



[Setiembre 2024]

“Era de Revoluciones”
La Transición Energética en la
Coyuntura y Tendencias Globales

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Jose E. Gonzales

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- I. Mercados**
- II. Postpandemia**
- III. America Latina**
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- V. Amazonia**
- VI. Perspectivas**



Mercados



GCC Advisors

Acciones



Source: Trading Economics



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Bonos



Source: Trading Economics



GCC Advisors

Cryptos



Source: Trading Economics



GCC Advisors

FX



Source: Trading Economics



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Petroleo



Source: Trading Economics

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Gas | Carbón



Source: Trading Economics

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Oro | Cobre



Source: Trading Economics



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Litio | Hierro | Acero



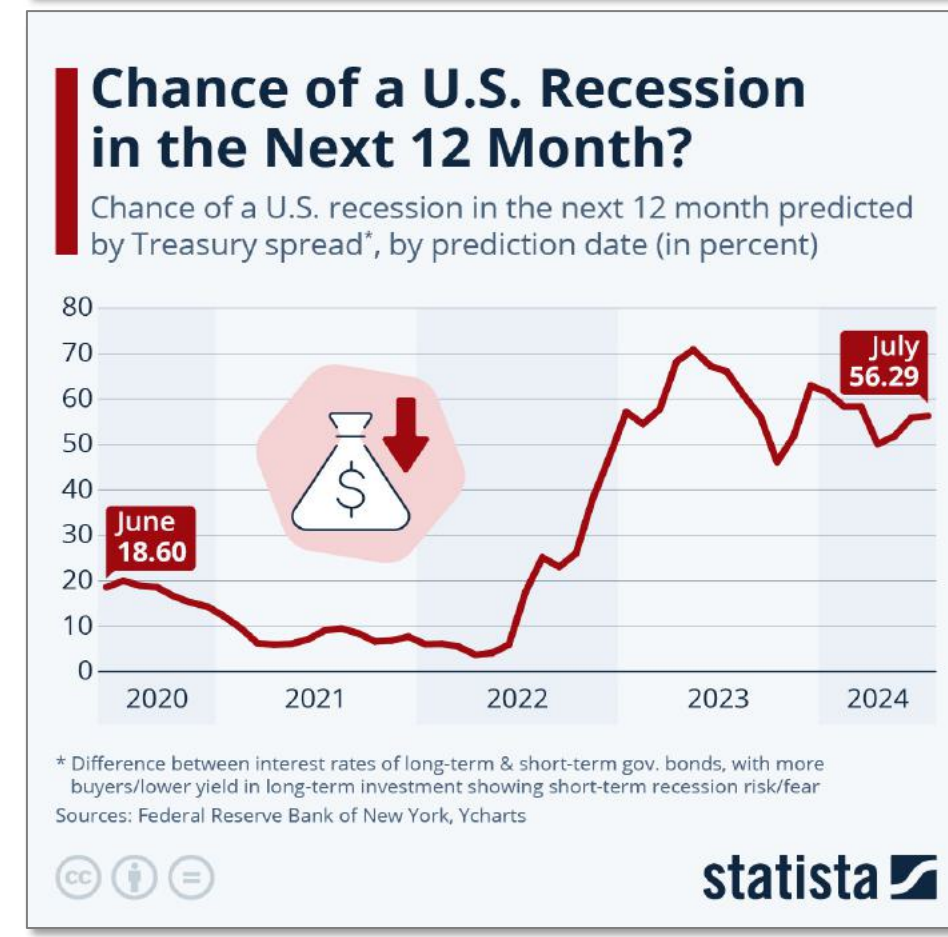
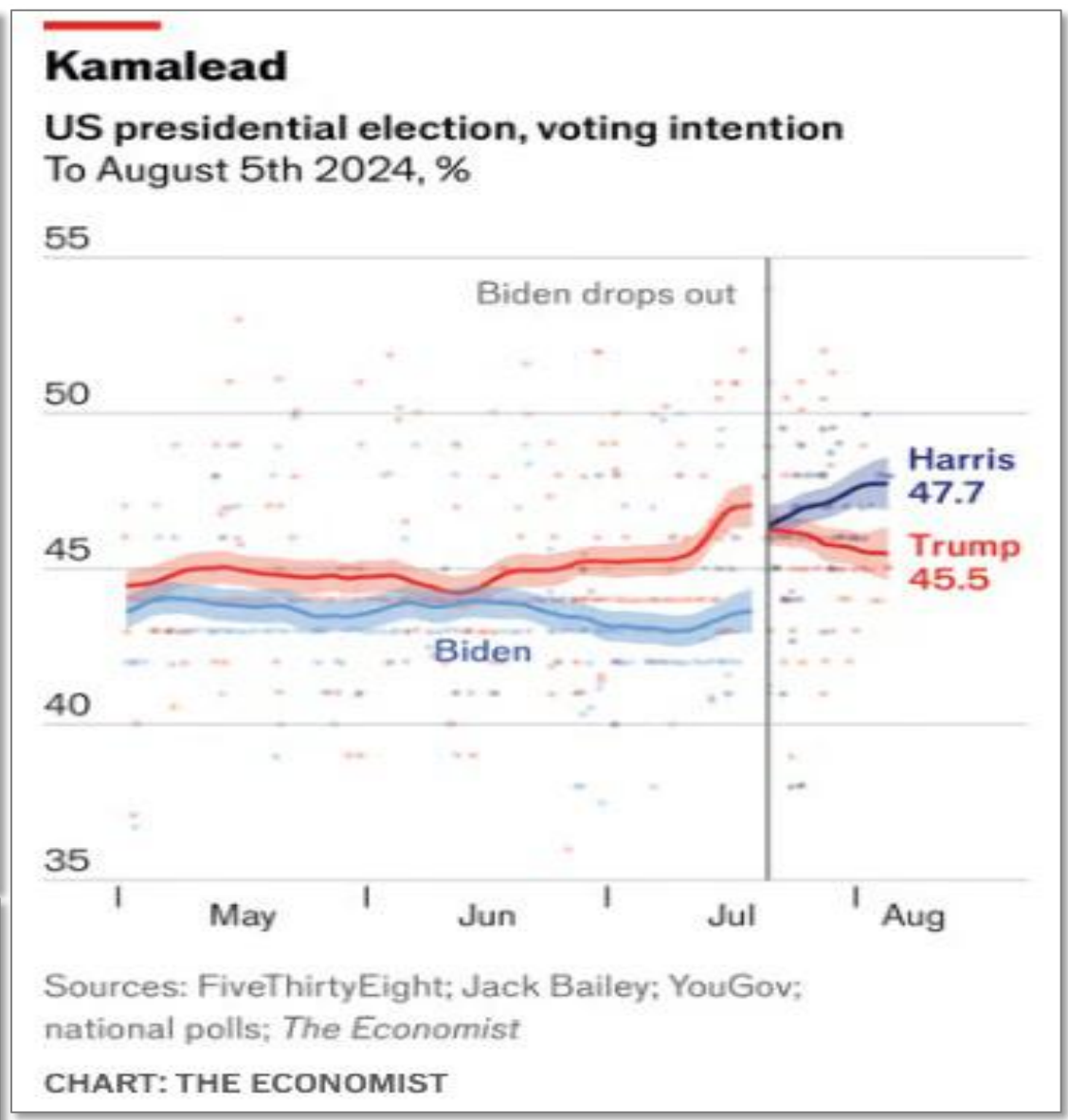
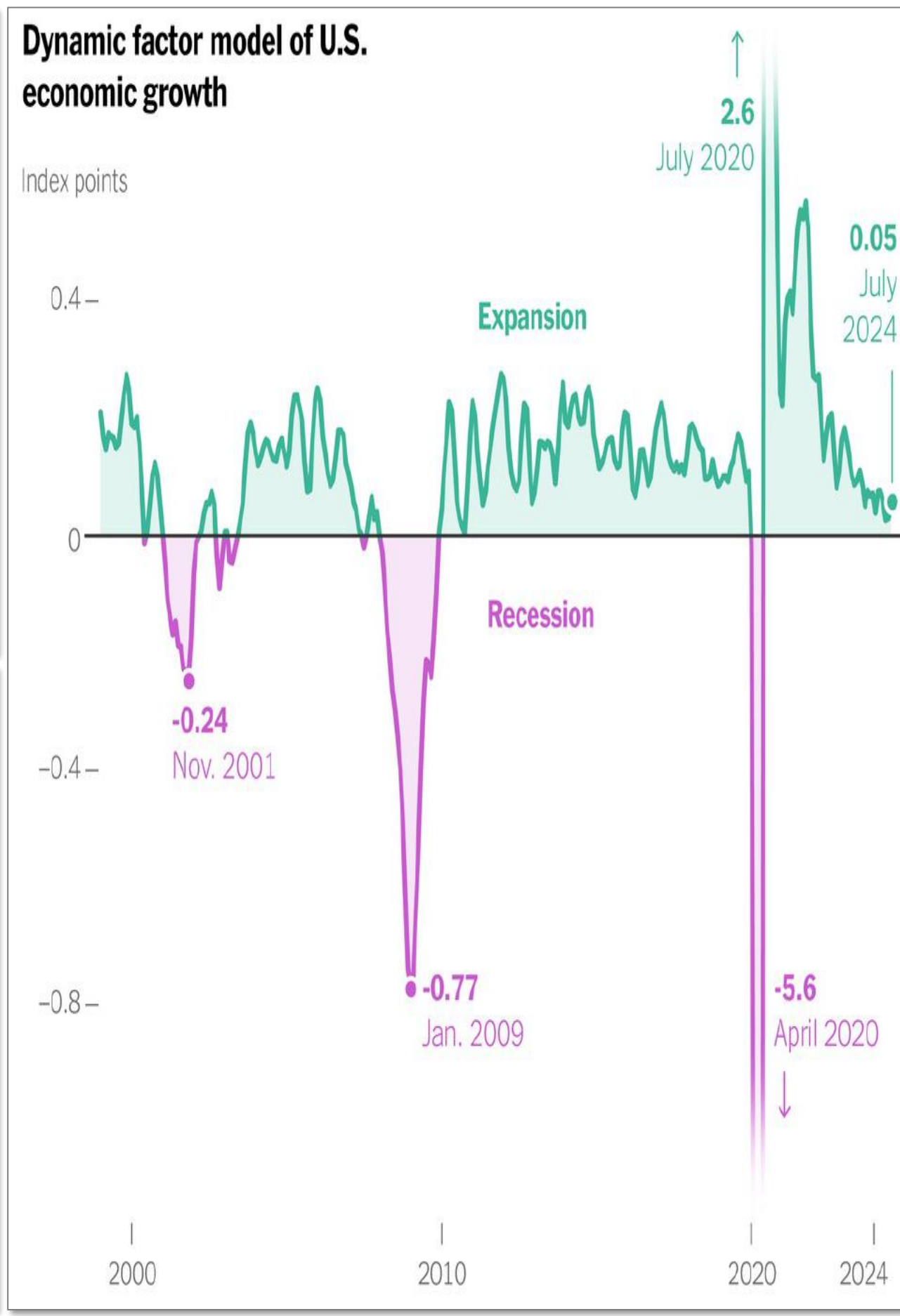
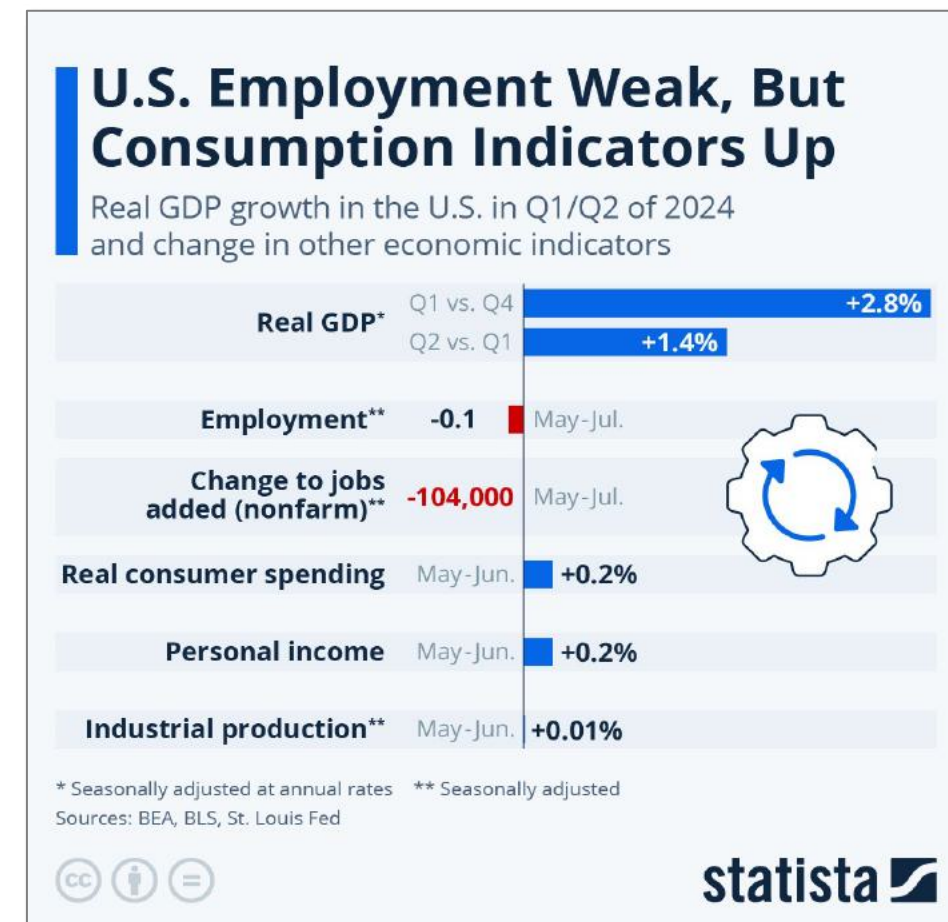
Source: Trading Economics



