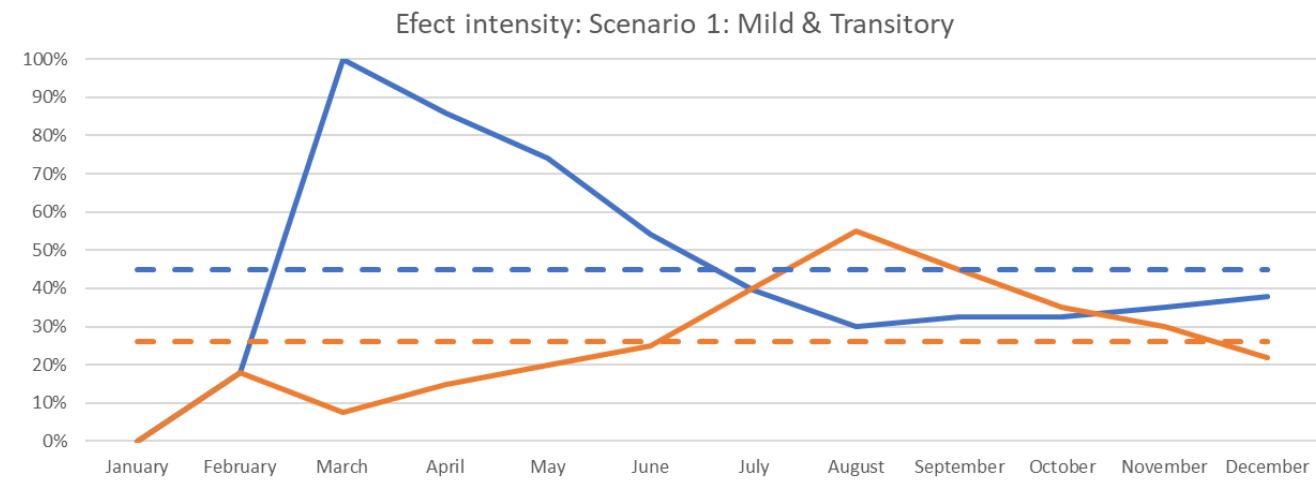
## Two alternative prices profiles



## Temporal intensities:

- **Scenario 1: Moderate**  
(Price: 45%; Quantity: 26%;)

- **Scenario 2: Severe**  
(Price: 78%; Quantity: 26%)

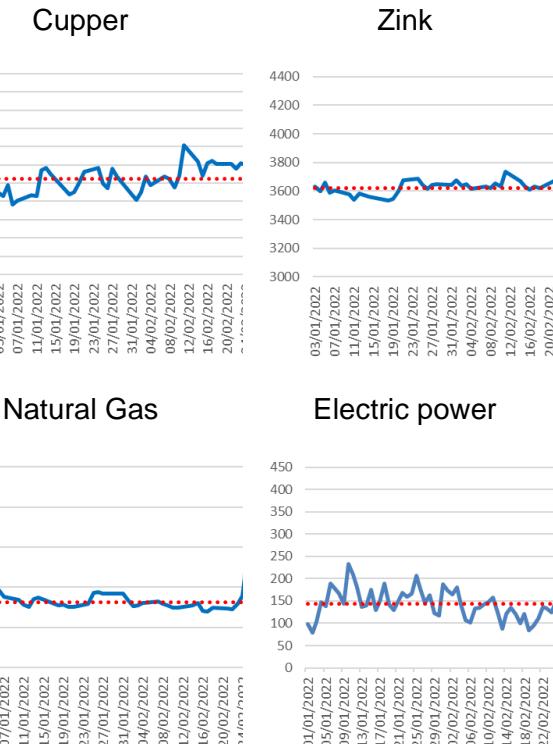
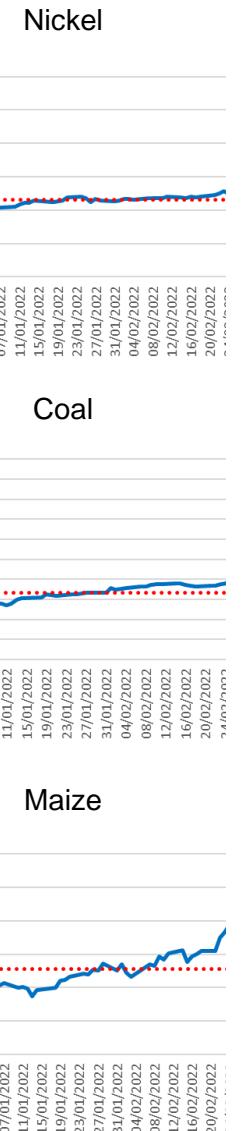
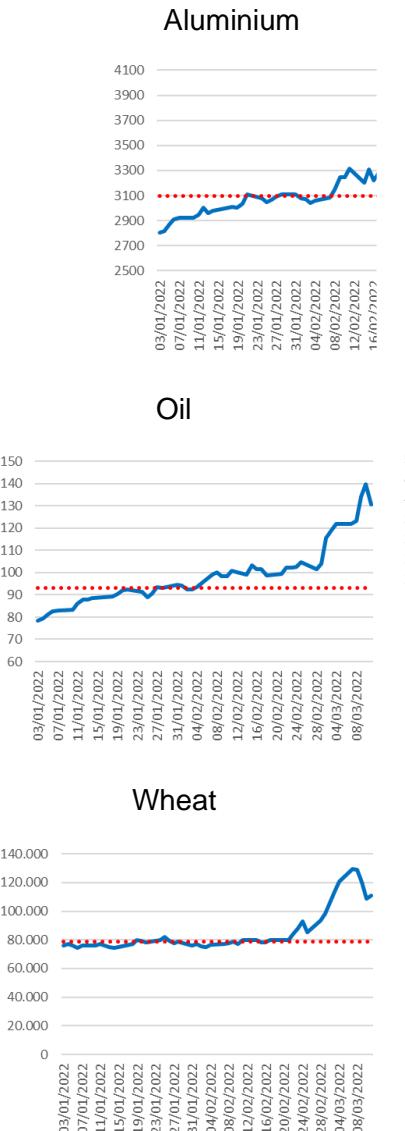


Then, combining the two alternative profiles for quantities & prices...

		Price shock			
		Transitory		Steady	
Quantity shock	Mild	Price ave.	45%	Price ave.	78%
		Quantity ave	26%	Quantity ave	26%
		Mean impact	31%	Mean impact	39%
	Intense	Price ave.	45%	Price ave.	78%
		Quantity ave	44%	Quantity ave	44%
		Mean impact	44%	Mean impact	56%

We consider the two extreme scenarios:

- Scenario 1: Moderate (P: 45%; Q: 26%; M: 31%)
- Scenario 2: Severe (P: 78%; Q: 26%; M: 56%)