Postpandemia

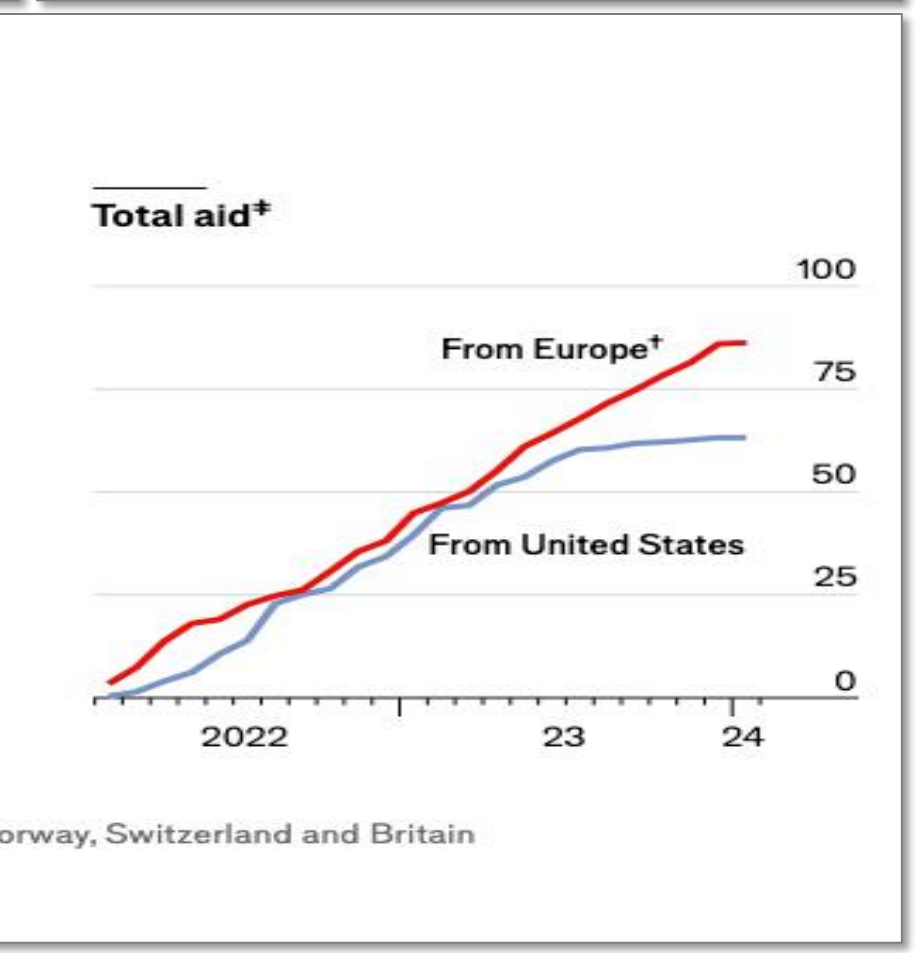
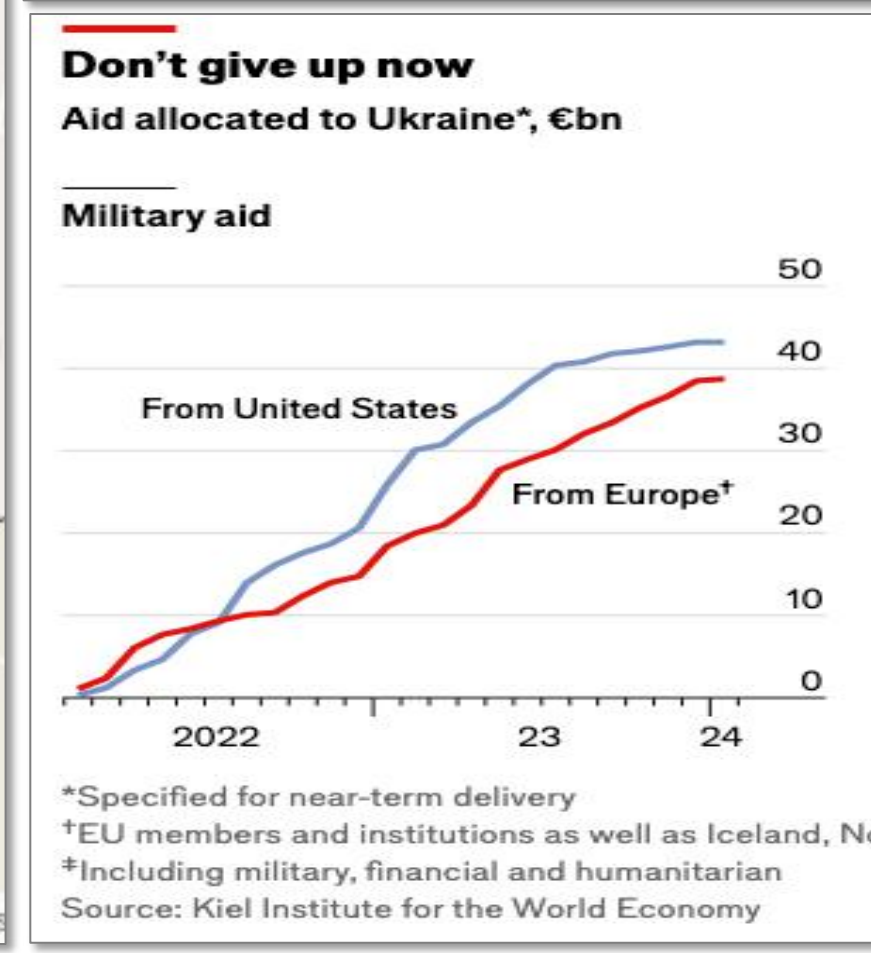
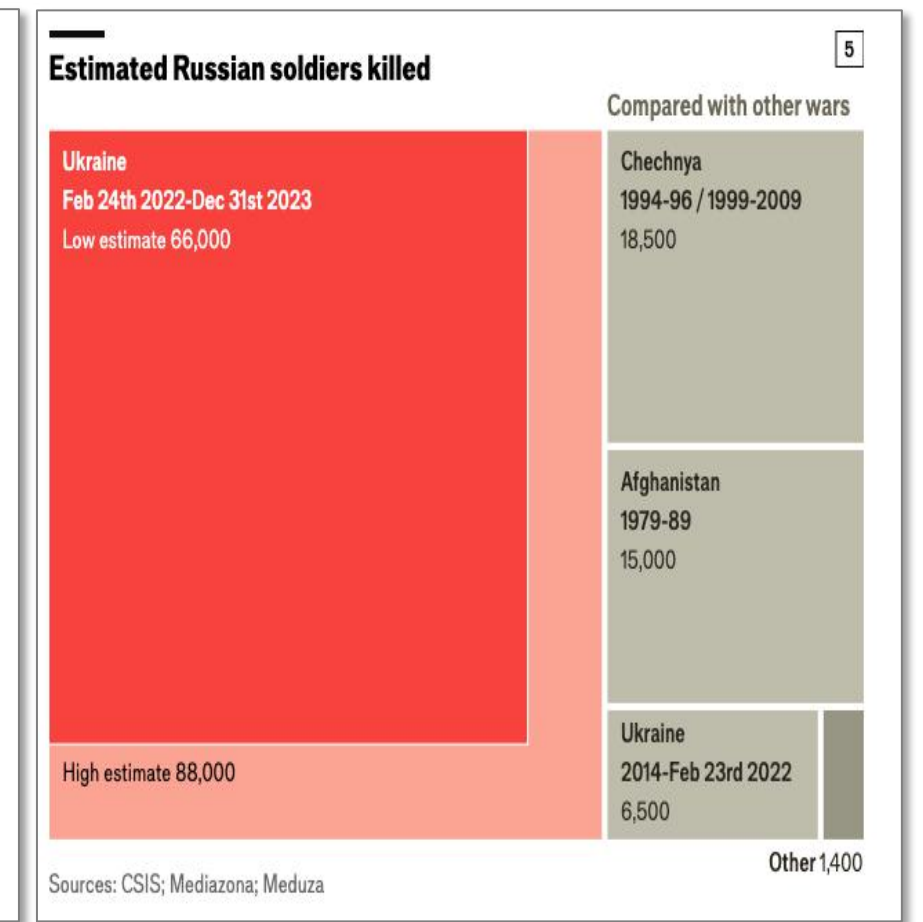
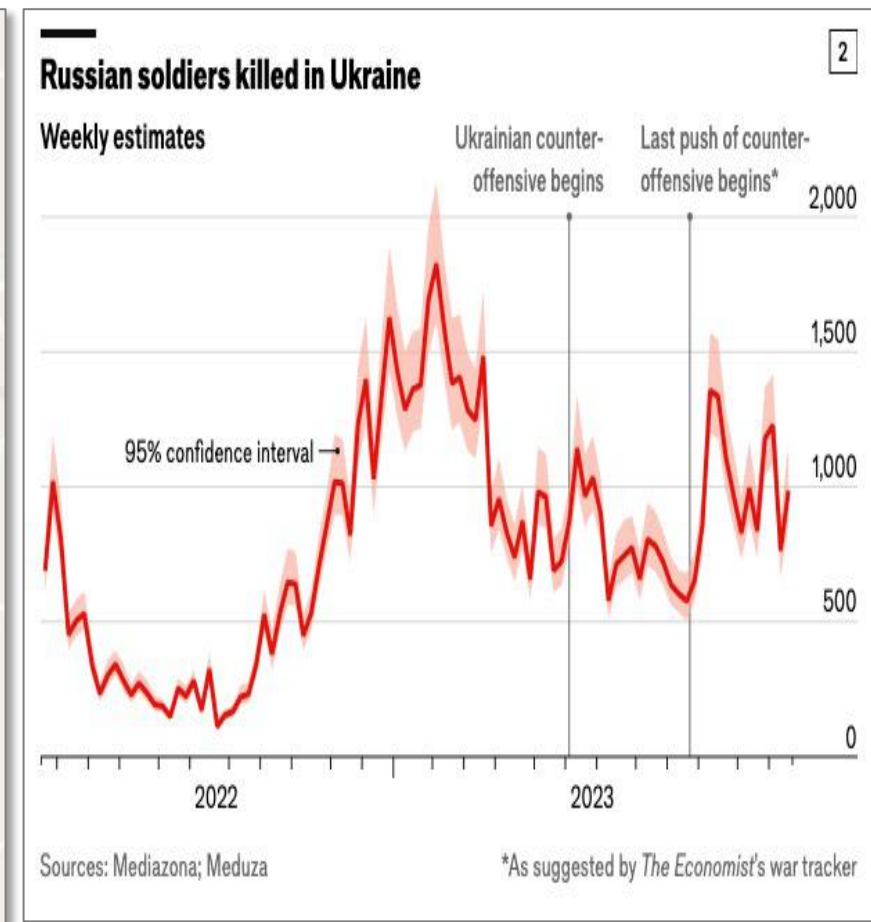
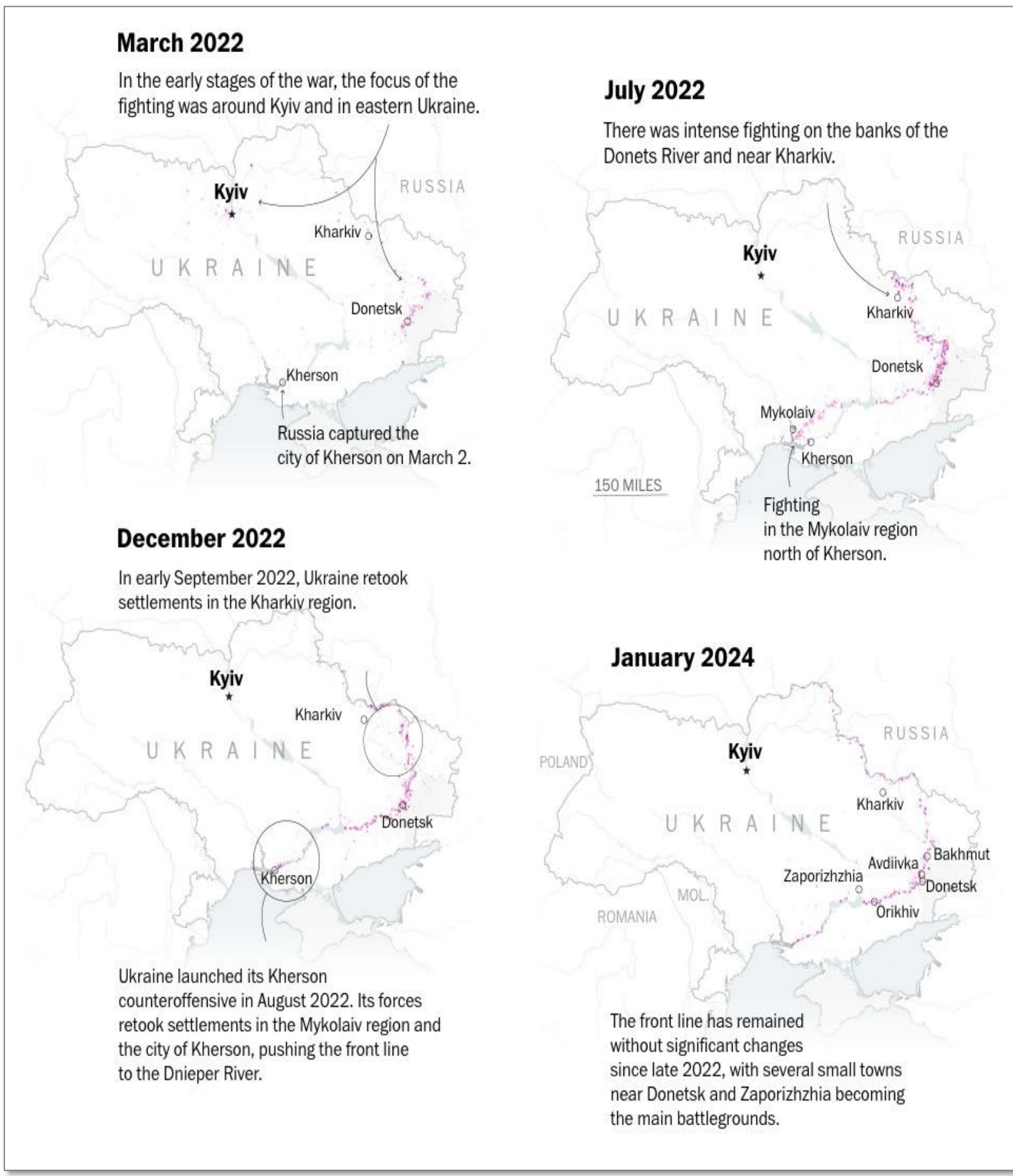
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“Mesoeconomía”



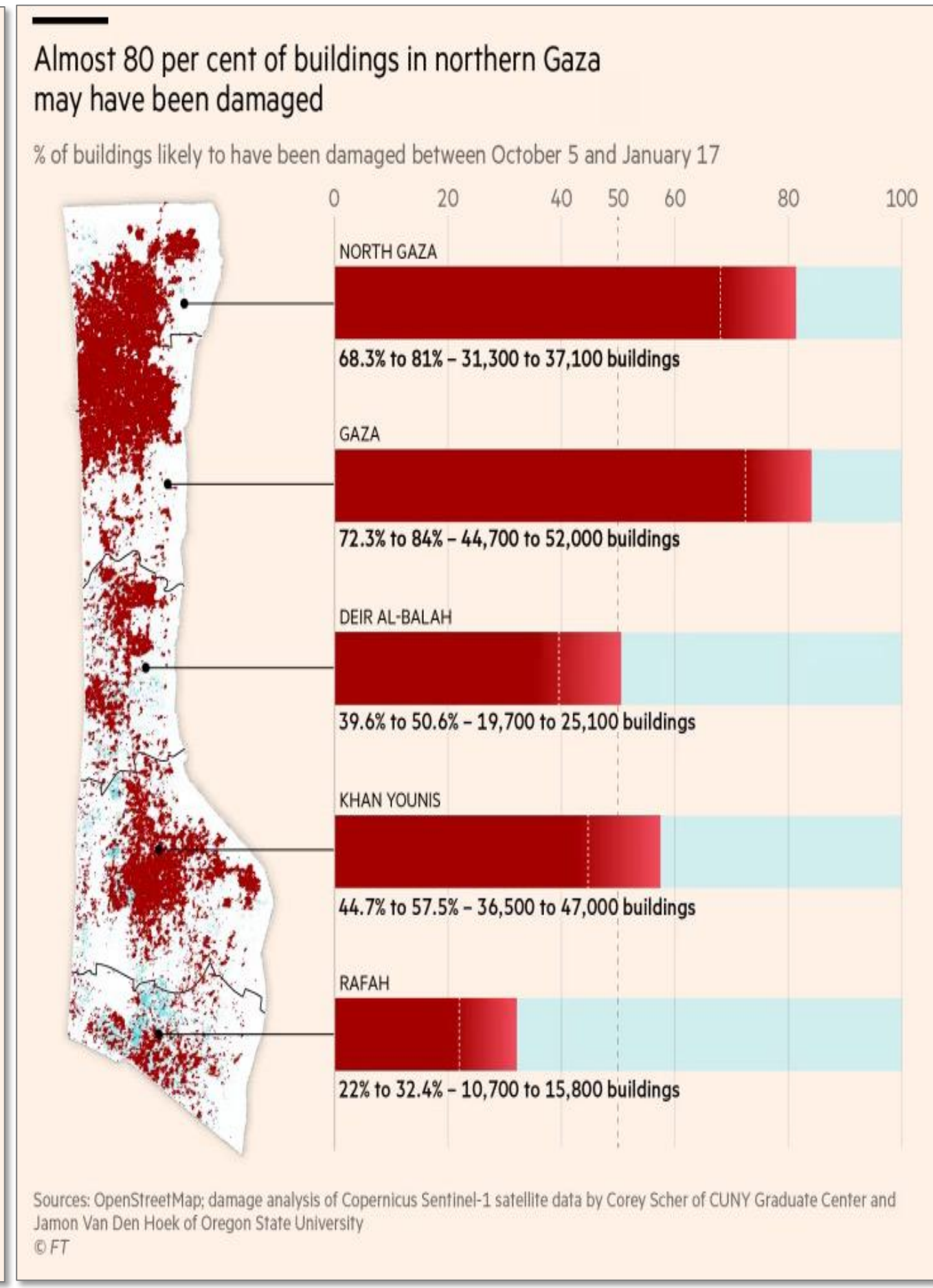
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Ucrania



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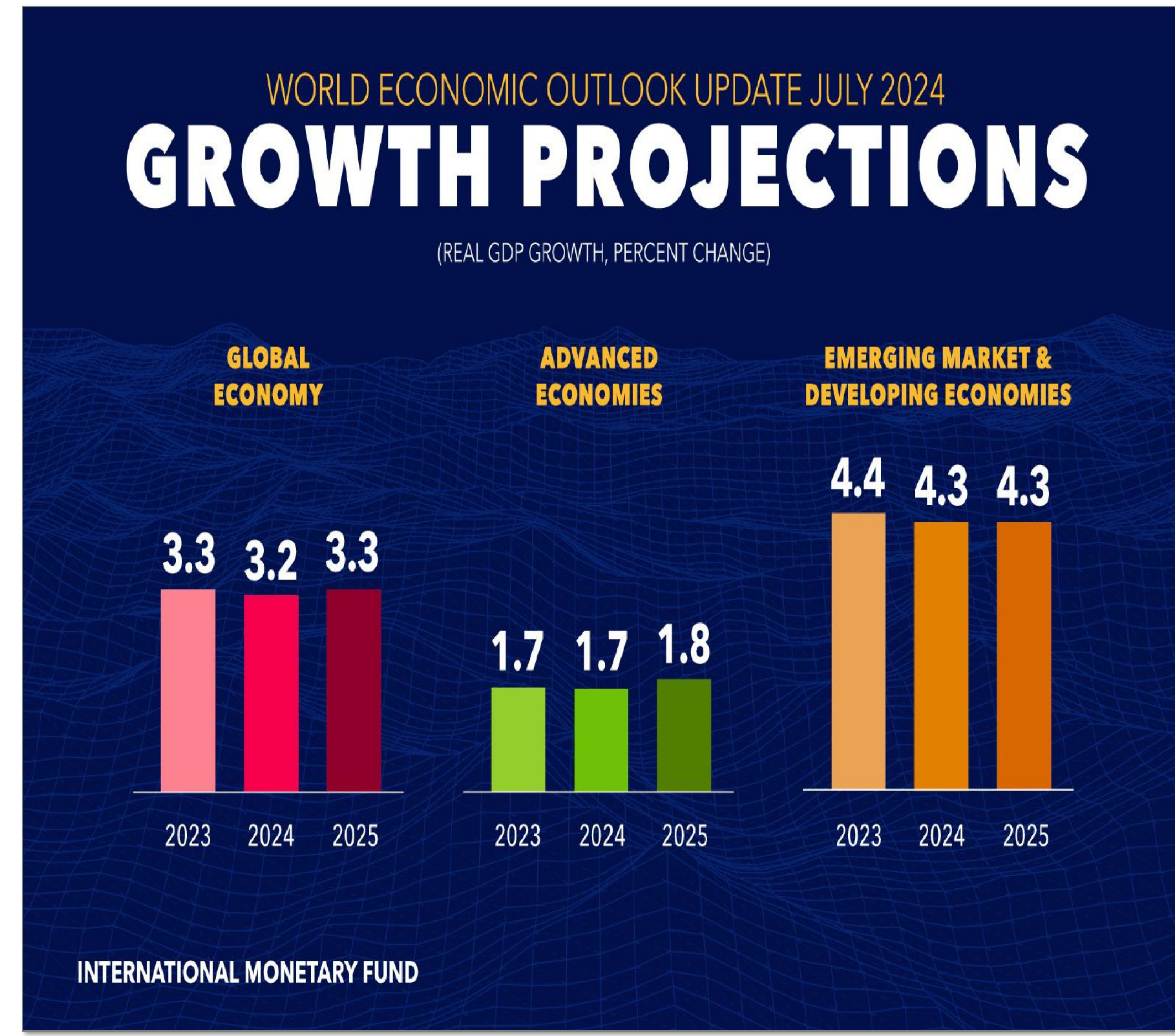
“Israel en Guerra”



Source: Financial Times, New York Times, Bloomberg

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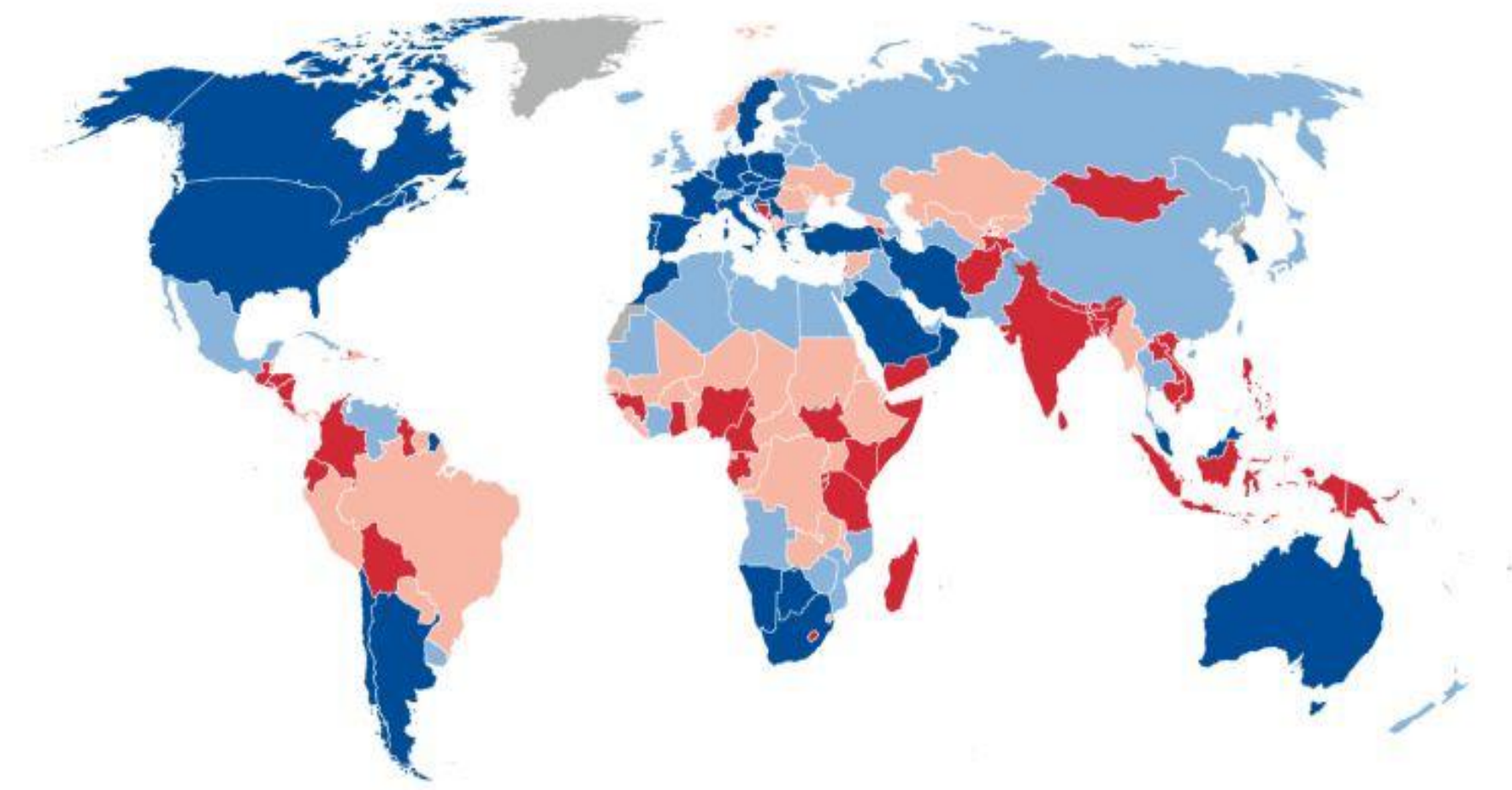
“Sticky Spot”



Speed bumps

The world's slowest roads are found in the poorest countries—presenting another obstacle to economic development.
(mean speed ranges, km/h)

● 30-60 ● 61-75 ● 76-90 ● 91-110 ● No data



Source: IMF staff calculations.
Note: Country borders nor names necessarily reflect the IMF's official position.



“Persistent Services Inflation”

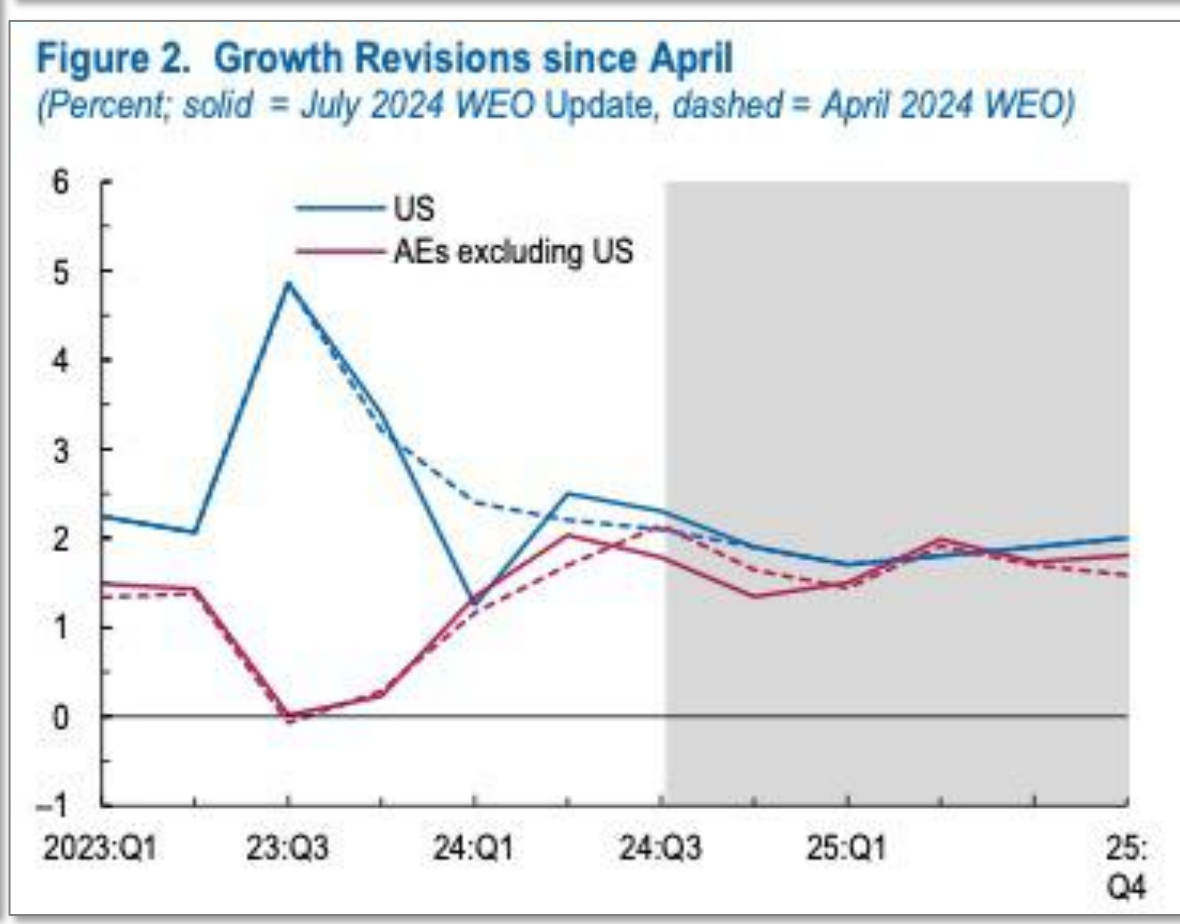
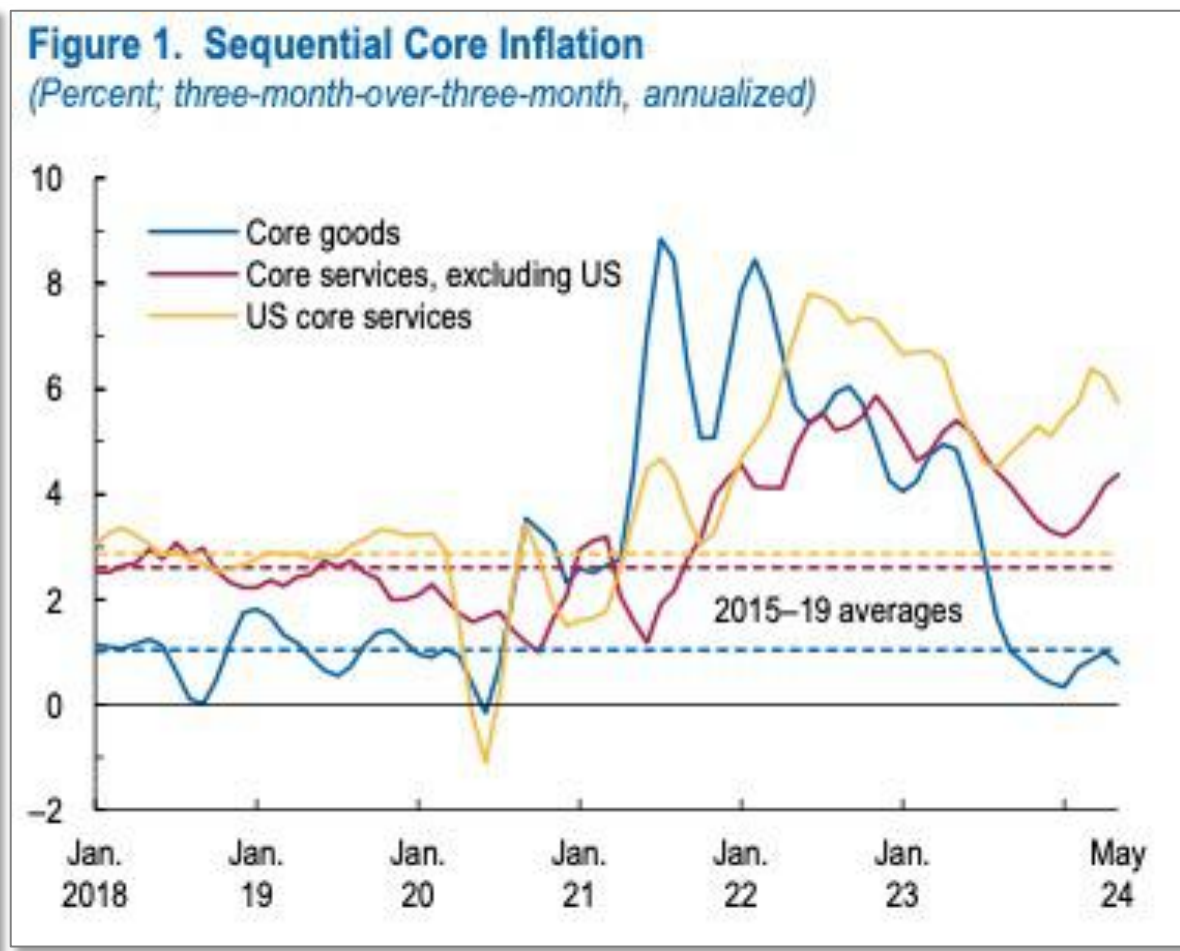
World Economic Outlook Growth Projections

(Real GDP, annual percent change)

	2023	PROJECTIONS	
		2024	2025
Advanced Economies	1.7	1.7	1.8
United States	2.5	2.6	1.9
Euro Area	0.5	0.9	1.5
Germany	-0.2	0.2	1.3
France	1.1	0.9	1.3
Italy	0.9	0.7	0.9
Spain	2.5	2.4	2.1
Japan	1.9	0.7	1.0
United Kingdom	0.1	0.7	1.5
Canada	1.2	1.3	2.4
Other Advanced Economies	1.8	2.0	2.2

Source: IMF, World Economic Outlook Update, July 2024

INTERNATIONAL MONETARY FUND IMF.org



World Economic Outlook Growth Projections

(Real GDP, annual percent change)

	2023	PROJECTIONS	
		2024	2025
Emerging Market and Developing Economies	4.4	4.3	4.3
Emerging and Developing Asia	5.7	5.4	5.1
China	5.2	5.0	4.5
India	8.2	7.0	6.5
Emerging and Developing Europe	3.2	3.2	2.6
Russia	3.6	3.2	1.5
Latin America and the Caribbean	2.3	1.9	2.7
Brazil	2.9	2.1	2.4
Mexico	3.2	2.2	1.6
Middle East and Central Asia	2.0	2.4	4.0
Saudi Arabia	-0.8	1.7	4.7
Sub-Saharan Africa	3.4	3.7	4.1
Nigeria	2.9	3.1	3.0
South Africa	0.7	0.9	1.2
Memorandum			
Emerging Market and Middle-Income Economies	4.4	4.2	4.2
Low-Income Developing Countries	3.9	4.4	5.3

Source: IMF, World Economic Outlook Update, July 2024

Note: For India, data and forecasts are presented on a fiscal year basis, with FY 2023/2024 (starting in April 2023) shown in the 2023 column. India's growth projections are 7.3 percent in 2024 and 6.5 percent in 2025 based on calendar year.

INTERNATIONAL MONETARY FUND IMF.org

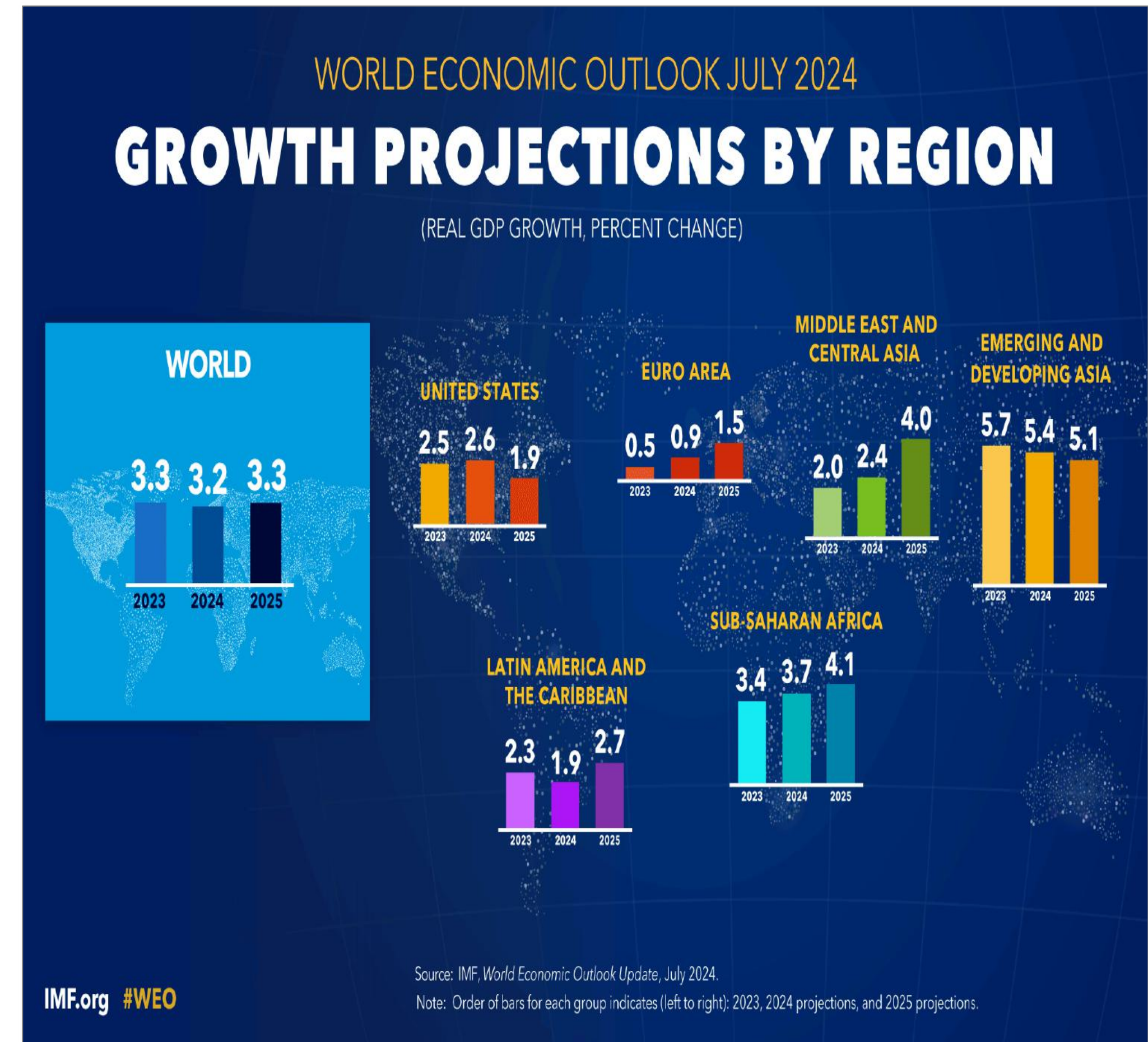
Source: IMF WEO July 2024



America Latina

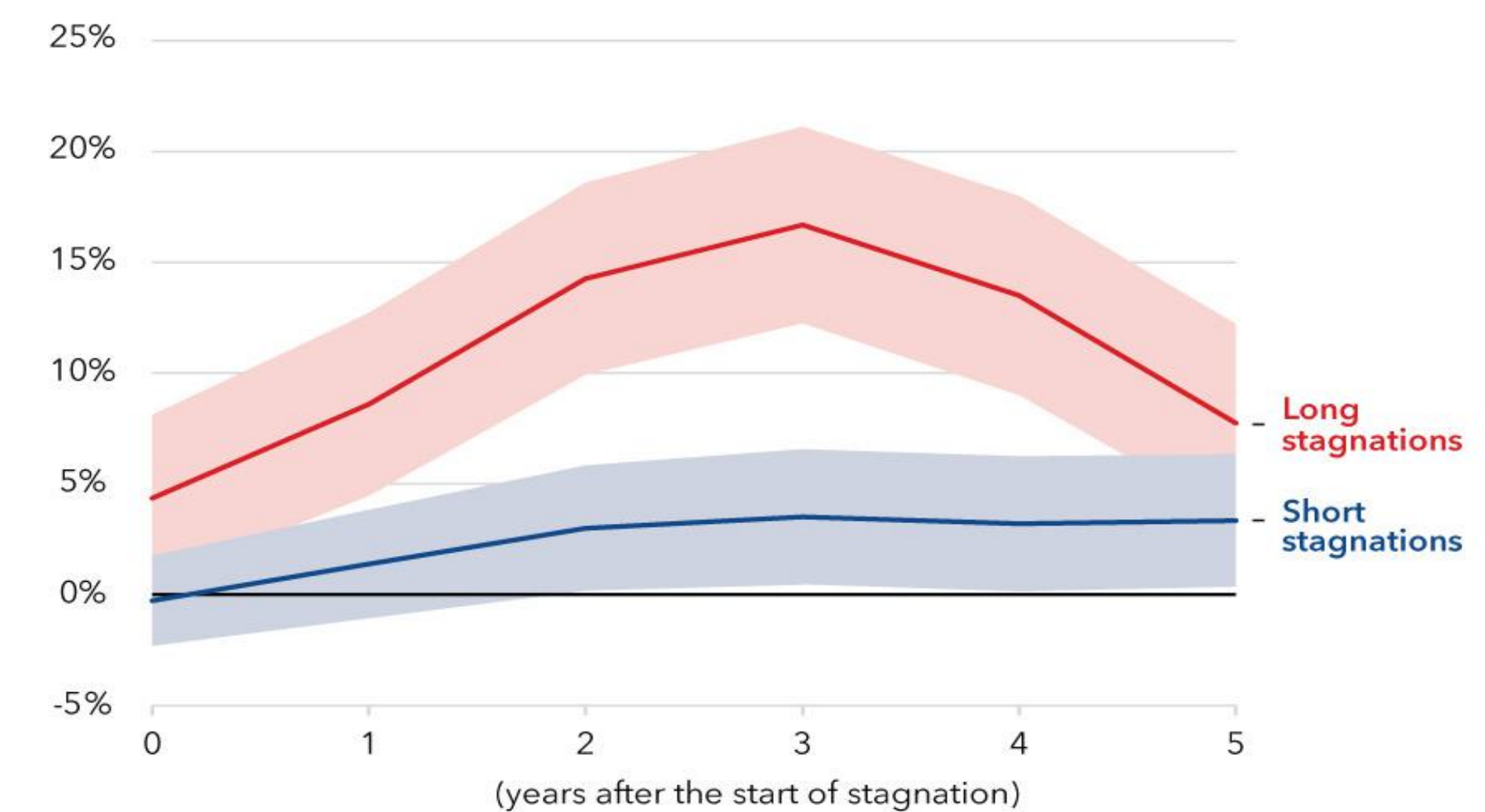
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America Latina I



Longer economic stagnations lead to higher inequality

Impact of output shocks on inequality during stagnation



Source: IMF staff estimates.
 Note: The response of the Palma ratio to a one standard deviation shock in output during stagnation spells, with long stagnations defined as lasting at least 4 years. The Palma ratio measures the ratio of the income of the top 10 percent of the income distribution to the income of the bottom 40 percent. Shaded areas indicate 90 percent confidence intervals.