**Prices shock in commodities**

**Metals: ▲ 18%**

**Coal ▲ 97%**

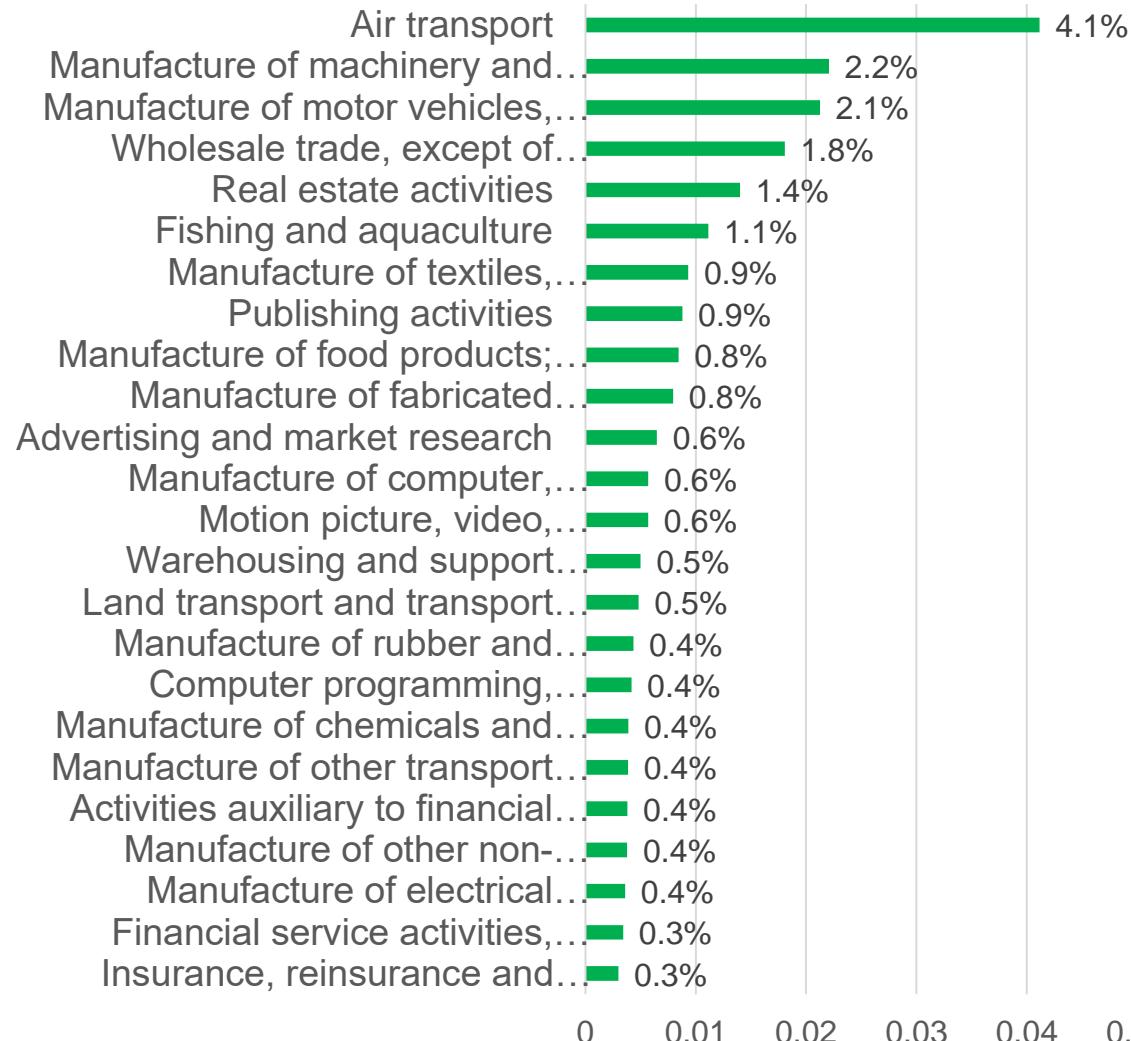
**Oil ▲ 30%**

**Electricity and gas ▲ 45%**

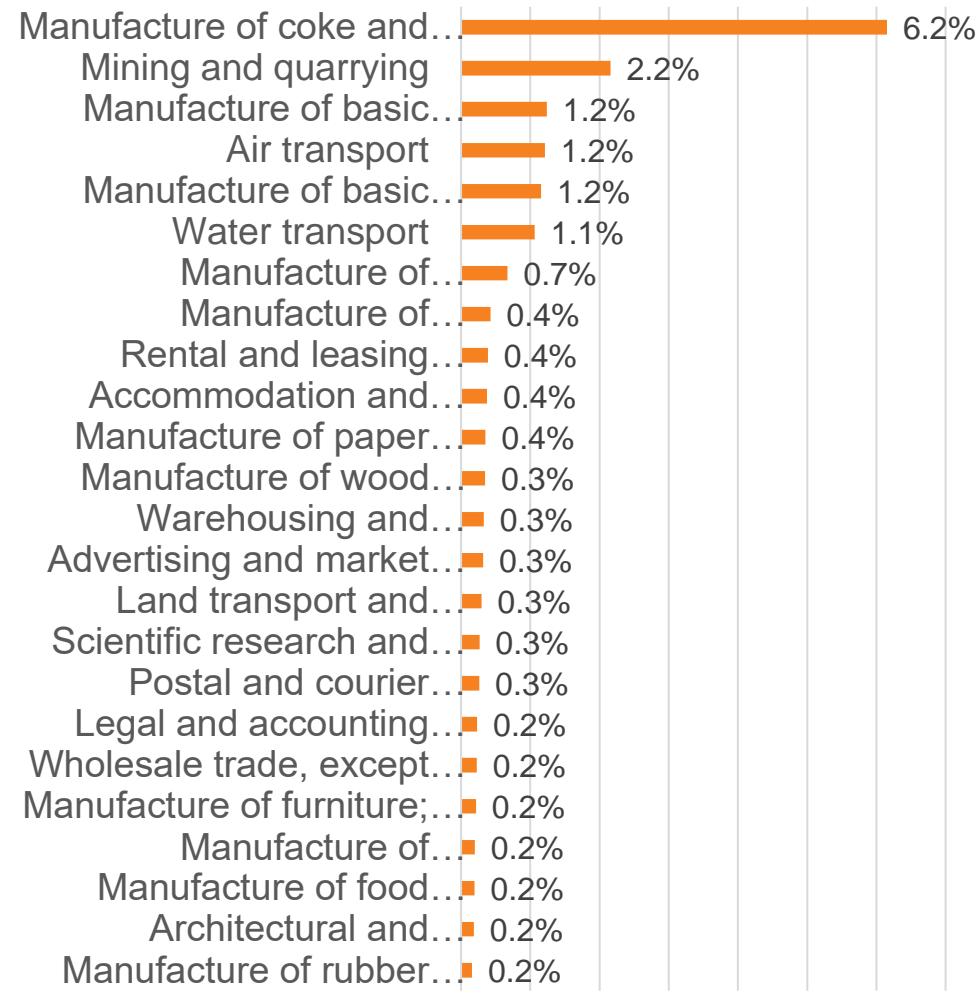
**Agricultural products: ▲ 32%**

# The Ukrainian conflict: Results > trade exposure

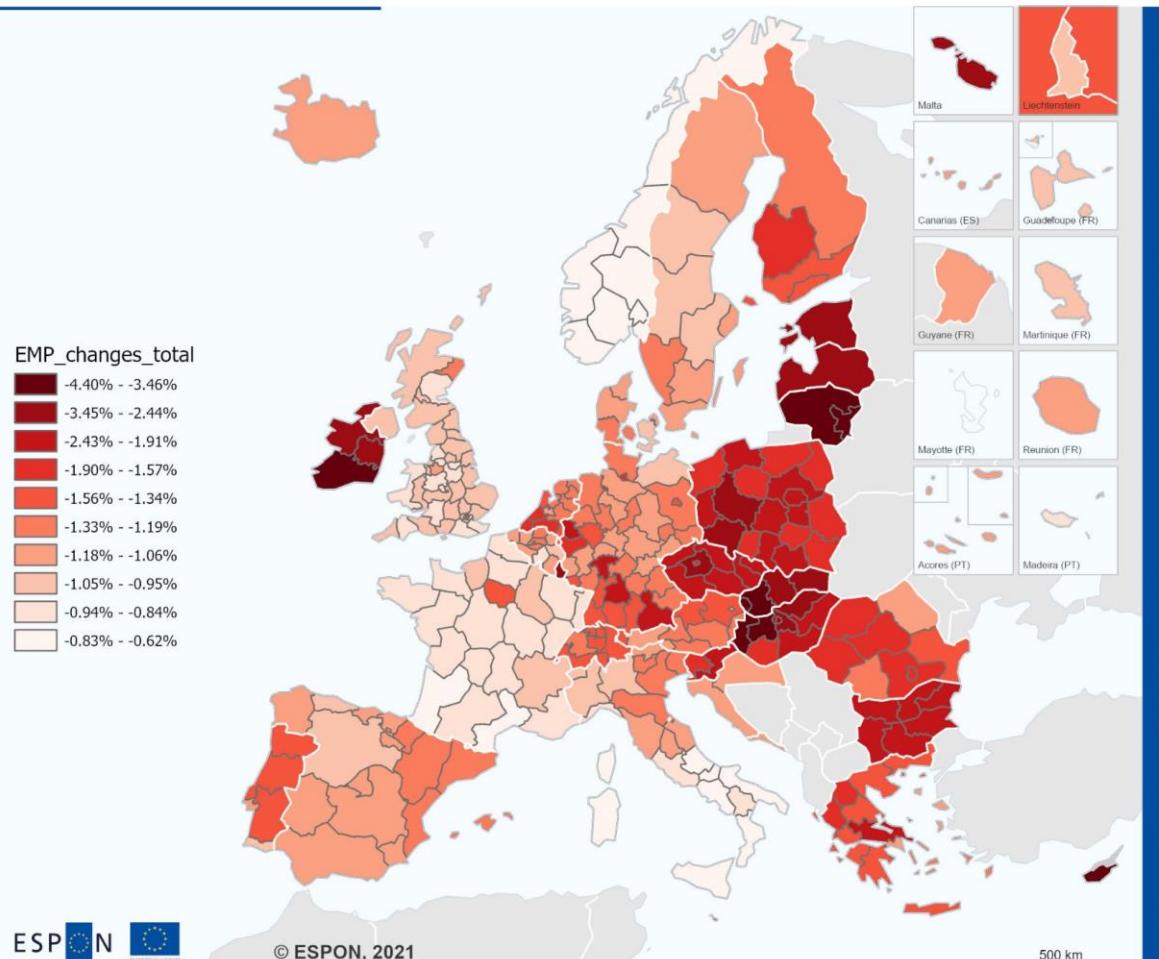
**Exports (goods & services) to Russia in % of GDP**



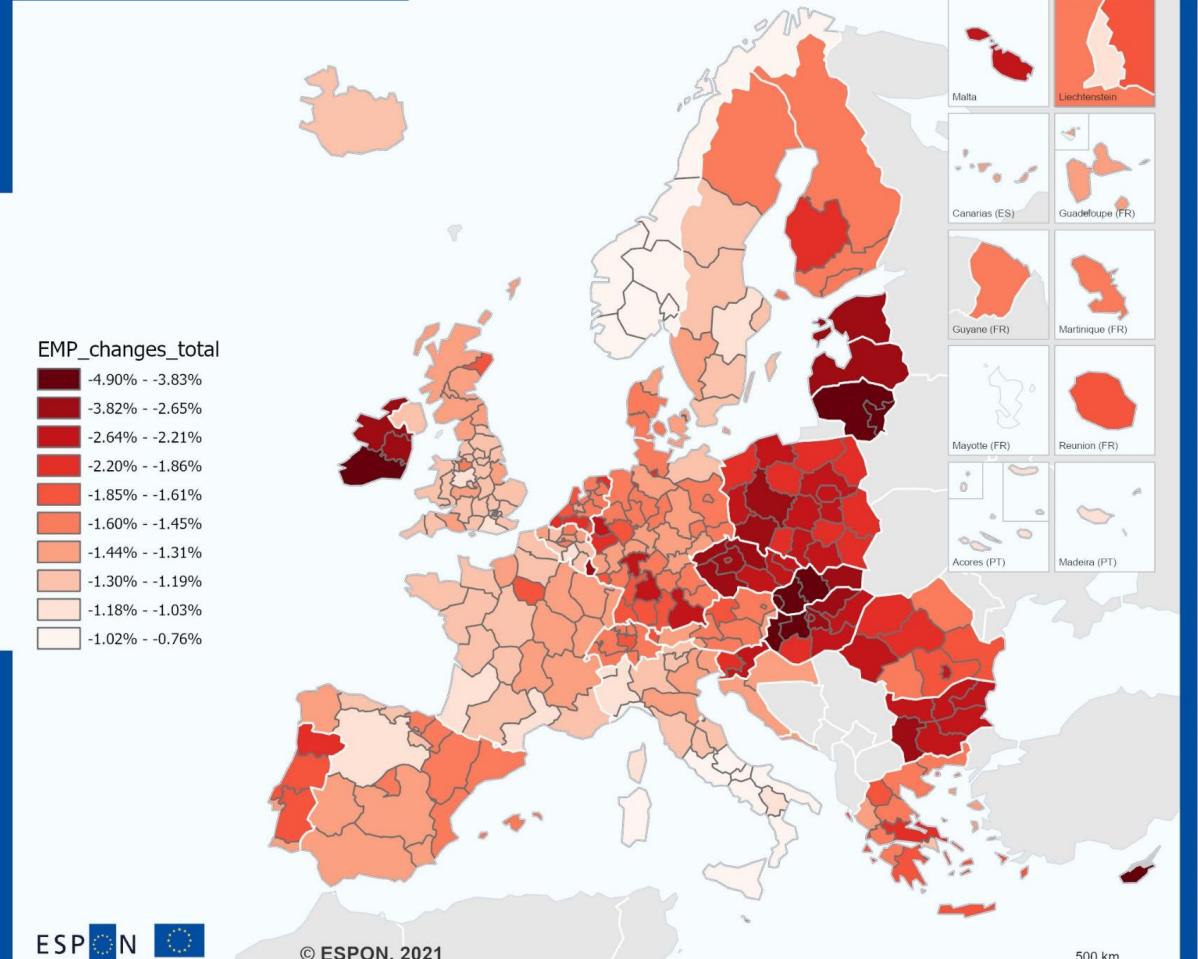
**Imports (goods & services) from Russia in % of GDP**

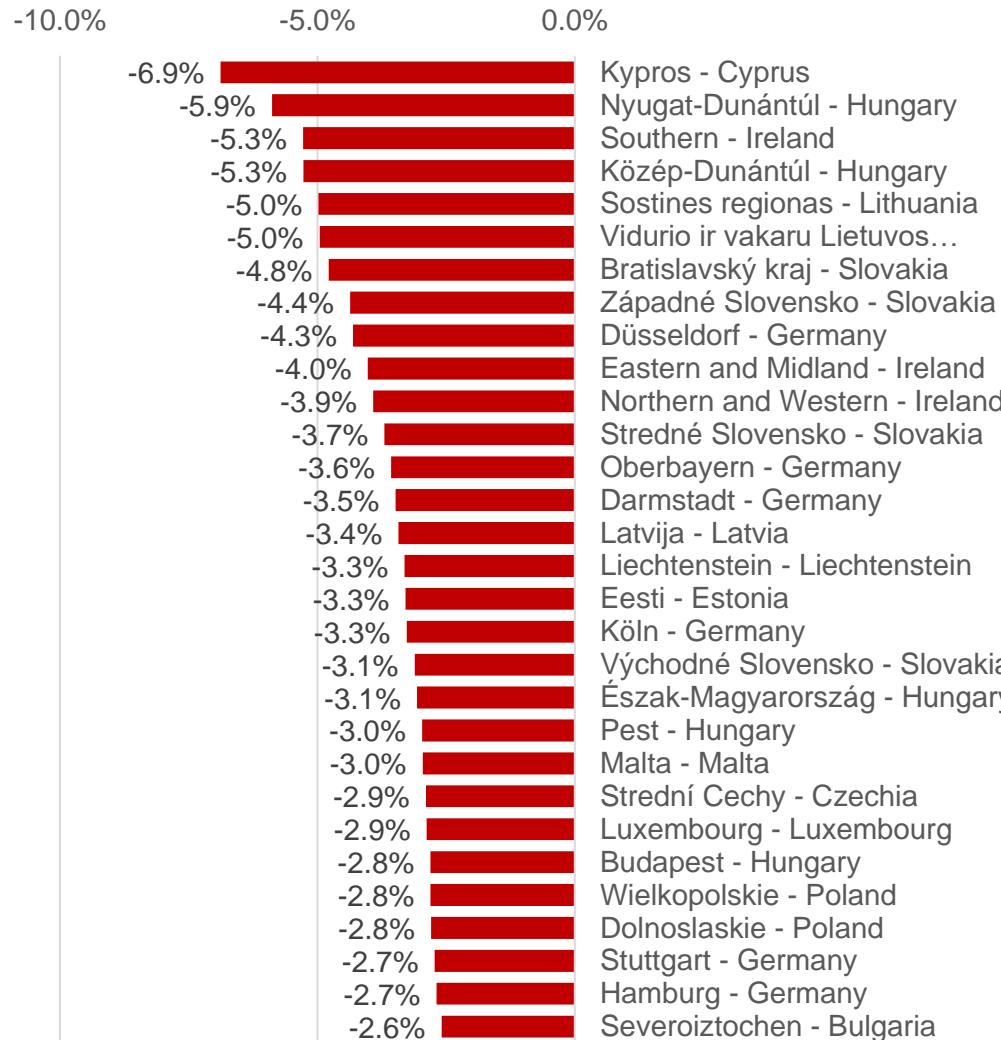
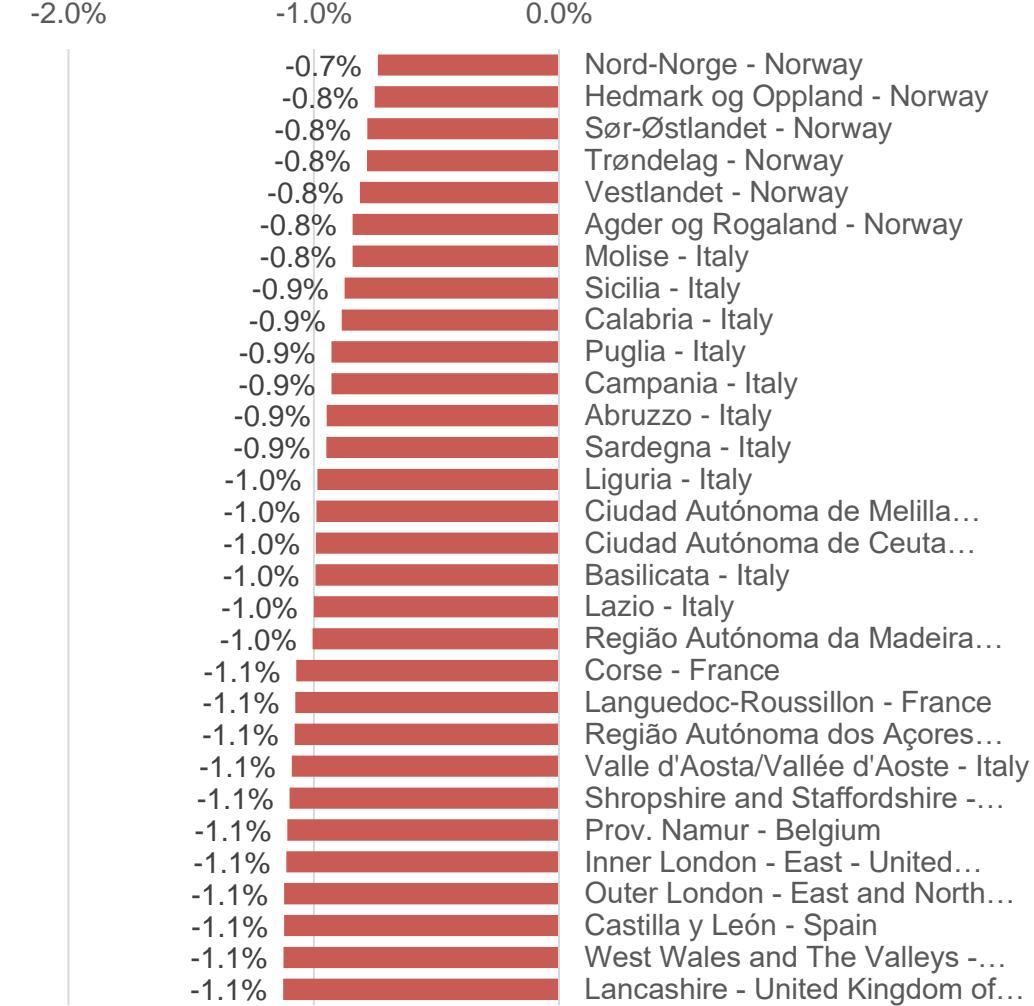