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America Latina II

Western Hemisphere: Real GDP growth
(year-over-year percent change)

	2022	2023	PROJECTIONS	
			2024	2025
North America	2.3	2.5	2.6	1.9
Canada	3.8	1.1	1.2	2.3
Mexico	3.9	3.2	2.4	1.4
United States	1.9	2.5	2.7	1.9
Puerto Rico	3.2	-0.7	-0.2	0.0
South America	4.0	1.5	1.4	2.7
Argentina	5.0	-1.6	-2.8	5.0
Bolivia	3.6	2.5	1.6	2.2
Brazil	3.0	2.9	2.2	2.1
Chile	2.1	0.2	2.0	2.5
Colombia	7.3	0.6	1.1	2.5
Ecuador	6.2	2.3	0.1	0.8
Paraguay	0.2	4.5	3.8	3.8
Peru	2.7	-0.6	2.5	2.7
Uruguay	4.7	0.4	3.7	2.9
Venezuela	8.0	4.0	4.0	3.0
CAPDR	5.5	4.2	3.9	3.8
Costa Rica	4.6	5.1	4.0	3.5
Dominican Republic	4.9	2.4	5.4	5.0
El Salvador	2.8	3.5	3.0	2.3
Guatemala	4.1	3.5	3.5	3.7
Honduras	4.0	3.5	3.6	3.7
Nicaragua	3.8	4.7	3.5	3.5
Panama	10.8	7.3	2.5	3.0
Caribbean	14.0	8.3	9.7	6.9
Caribbean: Tourism dependent	9.0	3.5	2.5	2.1
Antigua and Barbuda	8.5	5.9	6.1	4.0
Aruba	10.5	5.3	1.1	1.0
The Bahamas	14.4	4.3	2.3	1.8
Barbados	13.8	4.4	3.7	2.8
Belize	8.7	4.7	3.4	2.5
Dominica	5.6	4.7	4.6	4.3
Grenada	7.3	4.8	4.1	3.7
Jamaica	5.2	2.2	1.8	1.7
St. Kitts and Nevis	8.8	3.4	4.7	4.3
St. Lucia	15.7	3.0	2.4	2.1
St. Vincent and the Grenadines	5.5	6.2	5.3	3.9
Caribbean: Non-tourism dependent	17.0	11.2	13.6	9.3
Haiti	-1.7	-1.9	-3.0	1.5
Commodity exporters	25.3	16.1	18.8	11.5
Guyana	62.3	33.0	33.9	18.7
Suriname	2.4	2.1	3.0	3.0
Trinidad and Tobago	1.5	2.1	2.4	2.3
Latin America and the Caribbean	4.2	2.3	2.0	2.5
LAC (simple average)	7.6	4.0	3.7	3.4
LAC excluding Argentina and Venezuela	4.1	2.7	2.4	2.3
LA7	3.7	2.4	2.2	2.0
Eastern Caribbean Currency Union	10.0	4.8	4.3	3.3

Sources: IMF, World Economic Outlook database; and IMF staff calculations and projections.
Note: Regional aggregates are purchasing-power-parity GDP-weighted averages unless indicated otherwise.
CAPDR = Central America, Panama, and the Dominican Republic; LAC = Latin America and the Caribbean;
LA7 = Latin America 7 (Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay).



Western Hemisphere: Inflation, end of period
(year-over-year percent change)

	2022	2023	PROJECTIONS	
			2024	2025
North America	6.6	3.3	2.5	2.1
Canada	6.6	3.2	2.1	1.9
Mexico	7.8	4.4	3.5	3.0
United States	6.4	3.2	2.4	2.0
Puerto Rico	6.1	1.5	2.2	2.3
South America	18.3	24.2	18.2	8.4
Argentina	94.8	211.4	149.4	45.0
Bolivia	3.1	2.1	4.8	4.0
Brazil	5.8	4.6	3.8	3.0
Chile	12.8	3.9	3.0	3.0
Colombia	13.2	9.3	5.3	3.0
Ecuador	3.7	1.3	1.5	1.5
Paraguay	8.1	3.7	4.0	4.0
Peru	8.5	3.2	2.4	2.0
Uruguay	8.3	5.1	5.7	5.5
Venezuela	234.0	190.0	160.0	150.0
CAPDR	7.3	2.6	3.3	3.3
Costa Rica	7.9	-1.8	2.0	3.0
Dominican Republic	7.8	3.6	4.0	4.0
El Salvador	7.3	1.2	1.7	1.7
Guatemala	9.2	4.2	4.0	4.0
Honduras	9.8	5.2	4.3	4.0
Nicaragua	11.6	5.6	4.8	4.0
Panama	2.1	1.9	2.2	2.0
Caribbean	15.2	8.8	6.5	5.5
Caribbean: Tourism dependent	7.4	4.5	3.6	3.3
Antigua and Barbuda	9.2	3.3	2.2	2.0
Aruba	5.7	2.3	1.8	1.8
The Bahamas	5.5	1.9	2.4	2.1
Barbados	5.7	4.8	2.7	2.6
Belize	6.7	3.7	2.6	1.3
Dominica	8.7	2.3	2.2	2.0
Grenada	2.9	2.7	1.8	2.0
Jamaica	9.4	6.9	5.5	5.0
St. Kitts and Nevis	3.9	2.1	2.3	2.0
St. Lucia	6.9	2.2	1.8	2.0
St. Vincent and the Grenadines	6.7	4.1	2.0	2.0
Caribbean: Non-tourism dependent	20.3	11.4	8.1	6.7
Haiti	38.7	31.8	22.1	13.4
Commodity exporters	13.1	4.5	4.1	4.8
Guyana	7.2	2.0	3.6	5.5
Suriname	54.6	32.6	14.2	11.0
Trinidad and Tobago	8.7	0.7	2.2	2.1
Latin America and the Caribbean	14.6	16.6	12.7	6.5
LAC (simple average)	12.6	11.6	8.6	4.8
LAC excluding Argentina and Venezuela	7.8	4.7	3.7	3.1
LA7	7.9	4.9	3.8	3.0
Eastern Caribbean Currency Union	6.6	2.9	2.1	2.0