## Employment (average elasticity approach)

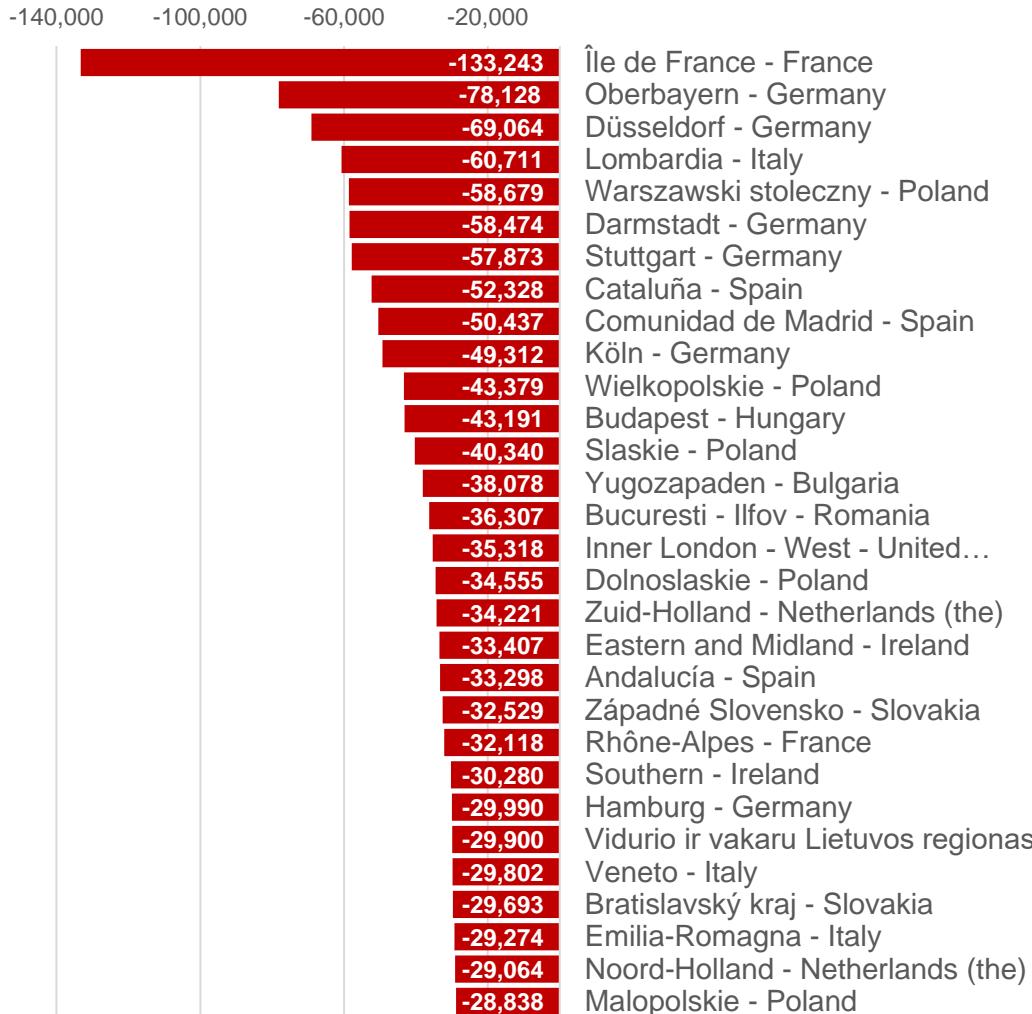


## Employment (income drag approach)



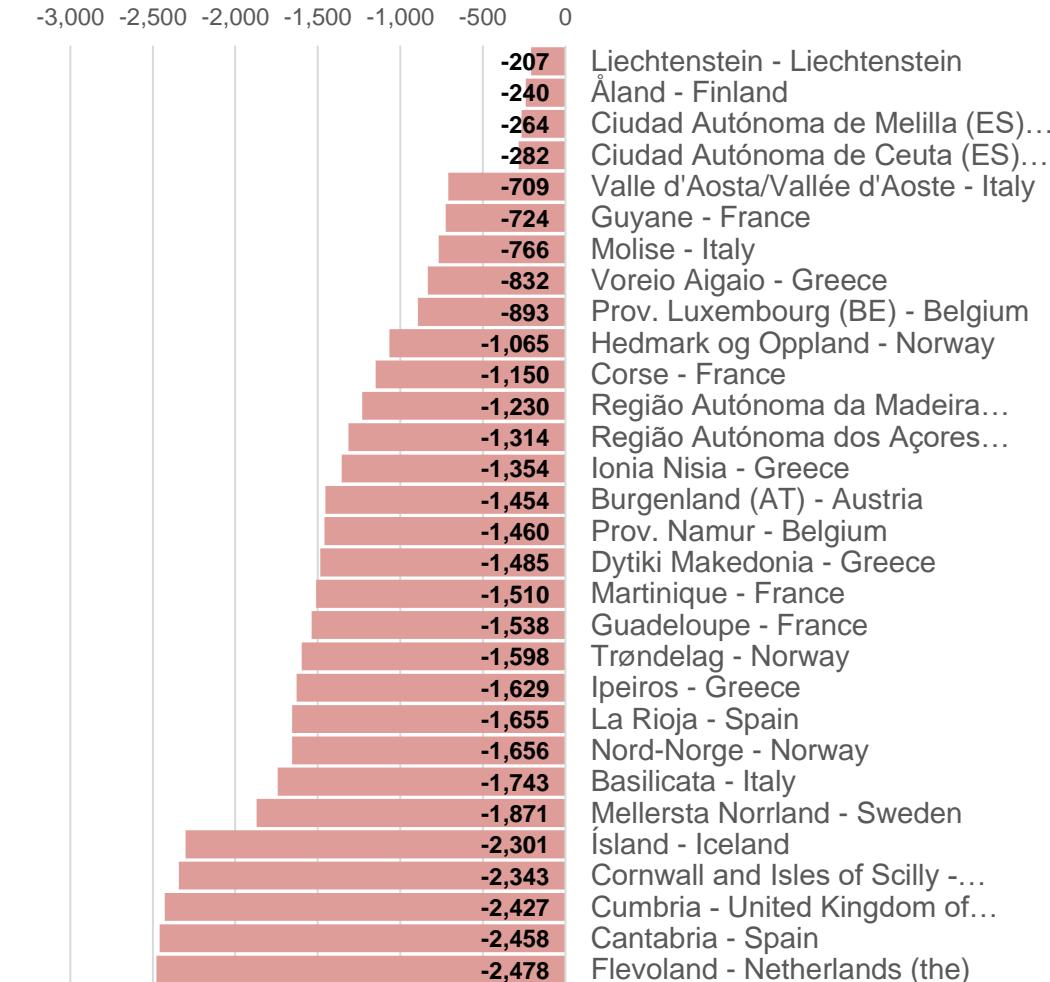
**The most damaged regions****Maximum shock (VA)****The less damaged regions**

## The most damaged regions

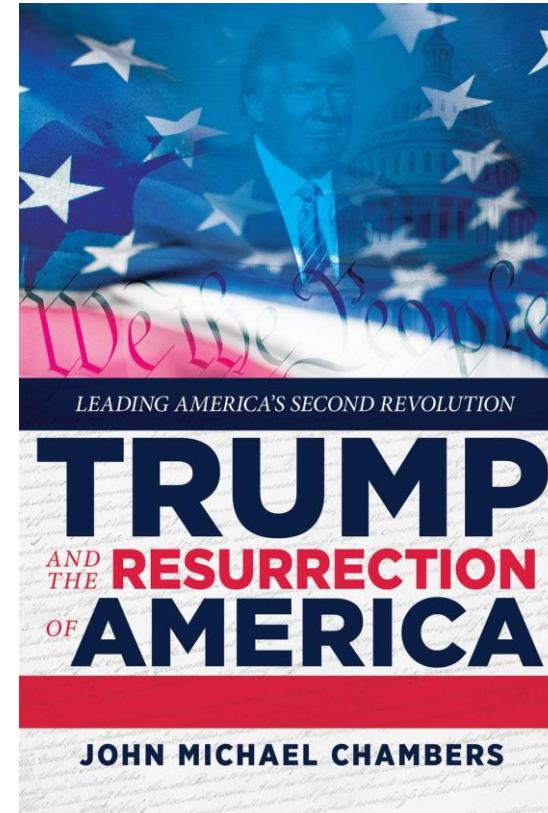


## Maximum shock (Employment)

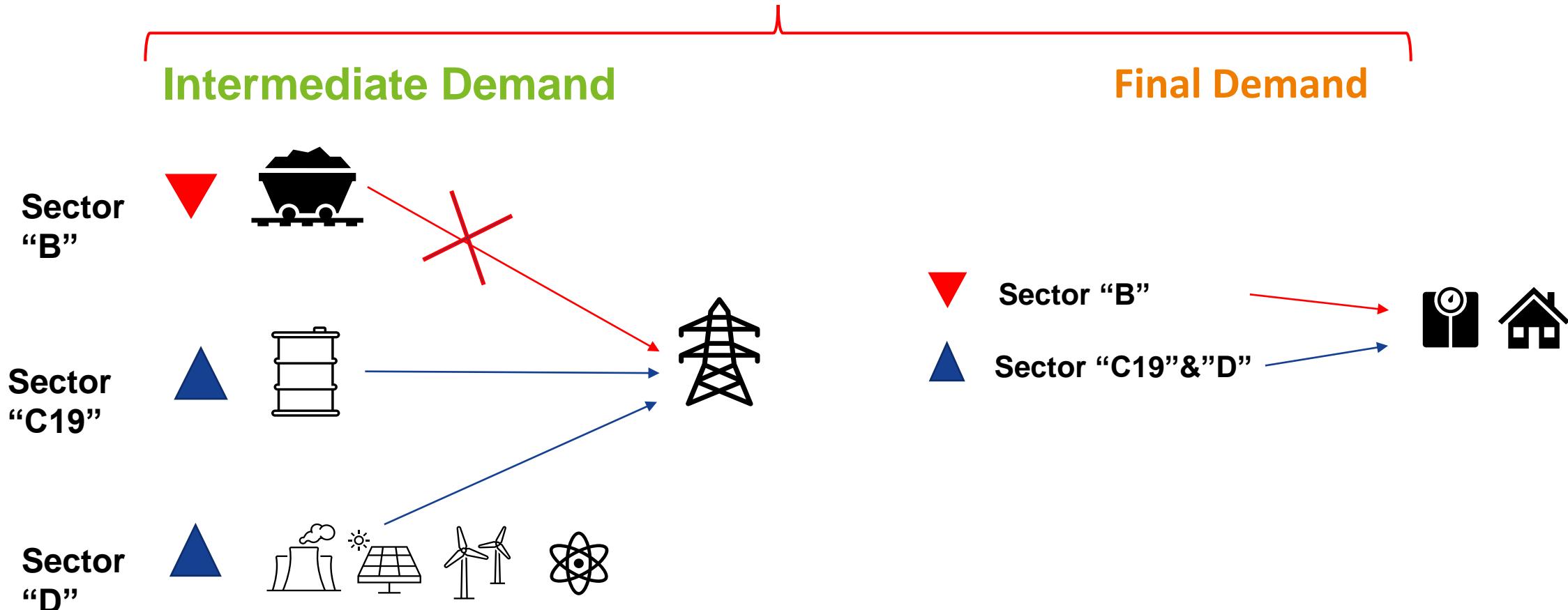
## The less damaged regions



- European Green Deal,
- New Globalization (Proteccionism).

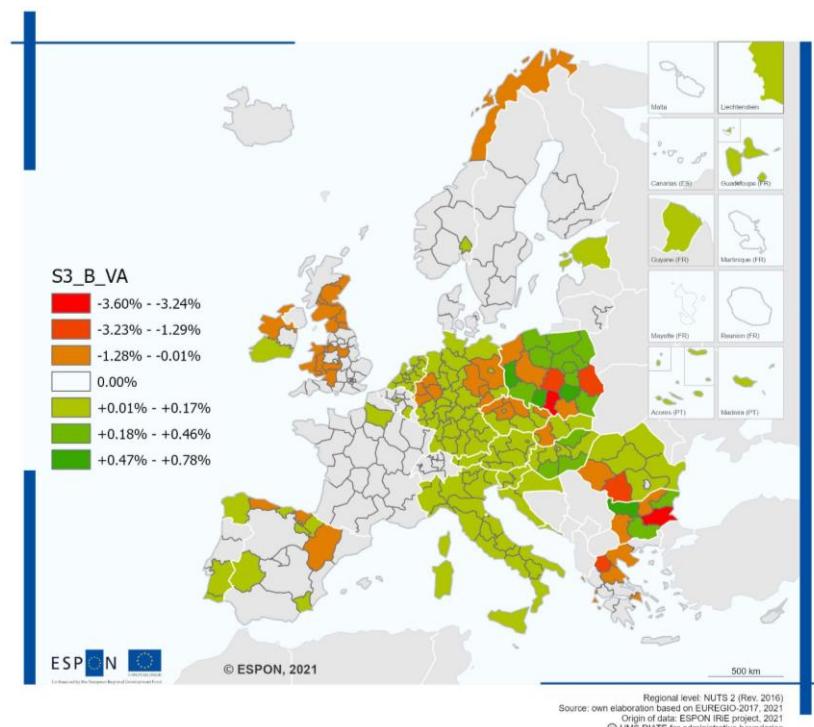


## Decarbonizing Europe

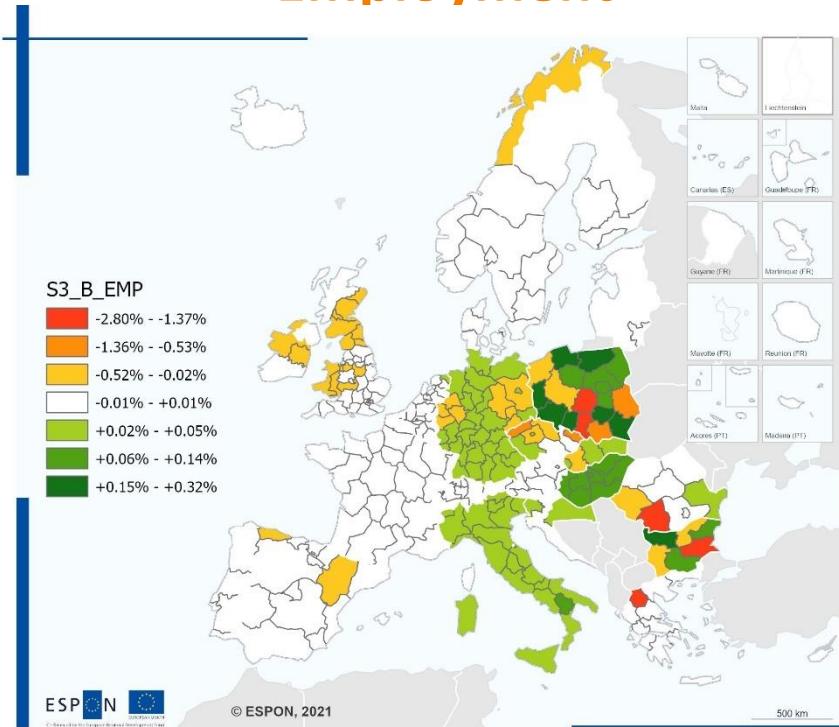
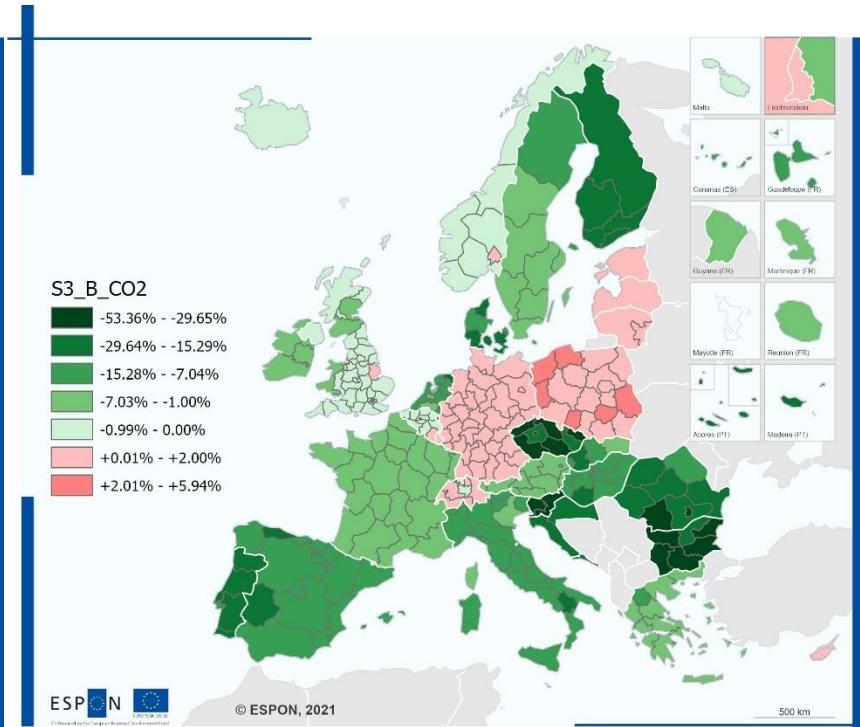


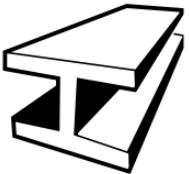
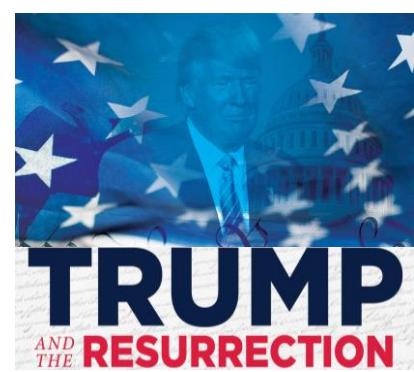
\* Case: certain integration between national electric systems (contiguous)

% Regional VAB



% Regional Employment

% CO<sub>2</sub> regional



25%

# USA tariffs to the EU

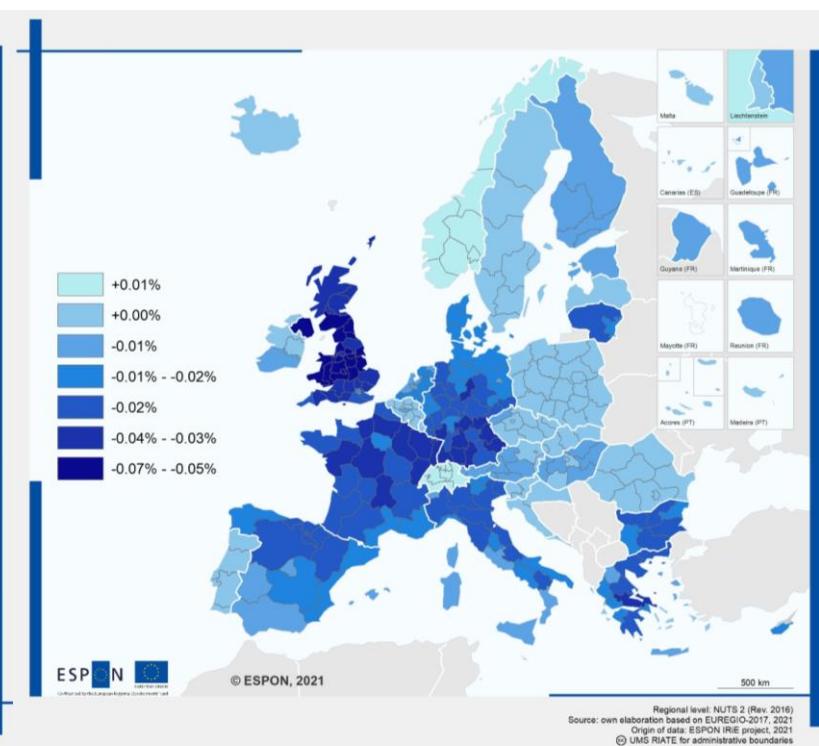
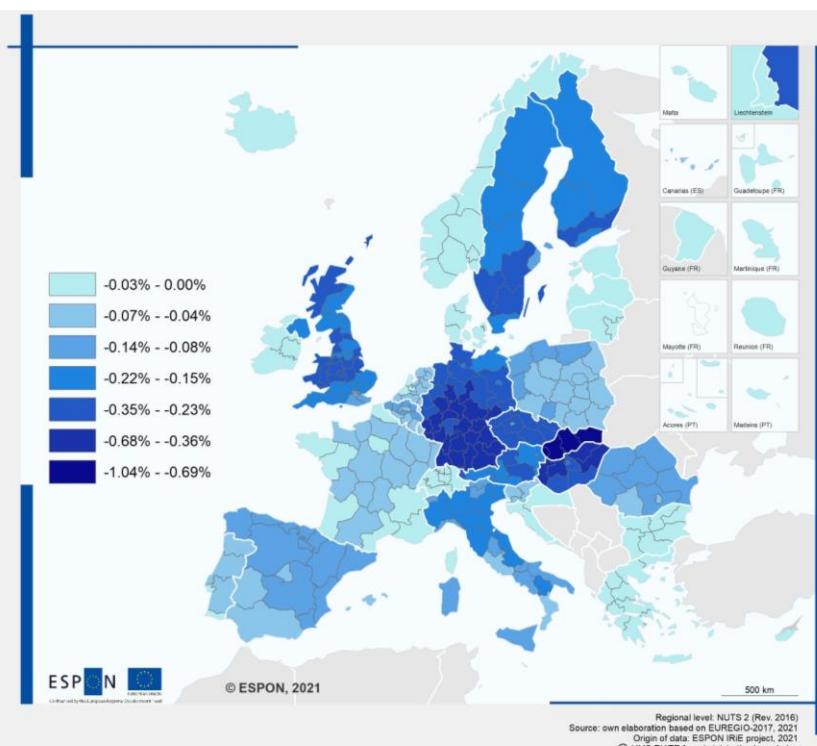
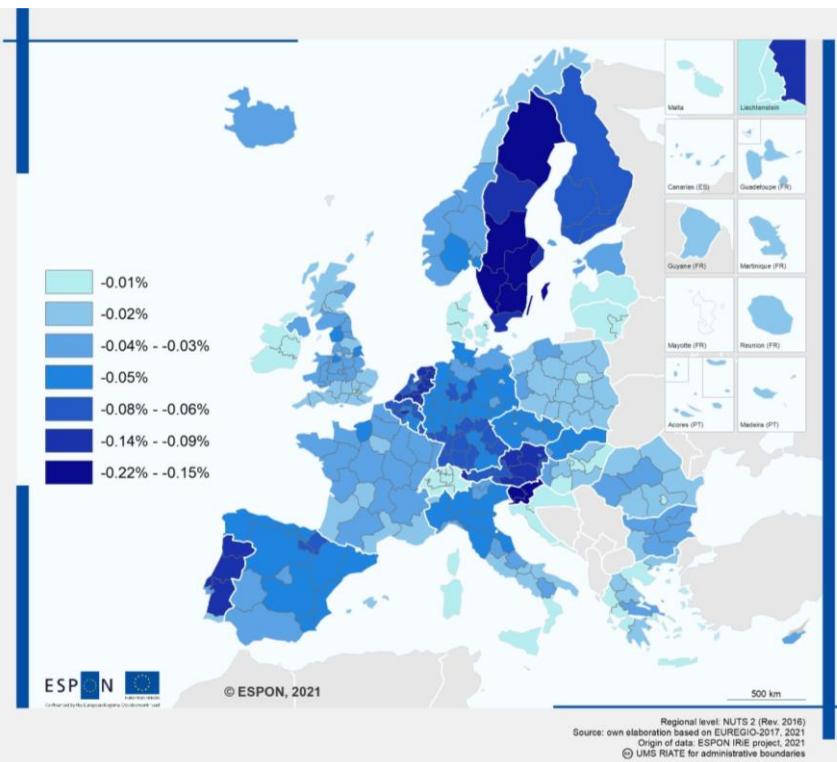
## % Regional VAB variation