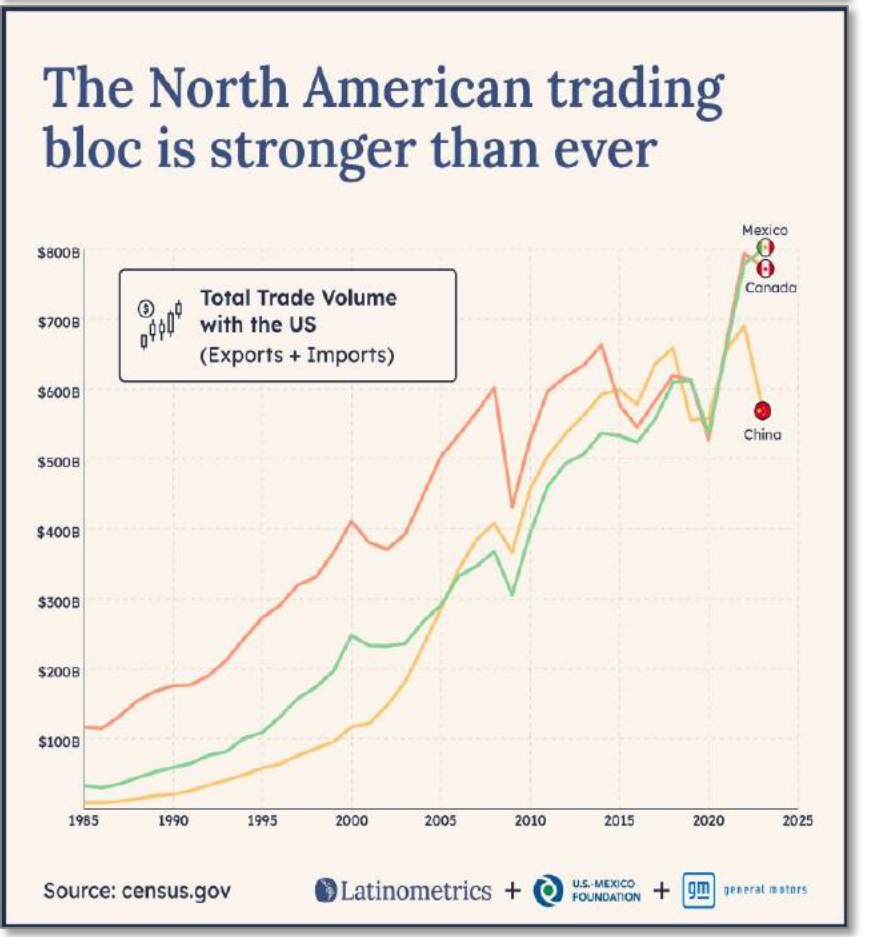
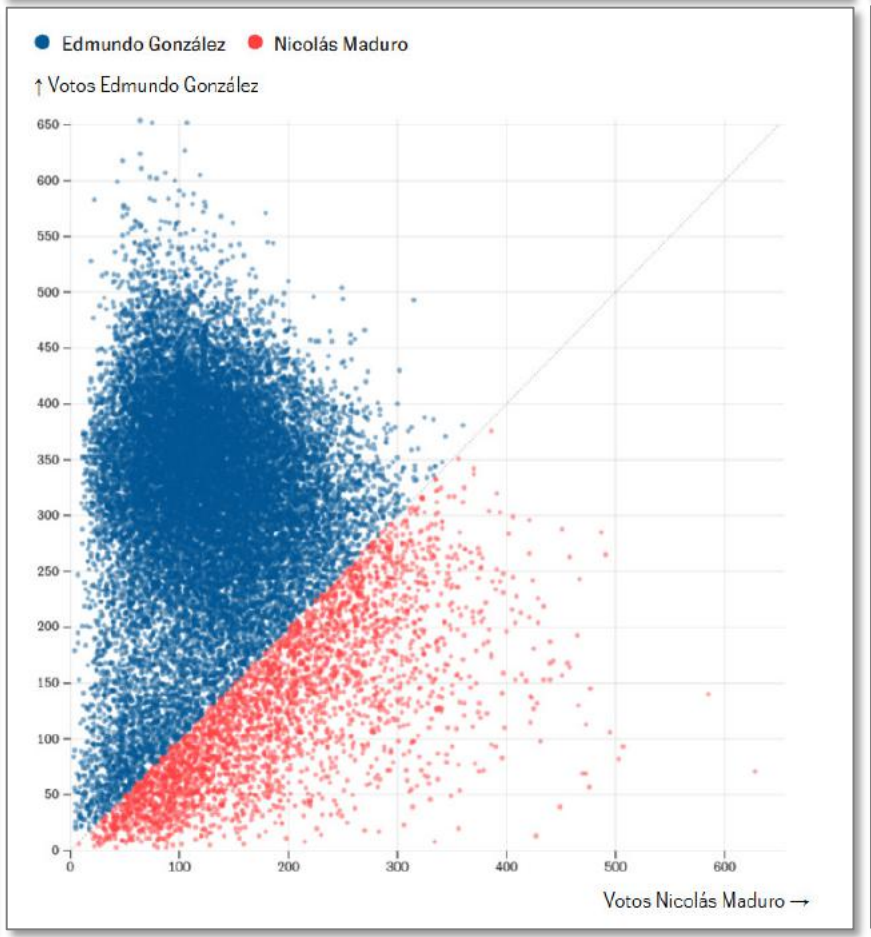
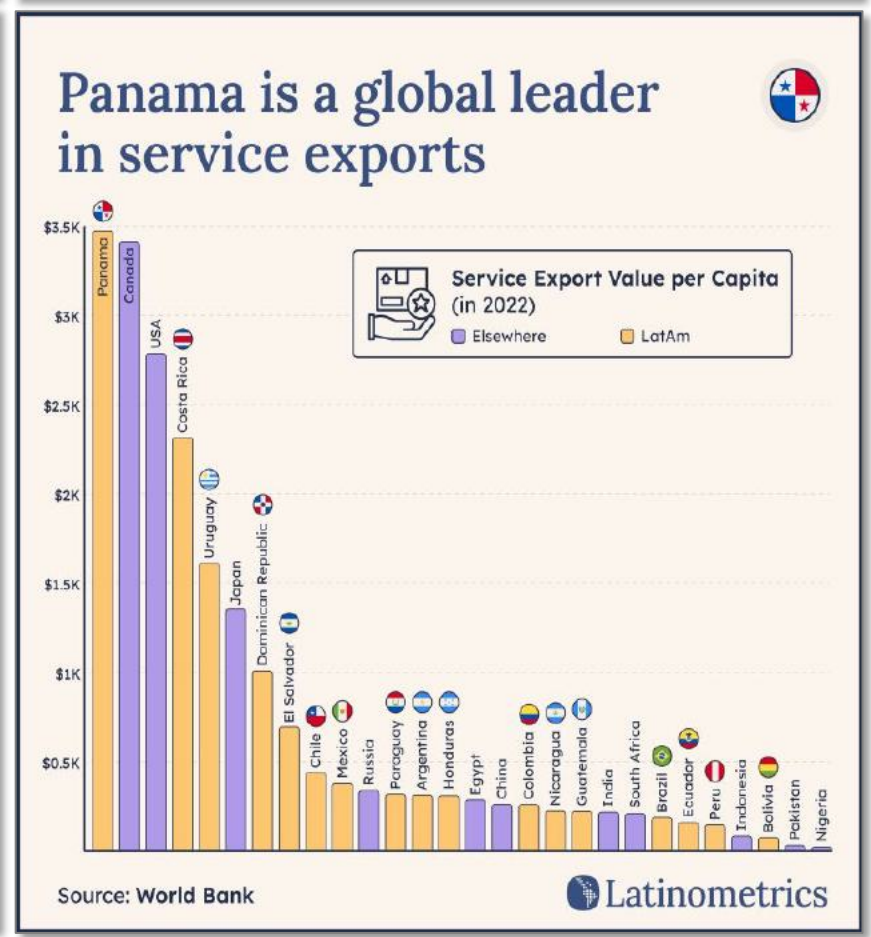
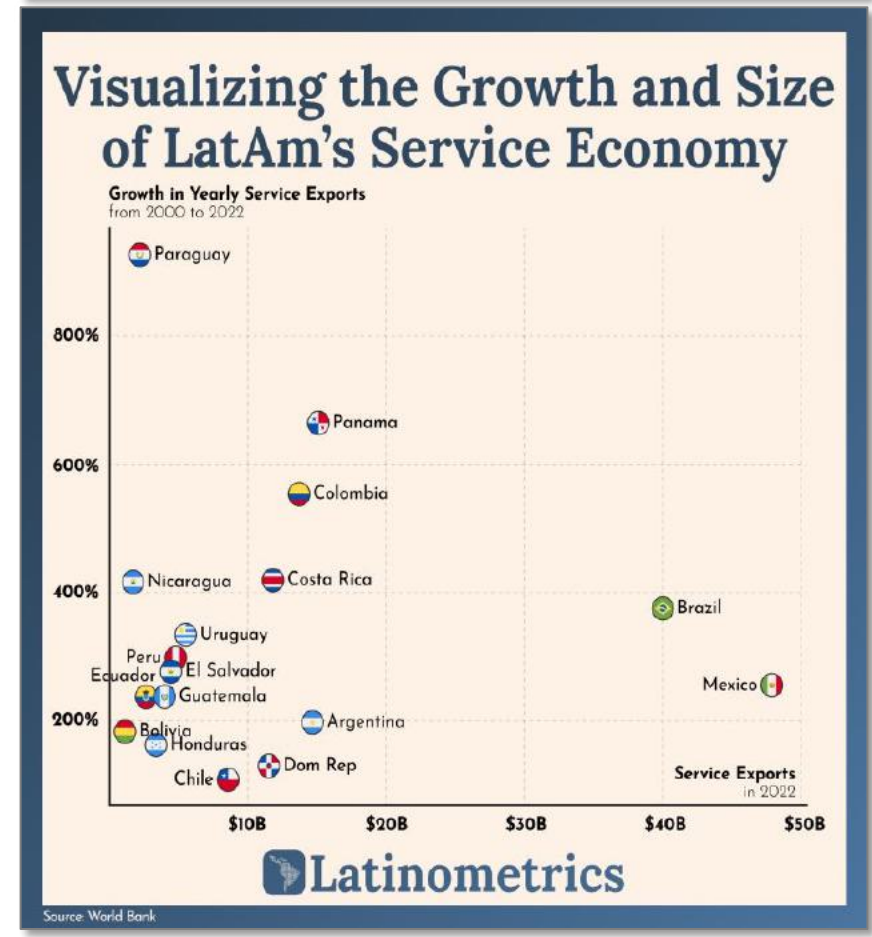
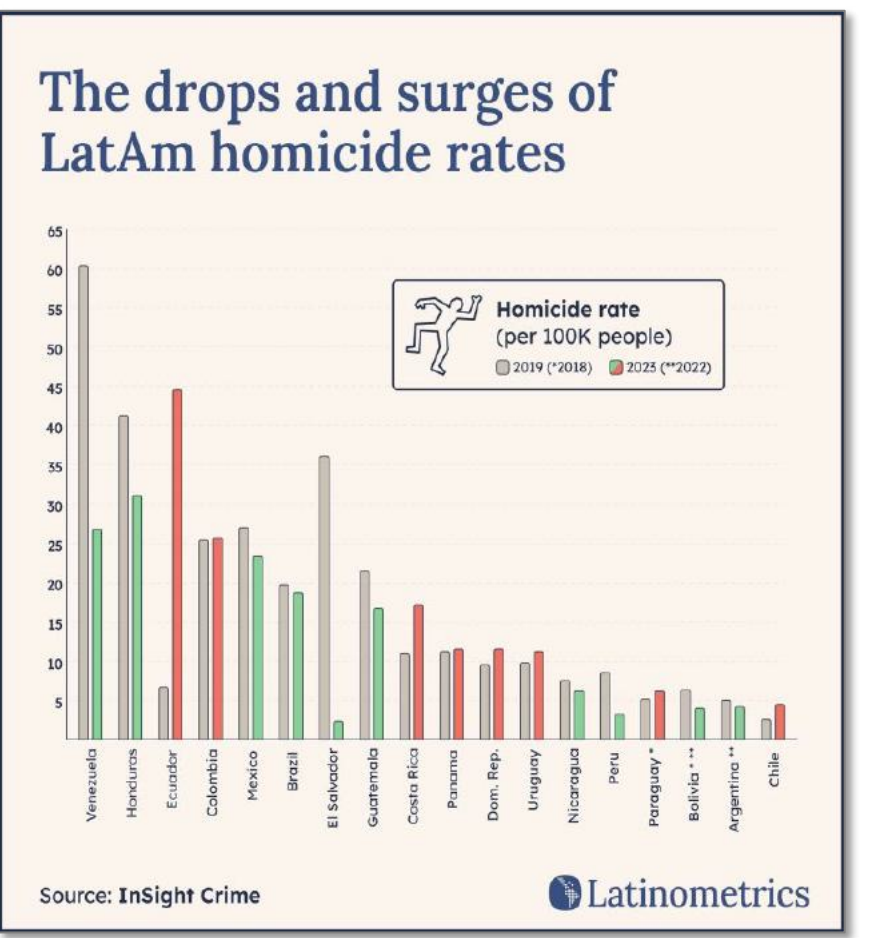
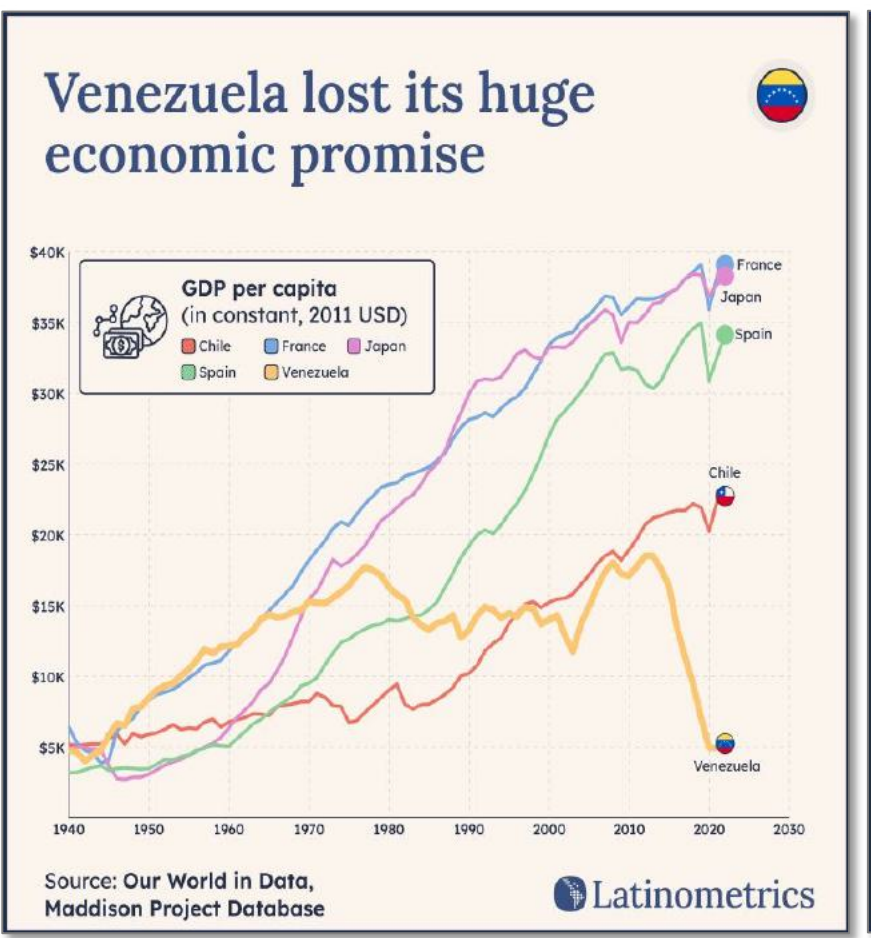
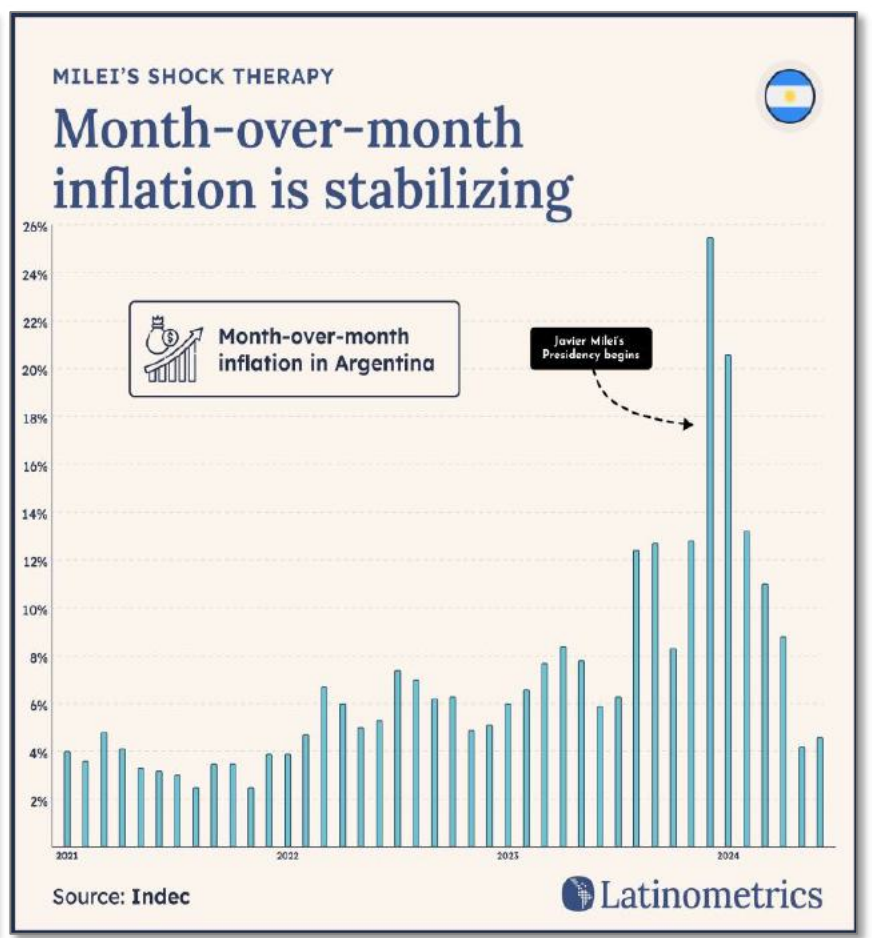
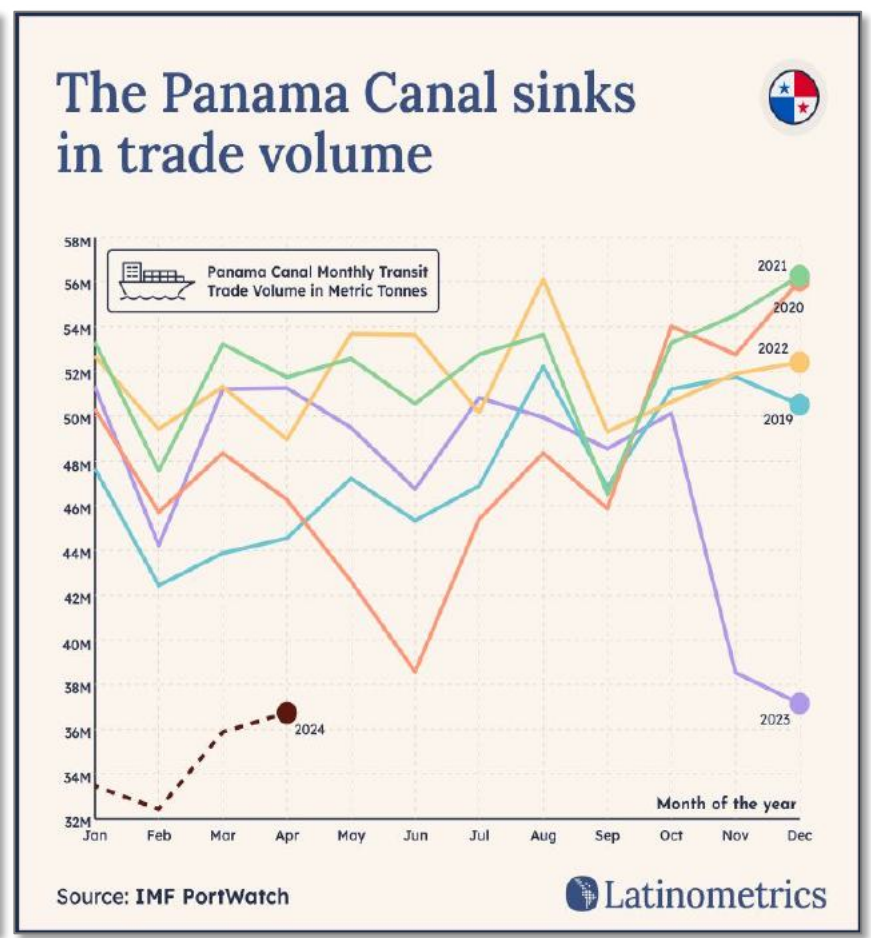
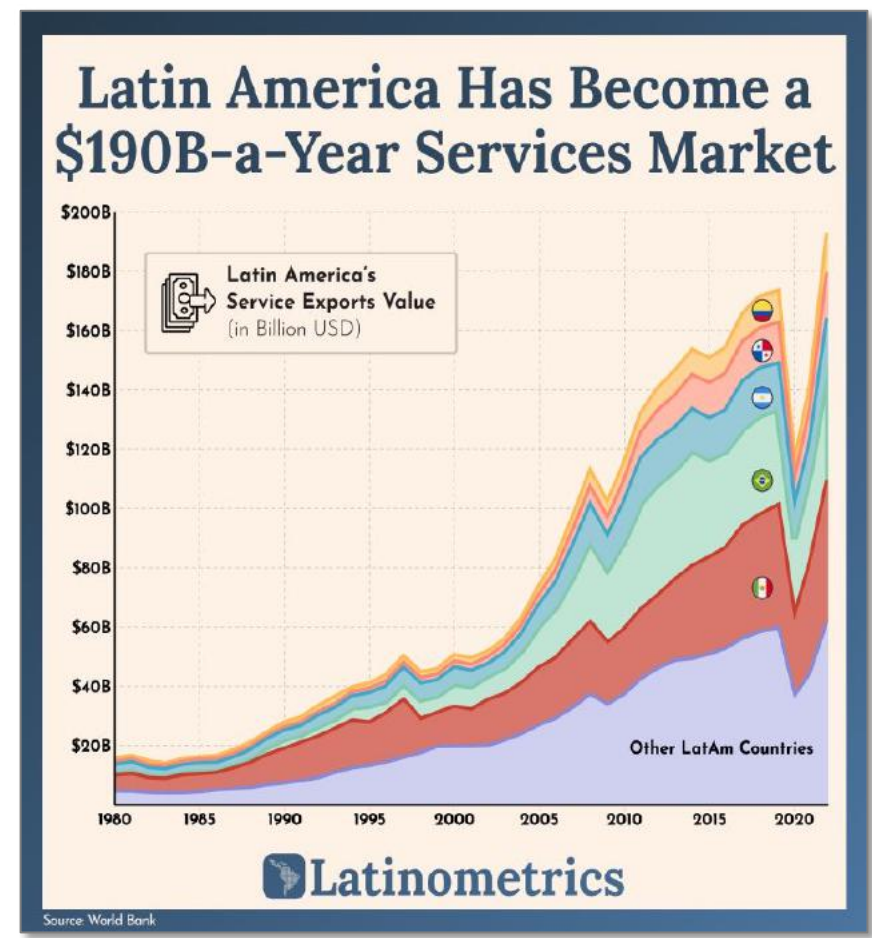
Sources: IMF, World Economic Outlook database; and IMF staff calculations and projections.
Note: Regional aggregates are purchasing-power-parity GDP-weighted geometric averages. Venezuela is excluded from all inflation aggregates. CAPDR = Central America, Panama, and the Dominican Republic; LAC = Latin America and the Caribbean; LA7 = Latin America 7 (Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay).