25%

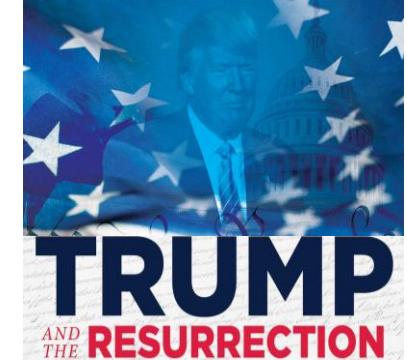
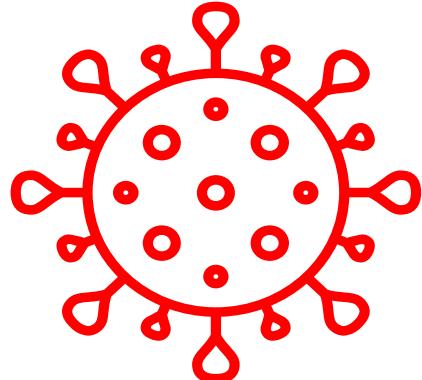
25%

10%



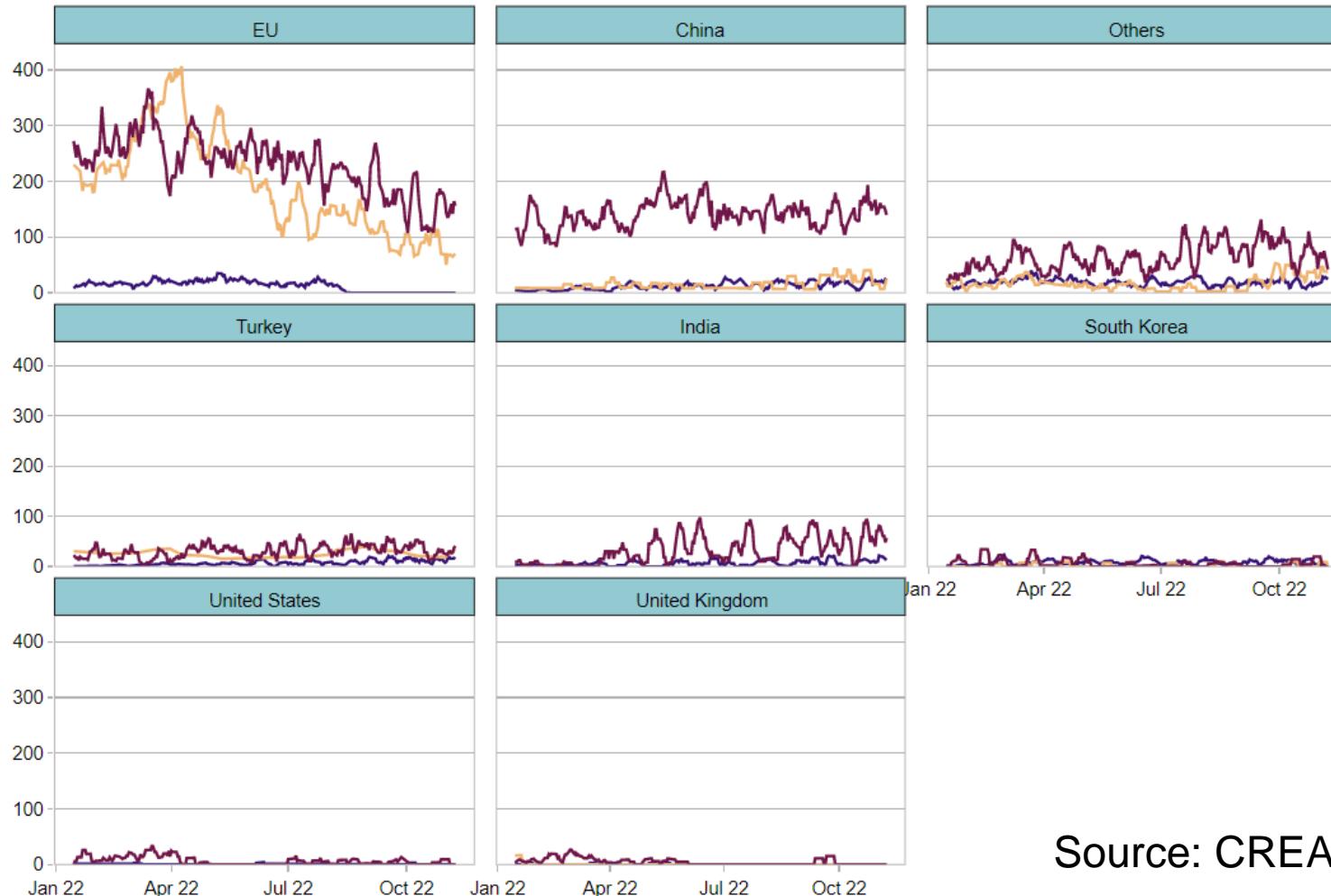
Source: own elaboration based on EUREGIO-2017, 2021  
Origin of data: ESPON IRE project, 2021  
© UMS RIATE for administrative boundaries