Source: IMF WEO April 2024

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America Latina III

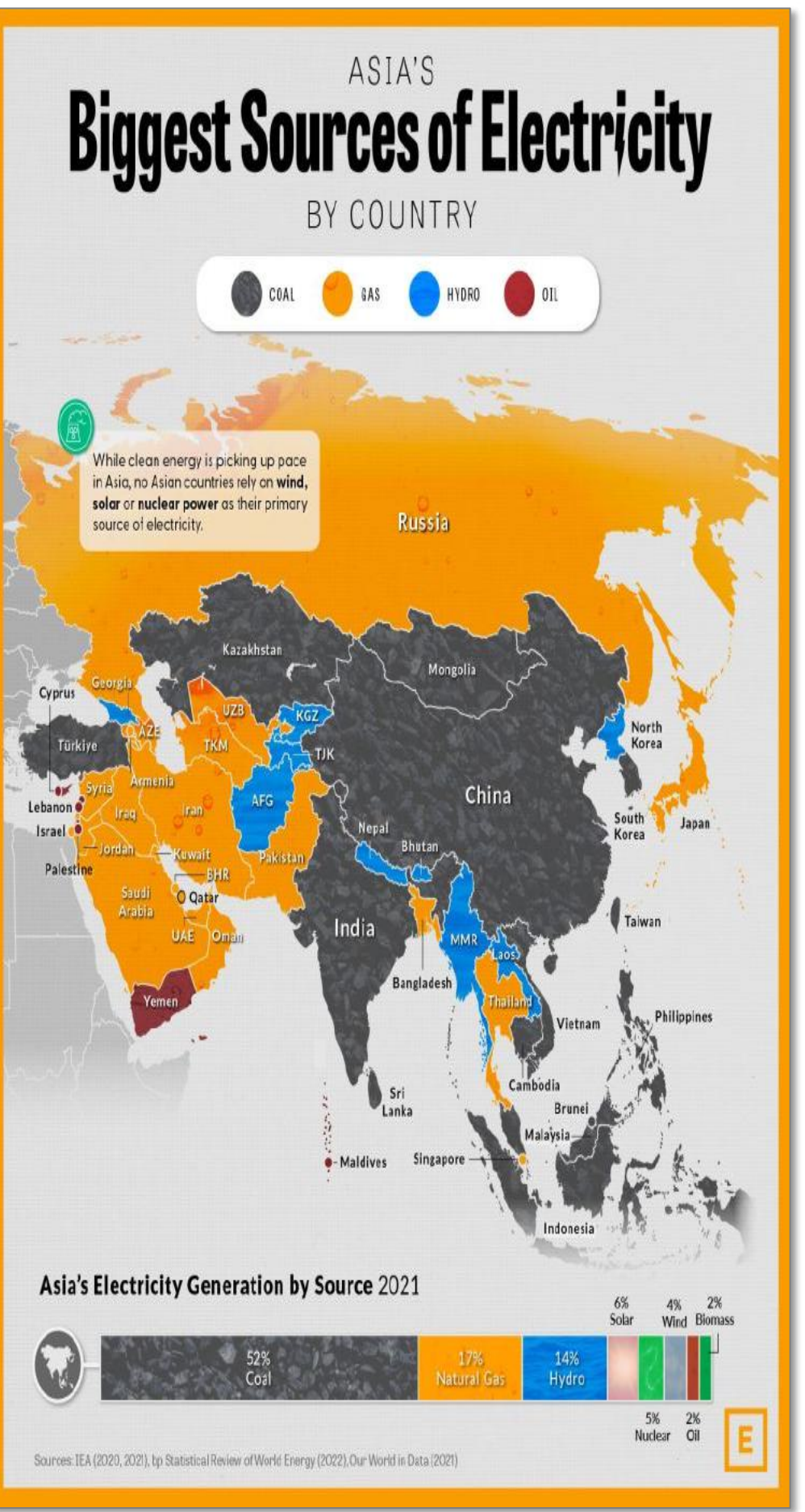
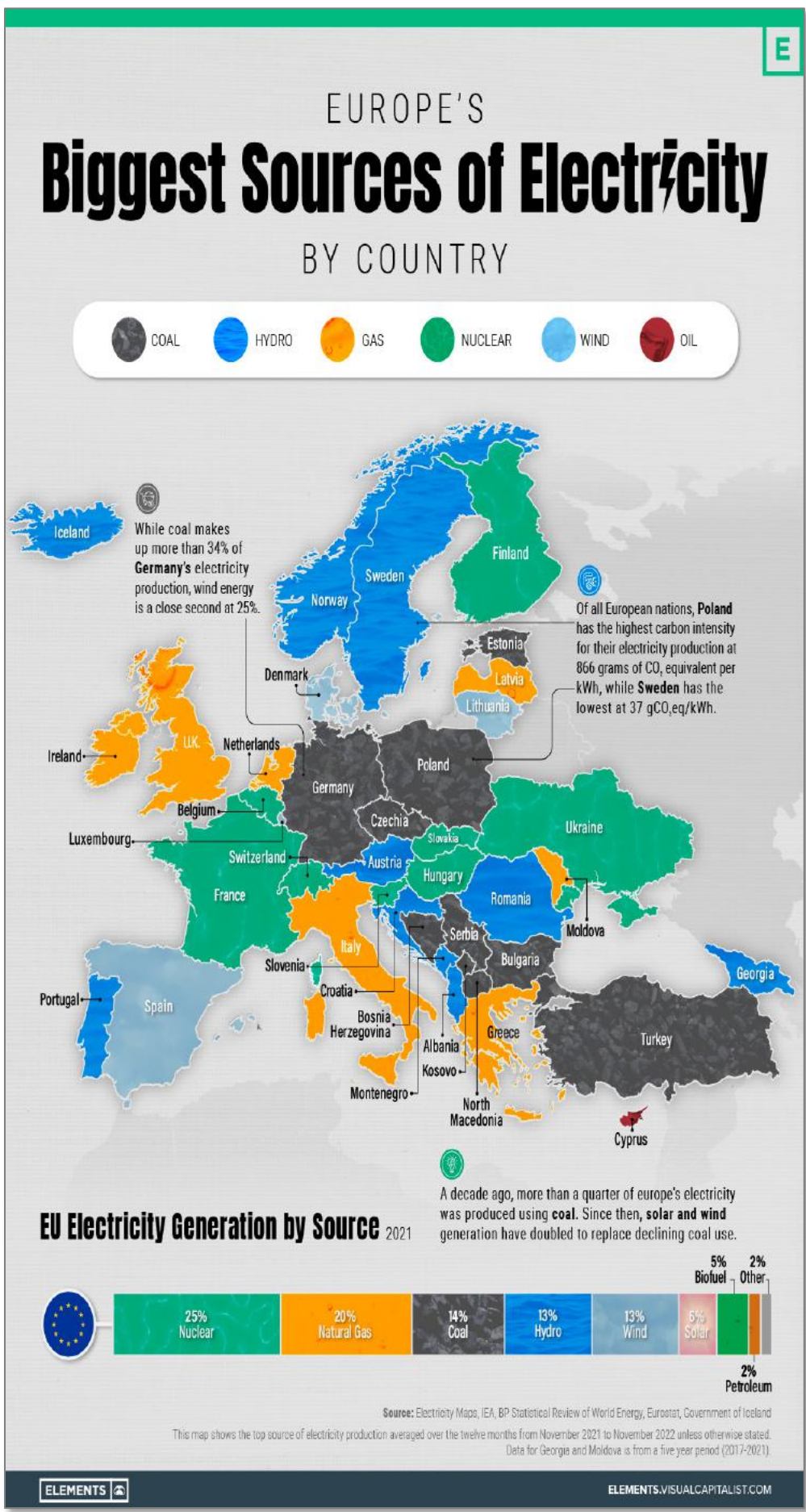
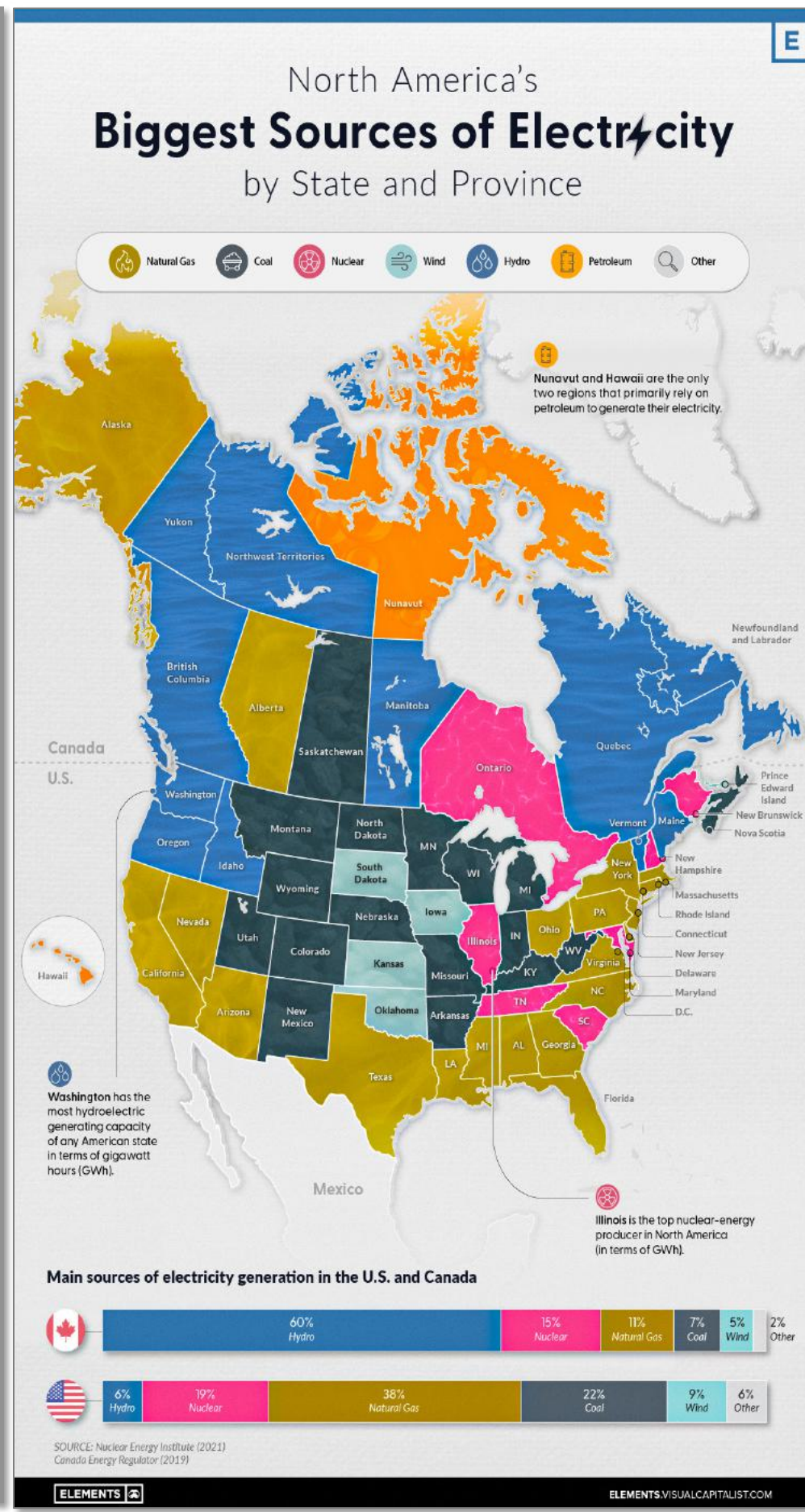
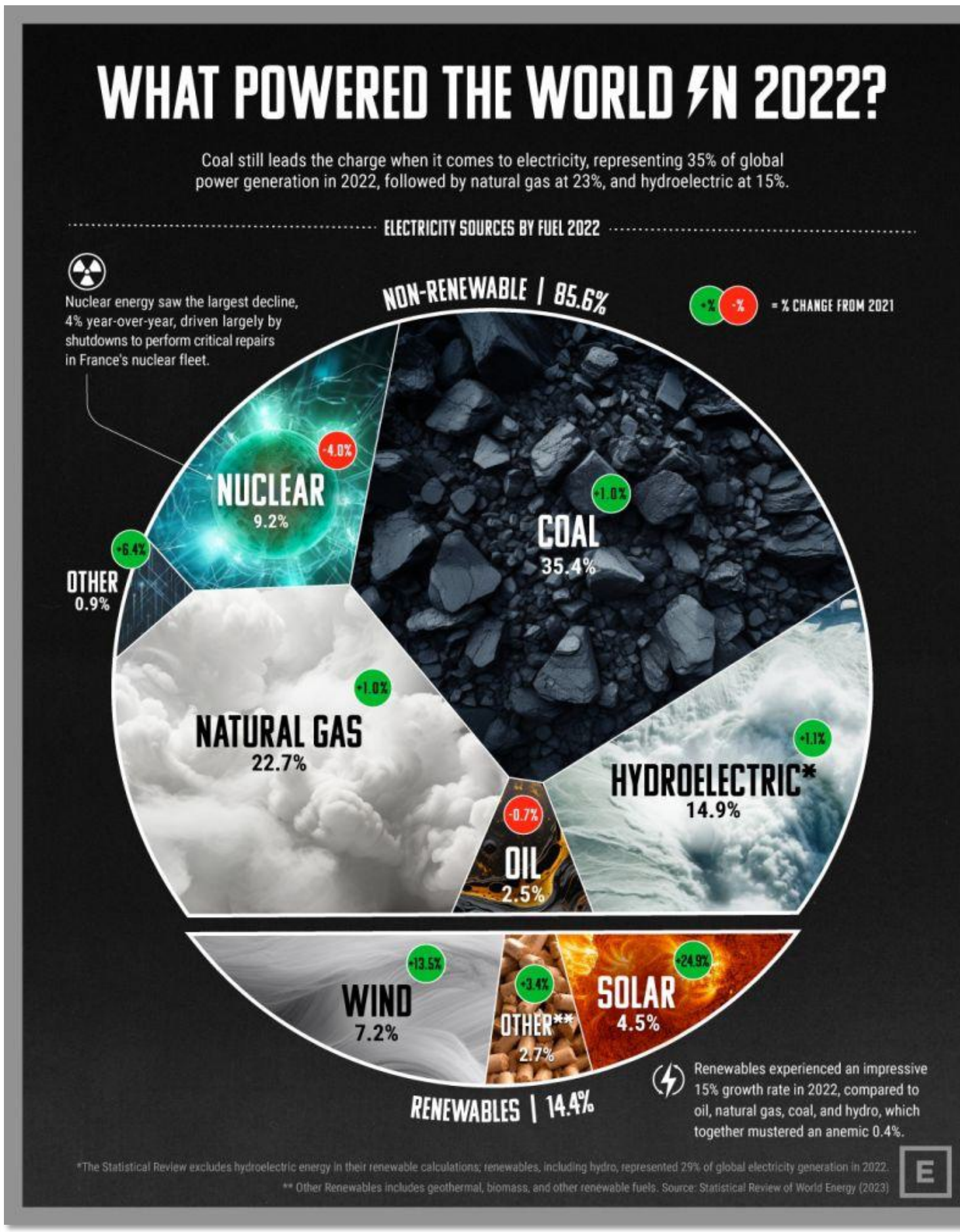


Source: Latinometrics



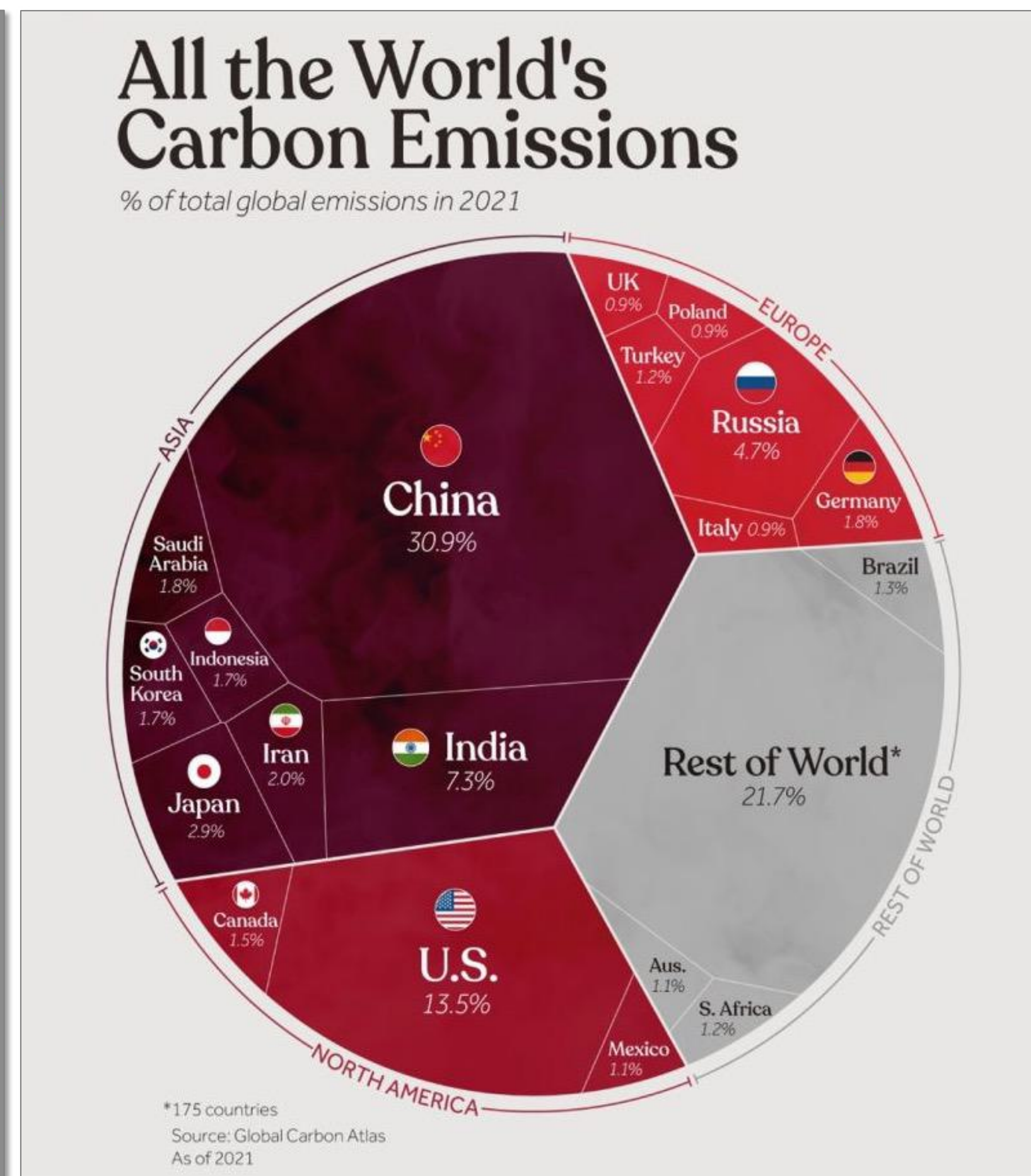
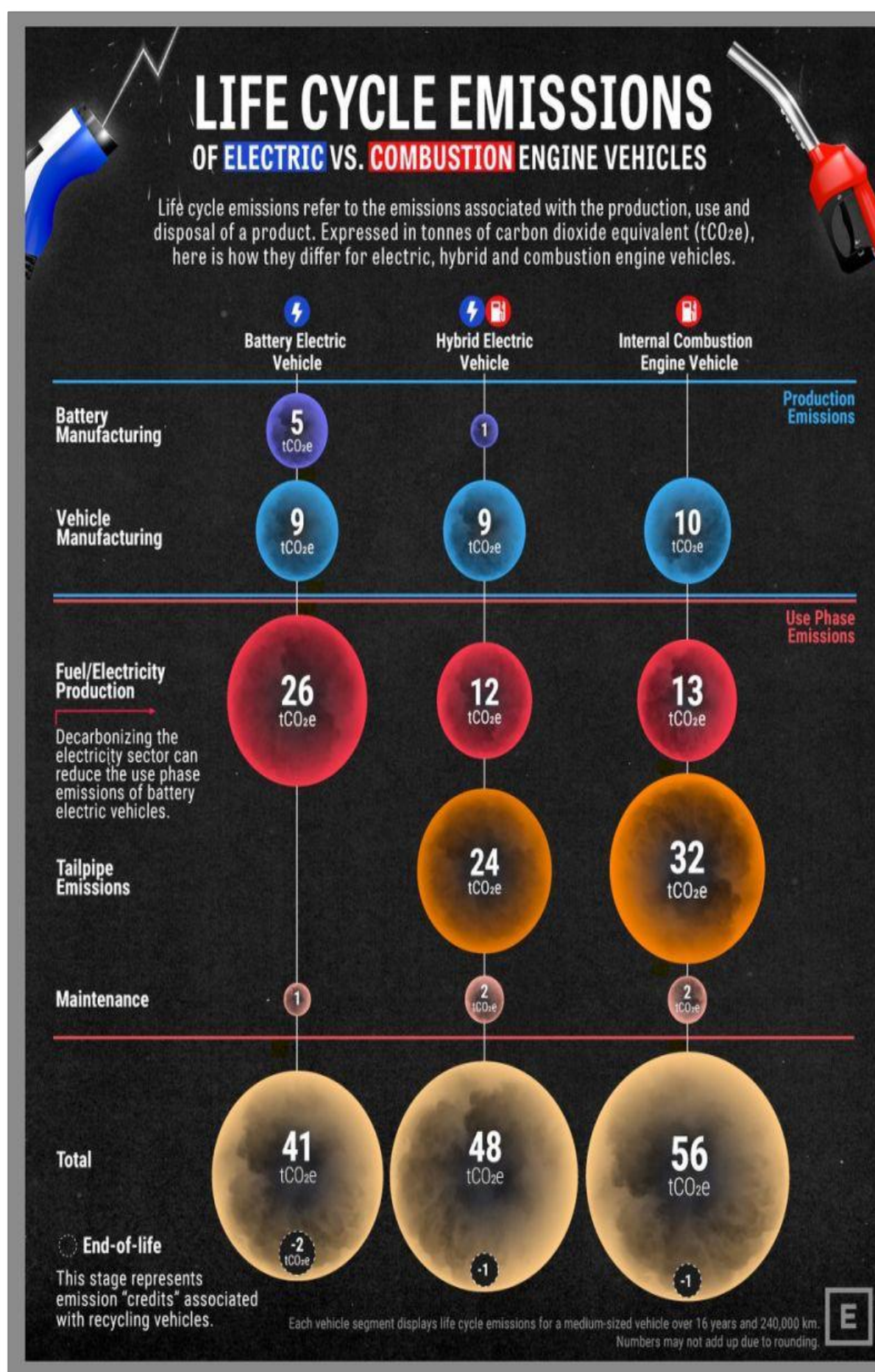
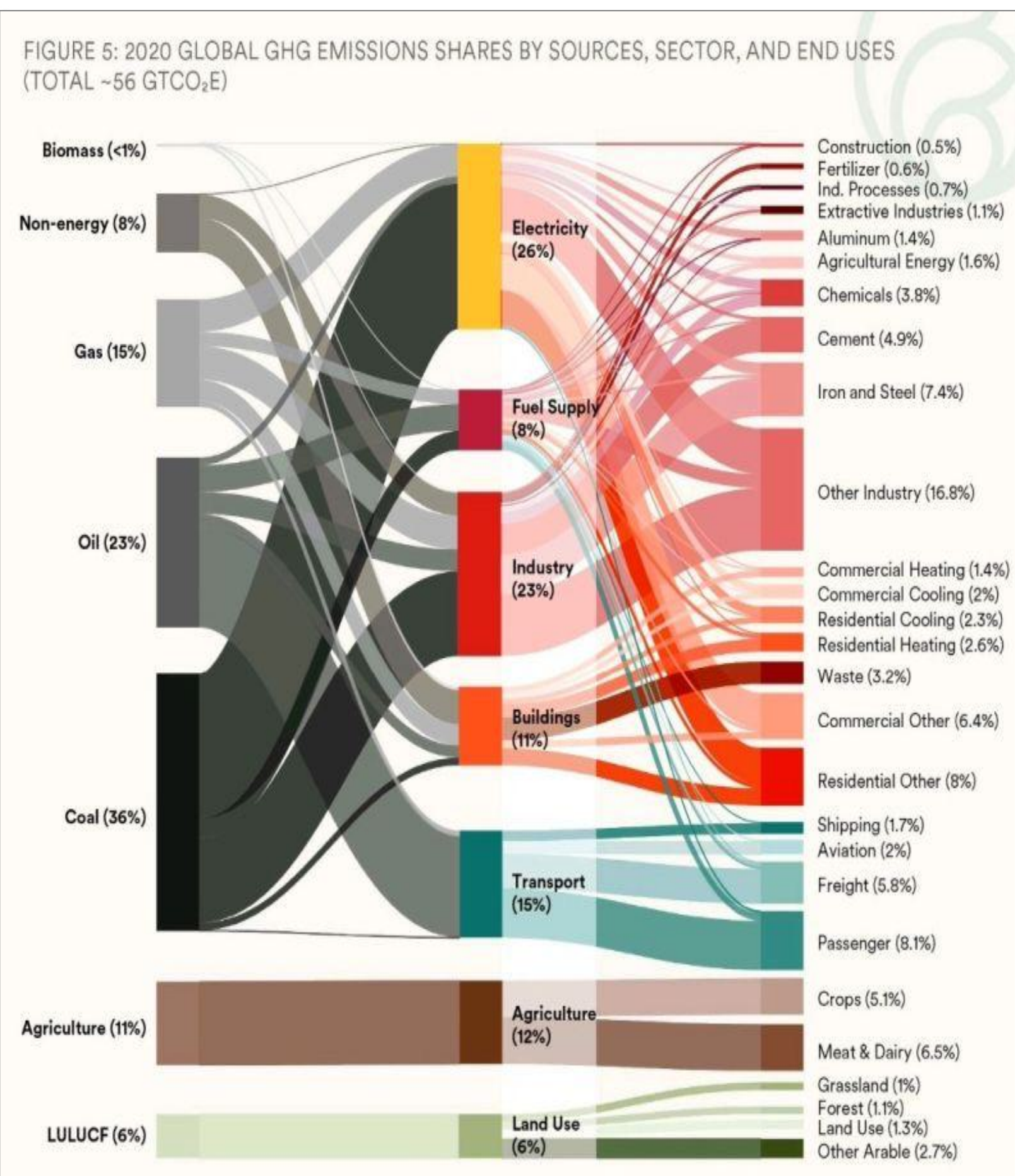
Descarbonización

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Energía



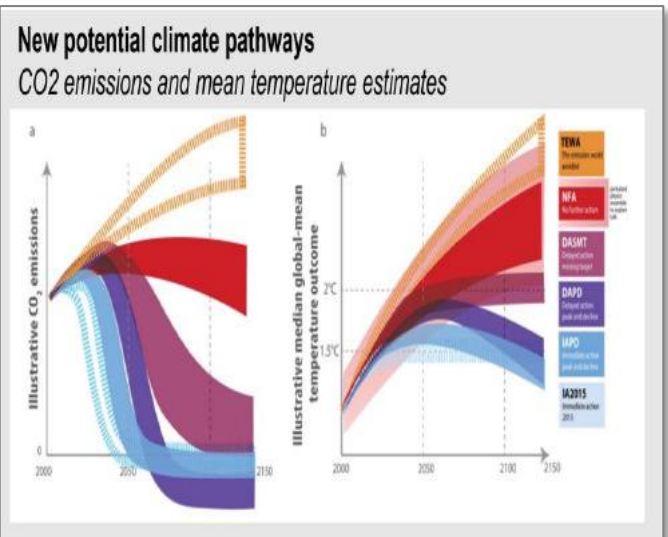
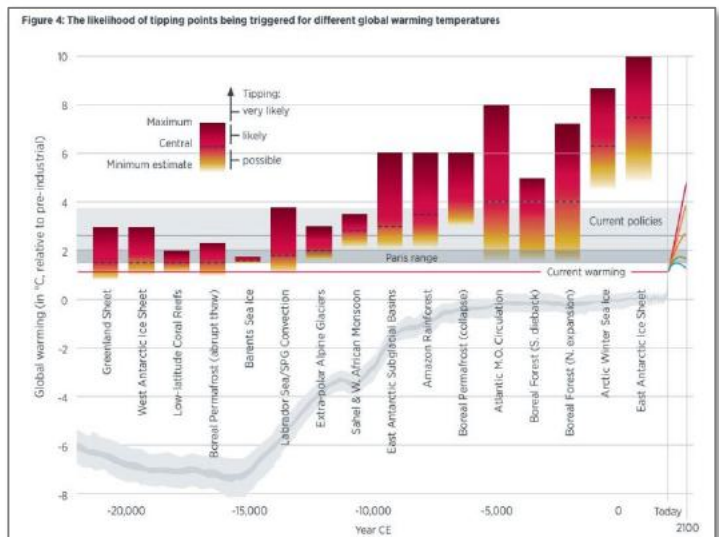
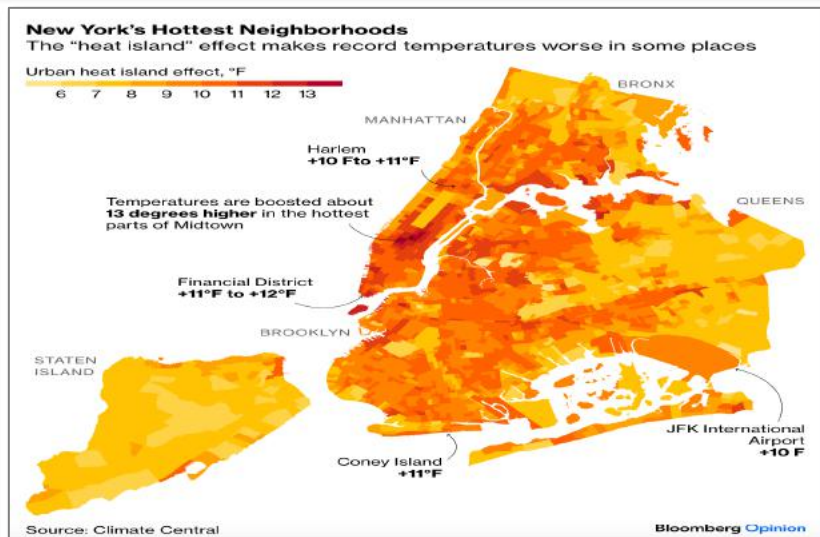
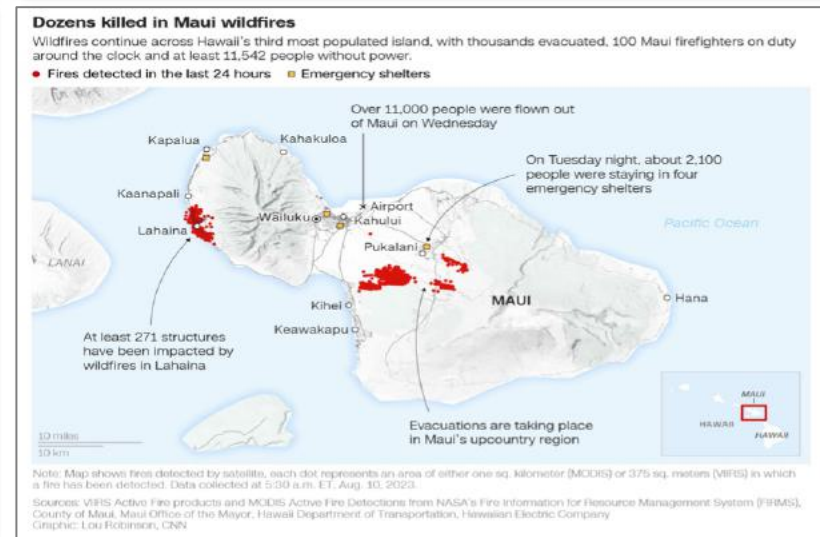
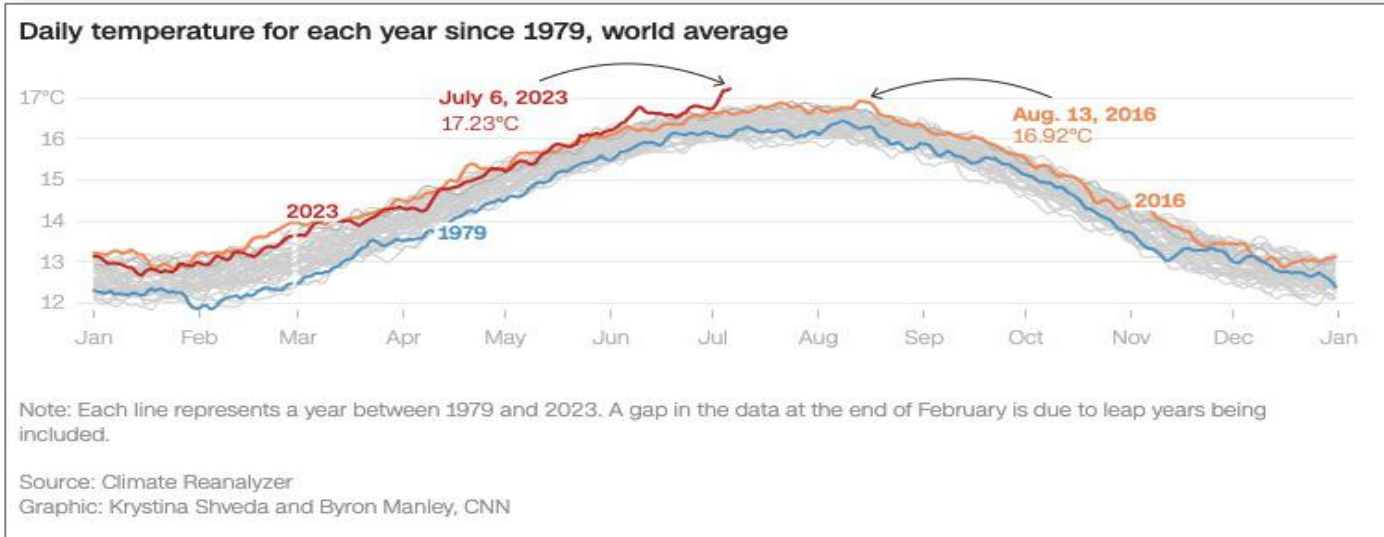
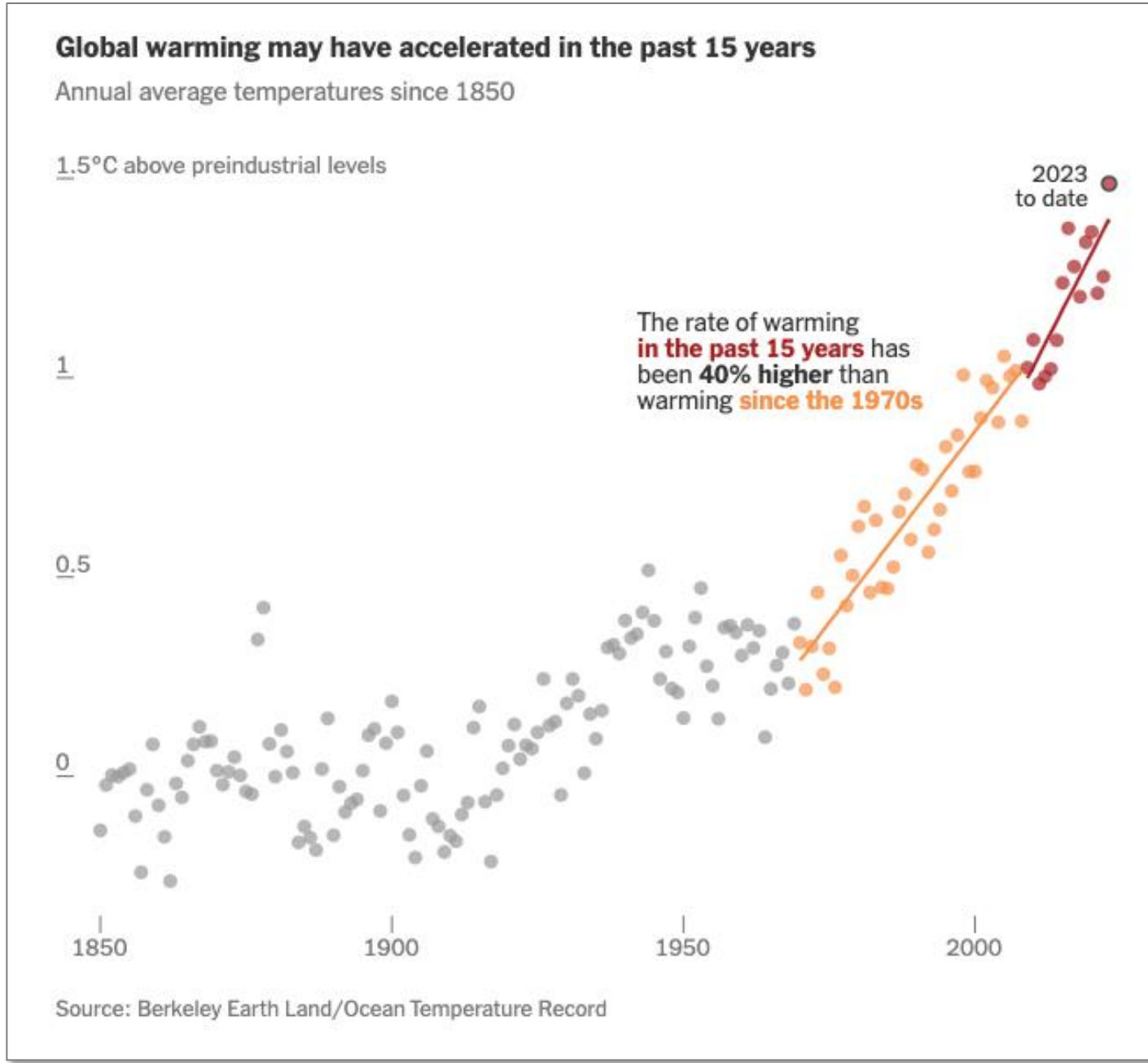
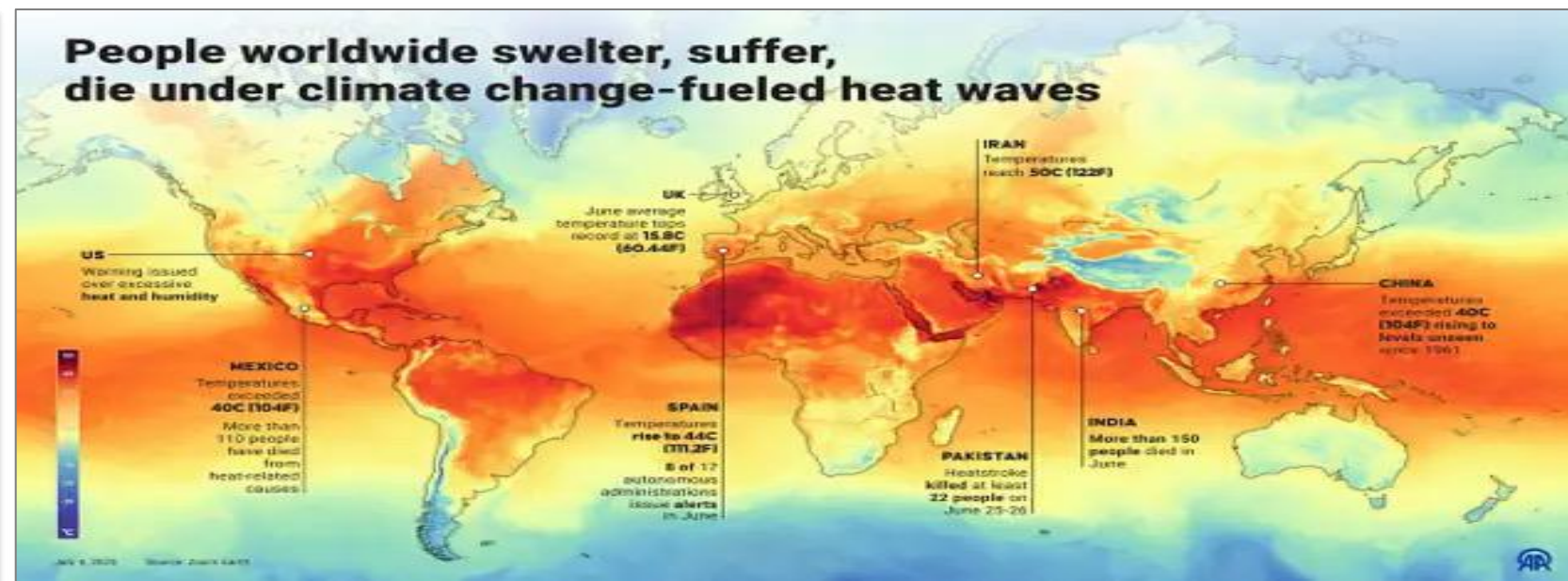
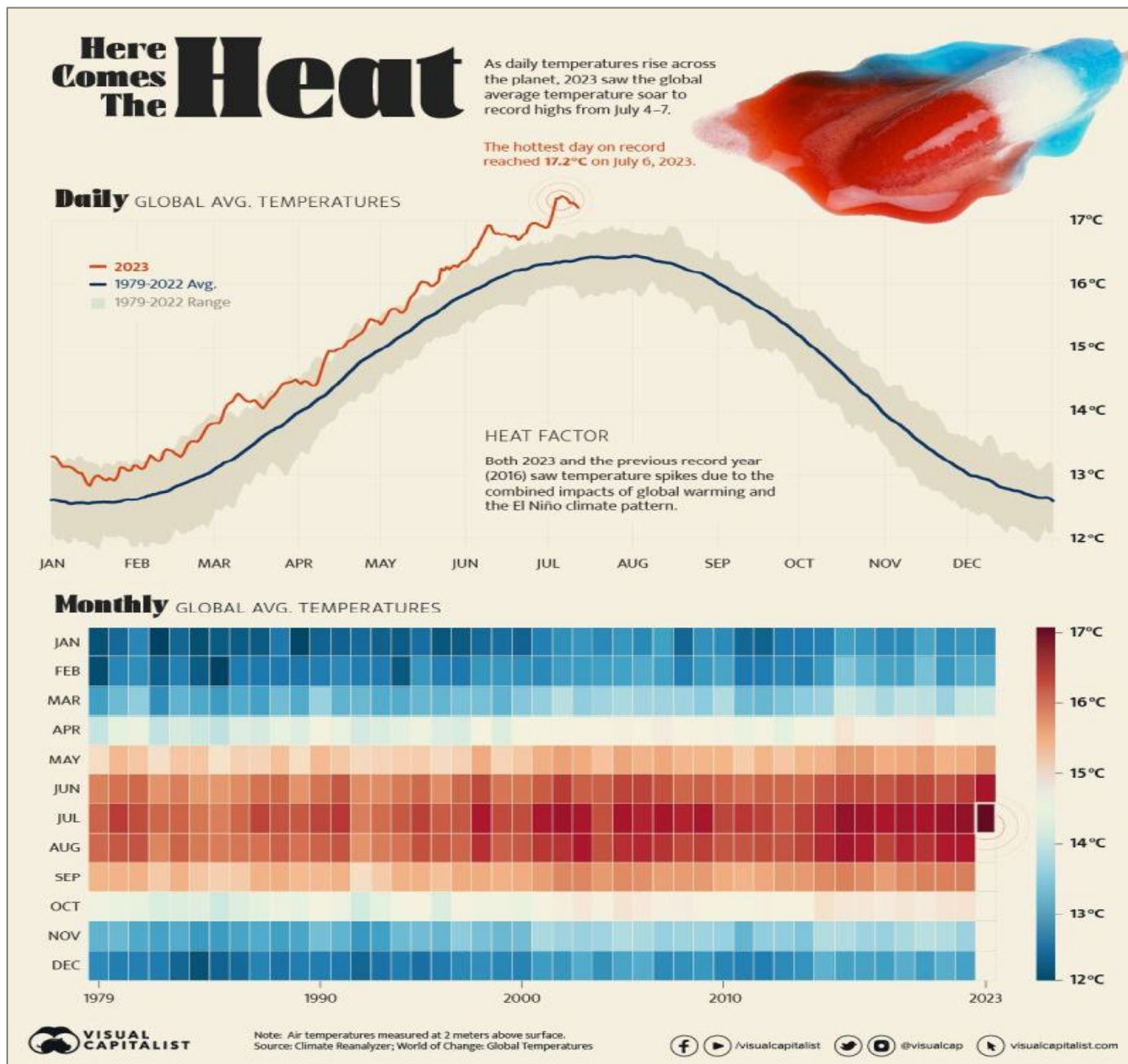
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Emissiones