# All scenarios: A focus in Navarra

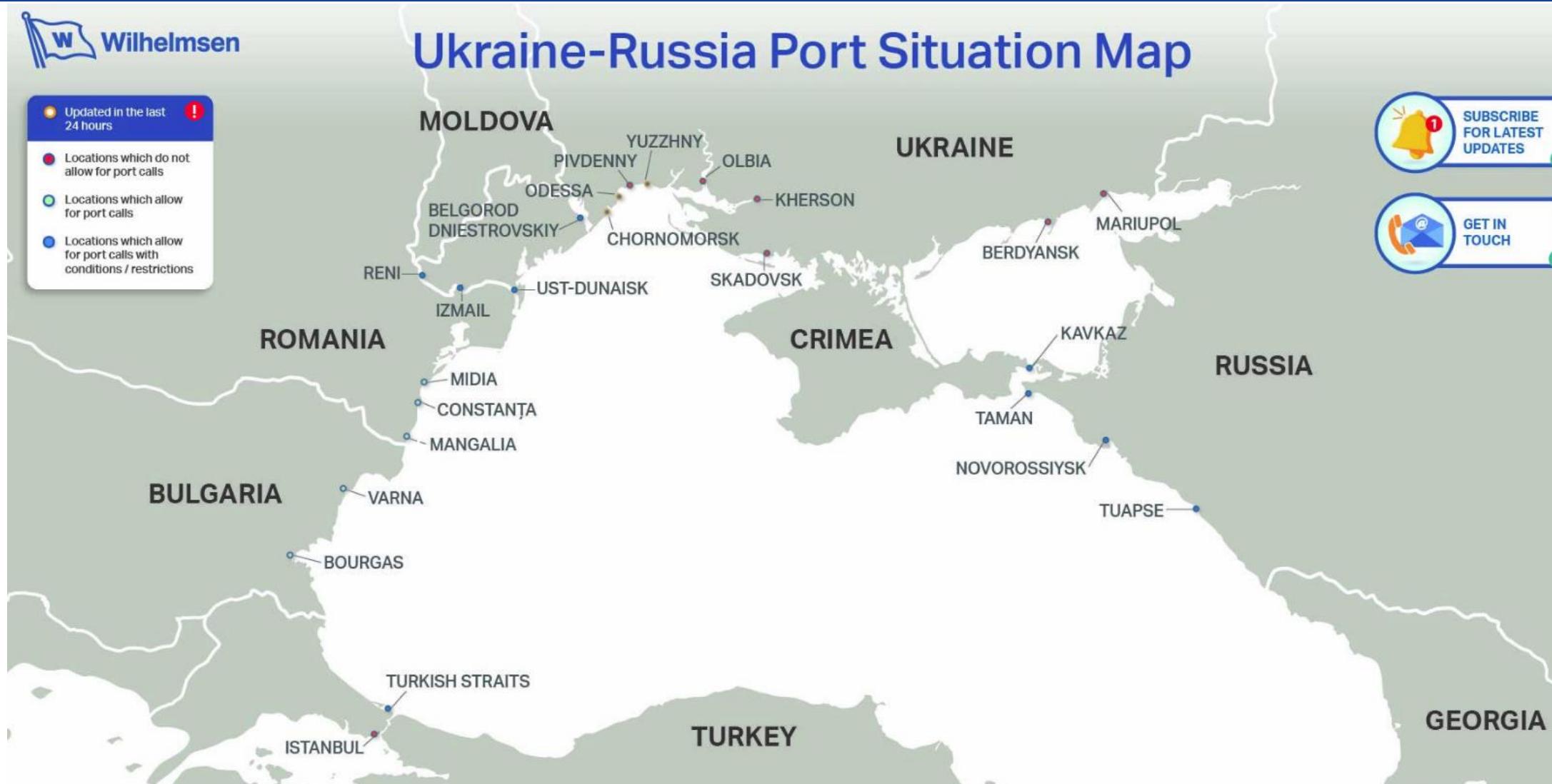


		COVID19	NGEU	COVID19 + NGEU	European Green Deal	New Glob.	War Russia Ukraine	Total
ESPON	UE28+EEE	-4.09%	2.13%	-1.96%	-0.01%	-0.16%	-1.89%	-4.01%
UE_27	UE_27	-4.35%	2.60%	-1.75%	0.00%	-0.17%	-2.14%	-4.06%
ES22	C.F. de Navarra	-8.84%	4.42%	-4.41%	0.01%	-0.15%	-1.52%	-6.07%

Deliveries of Russian fossil fuel by pipeline and ship in million EUR per day



Source: CREA



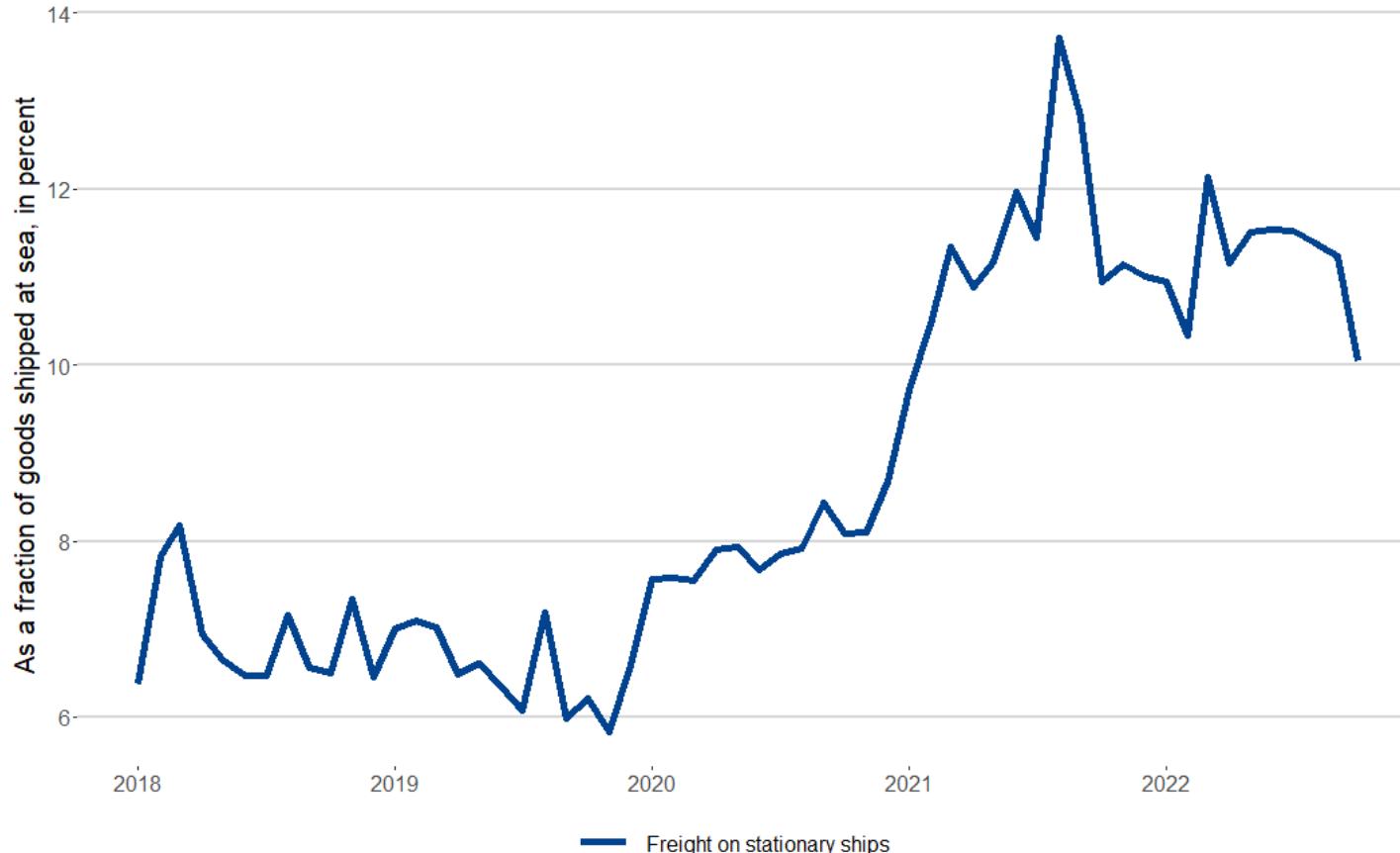
<https://www.wilhelmsen.com/port-services/ships-agency/campaigns/ukraine-russia/ukraine-russia-port-situation-map/>

**Other factors explaining inflation and GDP current figures:**

- Disruption in the supply chain

### Freight on stationary ships

Last Update: 06.11.2022



Quelle: Sources: Fleetmon, own calculations.

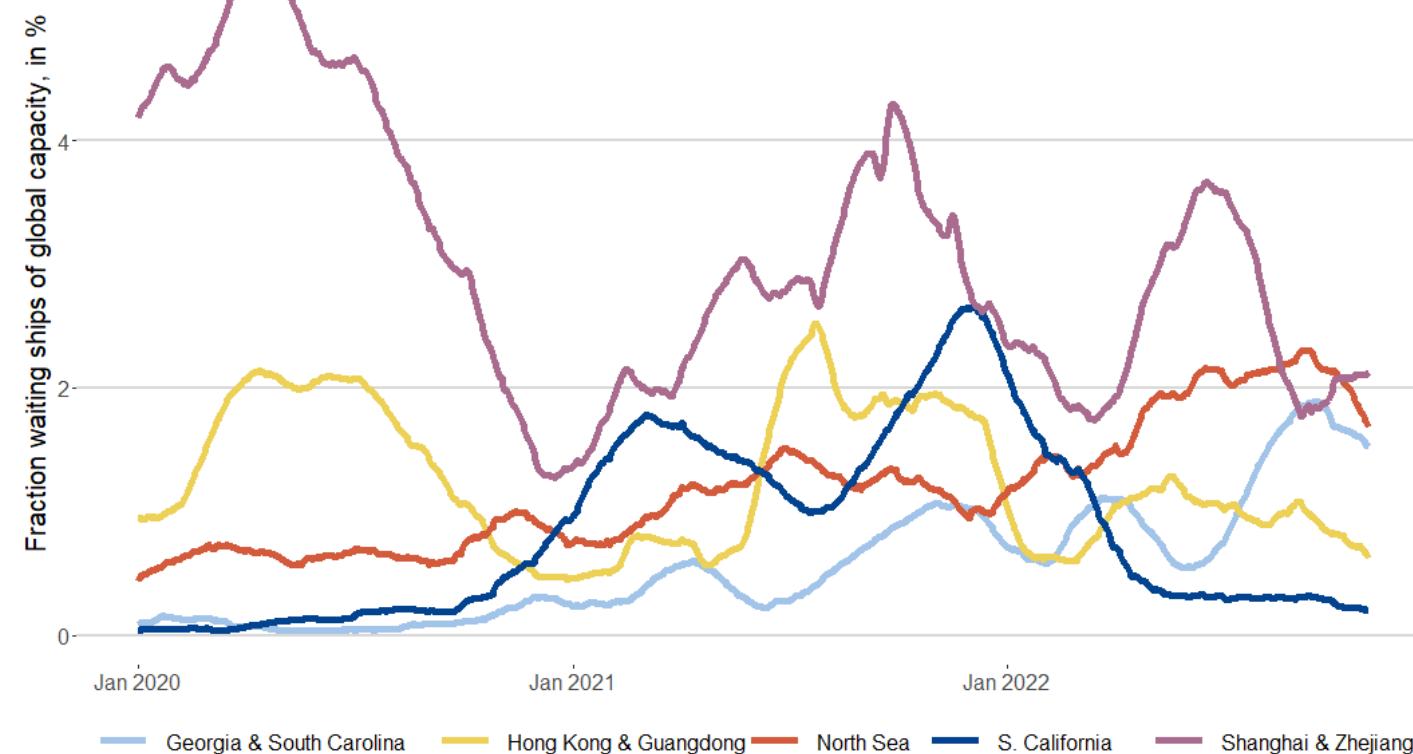
Kiel Trade indicator

## Containership traffic at major ports

Last Update: 06.11.2022

**Other factors explaining inflation and GDP current figures:**

- Disruption in the supply chain



Quelle: Fleetmon, own calculations. 60-days moving average

Kiel Trade indicator

## Other indicators regarding the international support to Ukraine

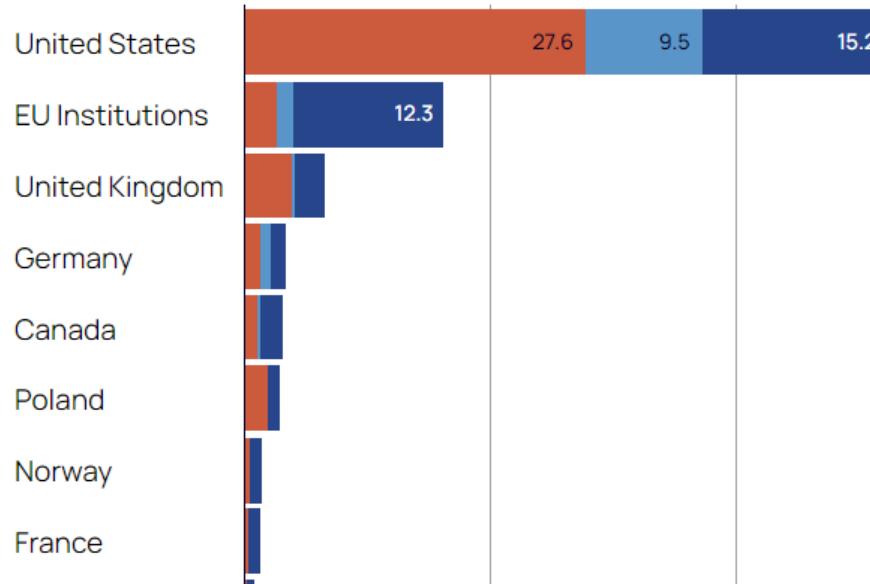
### Government support to Ukraine: Type of assistance, € billion

Commitments Jan. 24 to Oct. 3, 2022. Data on 41 donors ; scroll to see more donors

Military Humanitarian Financial



Select the type of aid ▾



Source: Antezza et al. (2022) "The Ukraine Support Tracker" Kiel WP

[ifw-kiel.de/ukrainetracker](http://ifw-kiel.de/ukrainetracker)

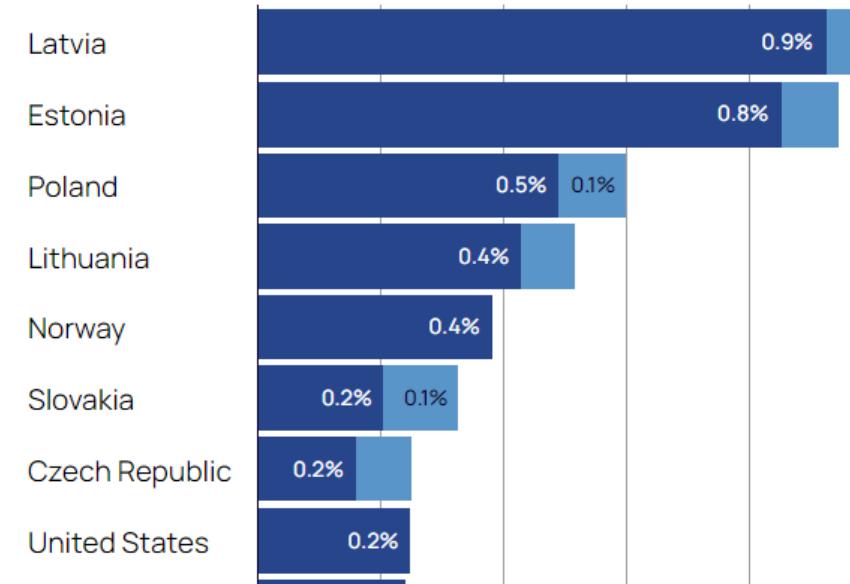
### Government support to Ukraine: By donor country GDP, incl. and excl. EU share

Commitments Jan. 24 to Oct. 3, 2022. Data on 40 donor countries; scroll to see more countries

Bilateral aid (% of GDP) Share of EU aid (% of GDP)



Change composition ▾



Source: Antezza et al. (2022) "The Ukraine Support Tracker" Kiel WP

[ifw-kiel.de/ukrainetracker](http://ifw-kiel.de/ukrainetracker)

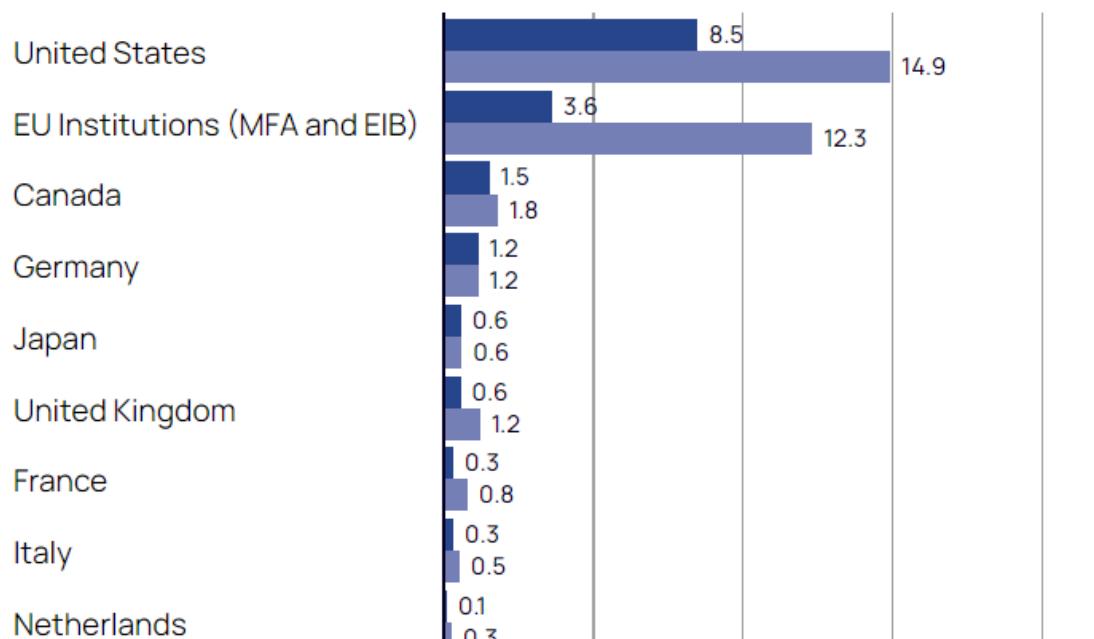
## Other indicators regarding the international support to Ukraine

### Government support to Ukraine: Committed vs. disbursed budget support, € billion



Commitments Jan. 24 to Oct. 3, 2022. Data on 17 donors; scroll to see more donors

■ Disbursed budgetary support ■ Committed budgetary support



Source: Antezza et al. (2022) "The Ukraine Support Tracker" Kiel WP

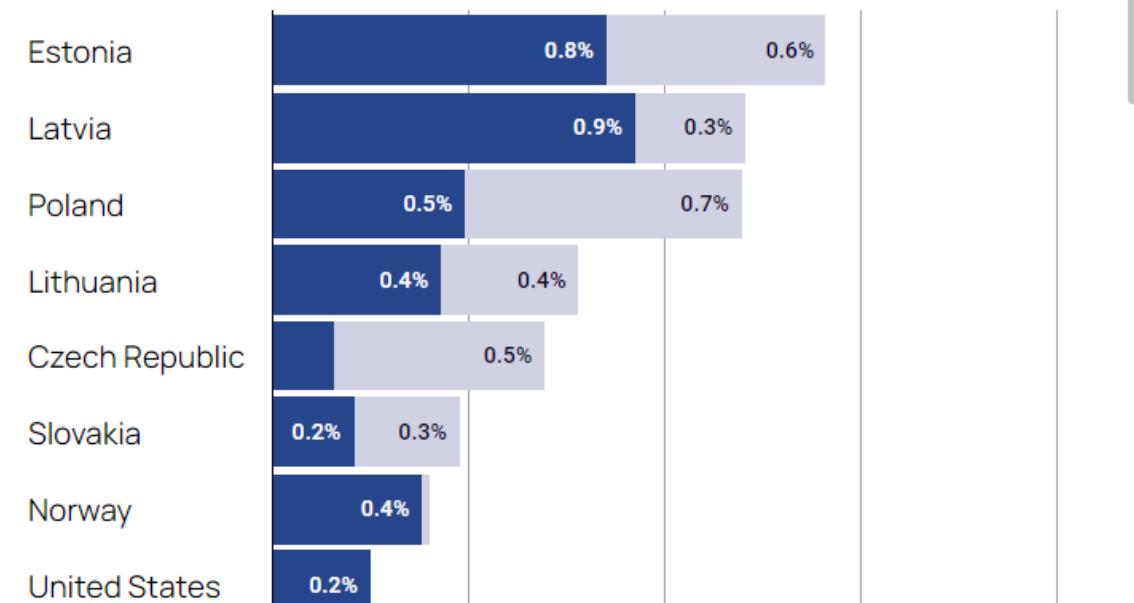
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### Government support to Ukraine: by donor GDP, incl. refugee costs



Commitments Jan. 24 to Oct. 3, 2022. Data on 40 donor countries ; scroll to see more countries

■ Bilateral aid (percent of GDP)  
■ Refugee costs (percent of GDP, rough baseline estimate)



Source: Antezza et al. (2022) "The Ukraine Support Tracker" Kiel WP

[ifw-kiel.de/ukrainetracker](http://ifw-kiel.de/ukrainetracker)