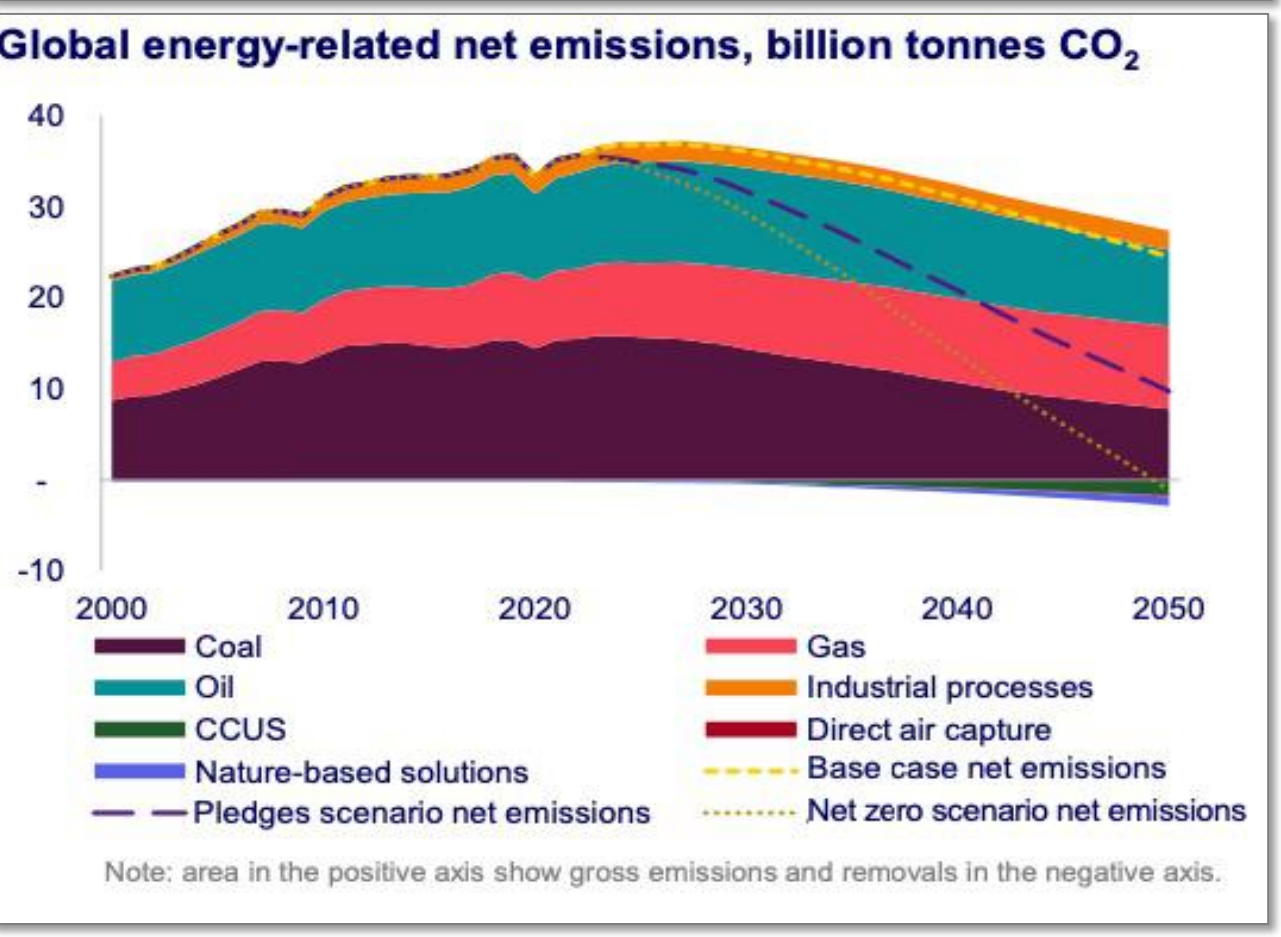
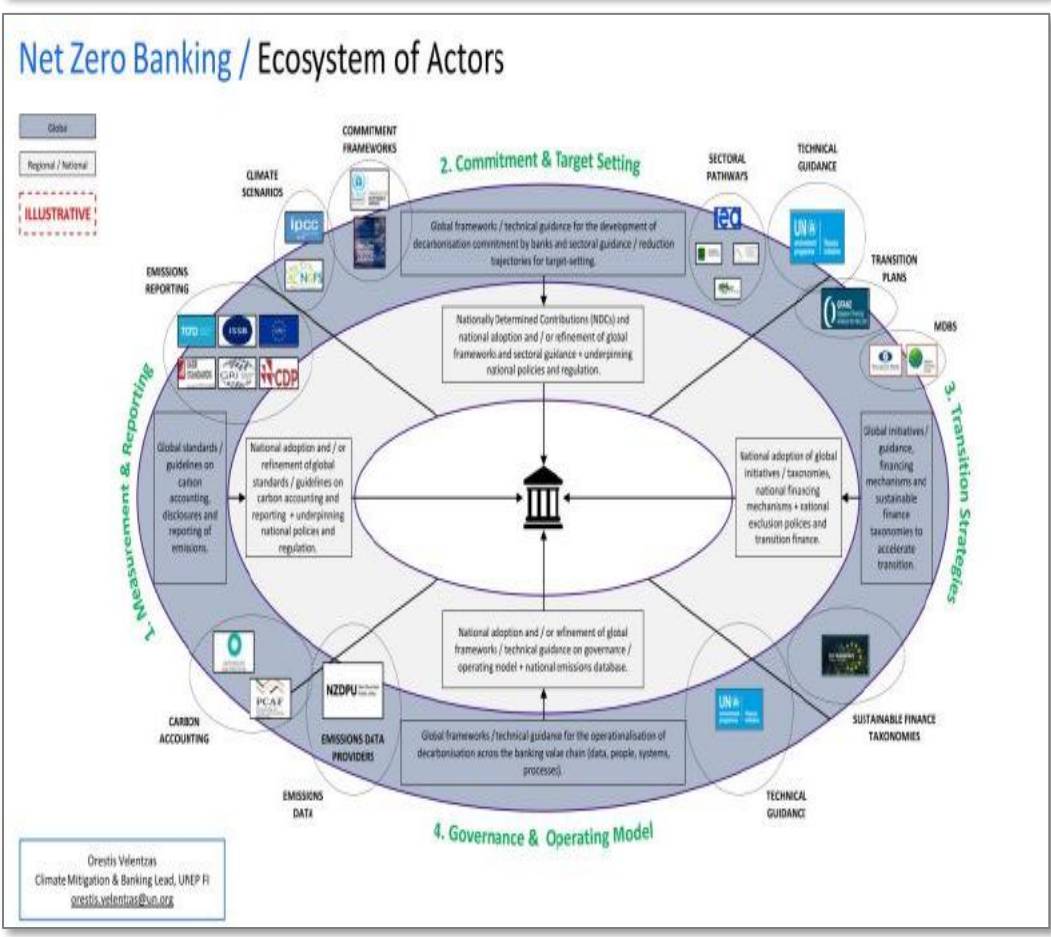
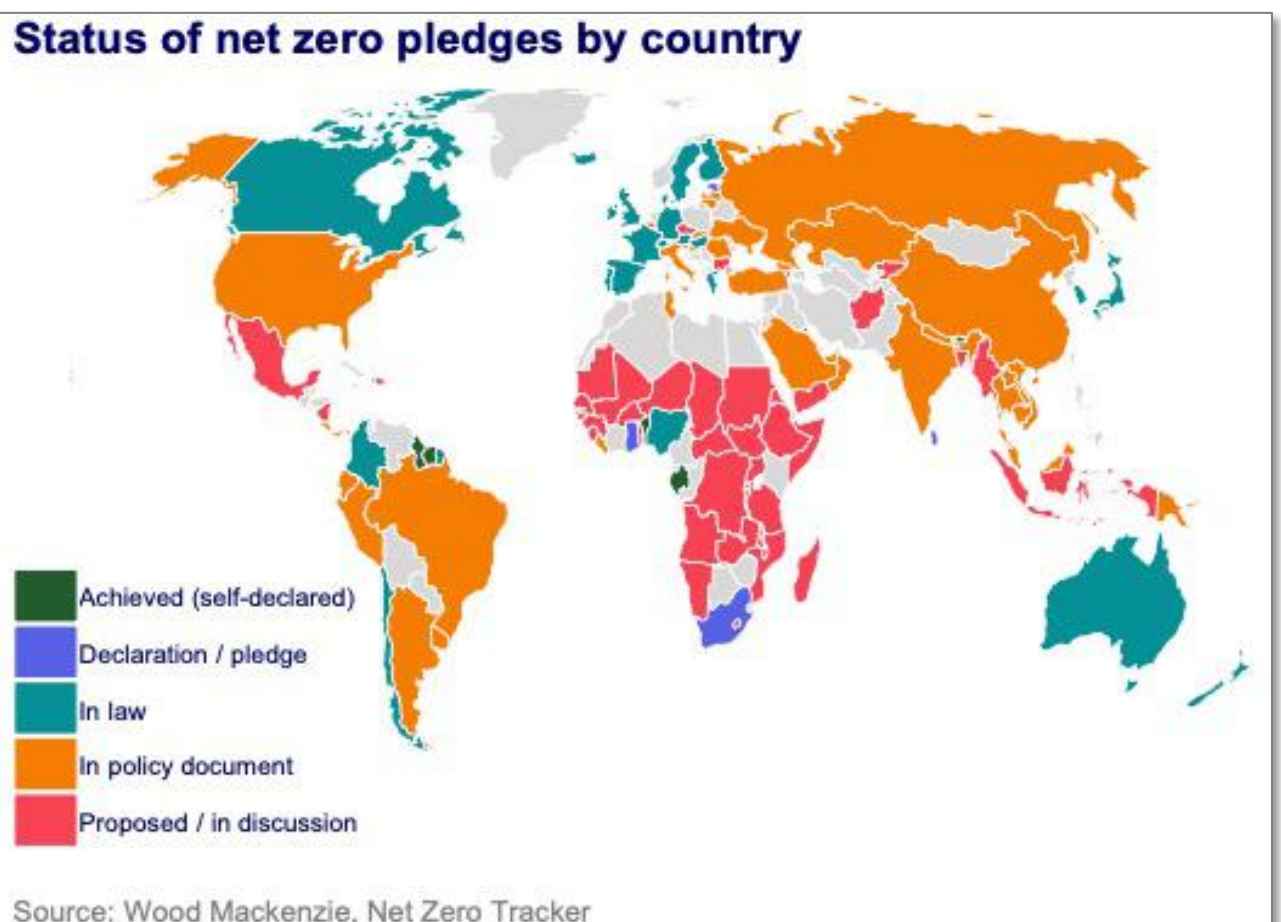
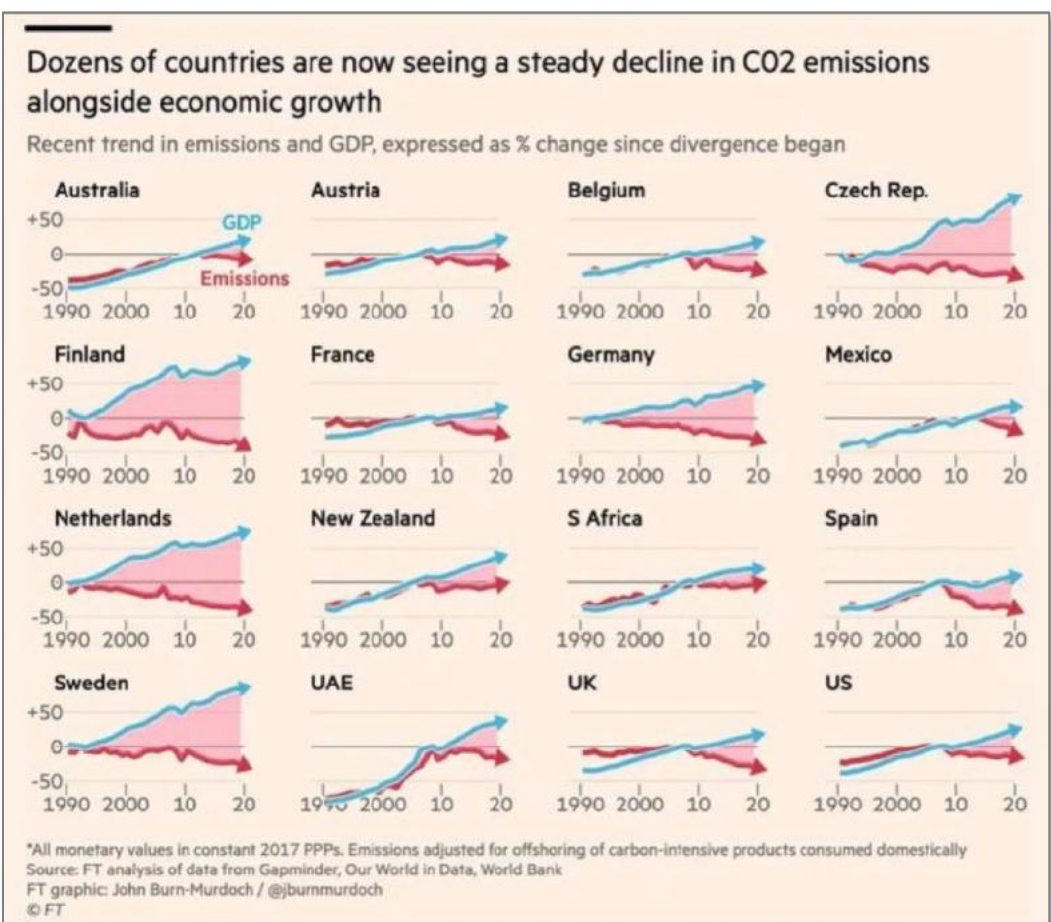
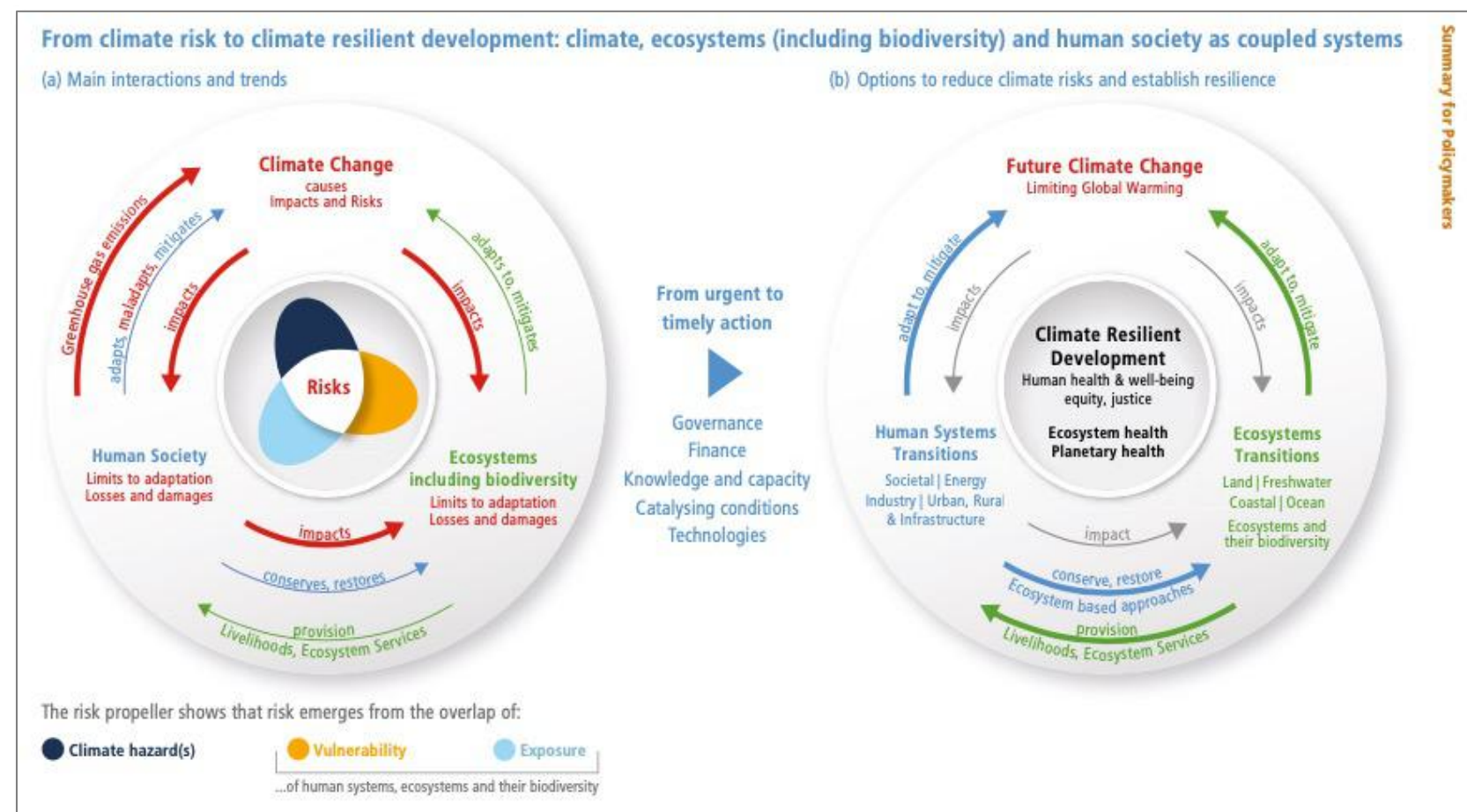
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Calentamiento Global



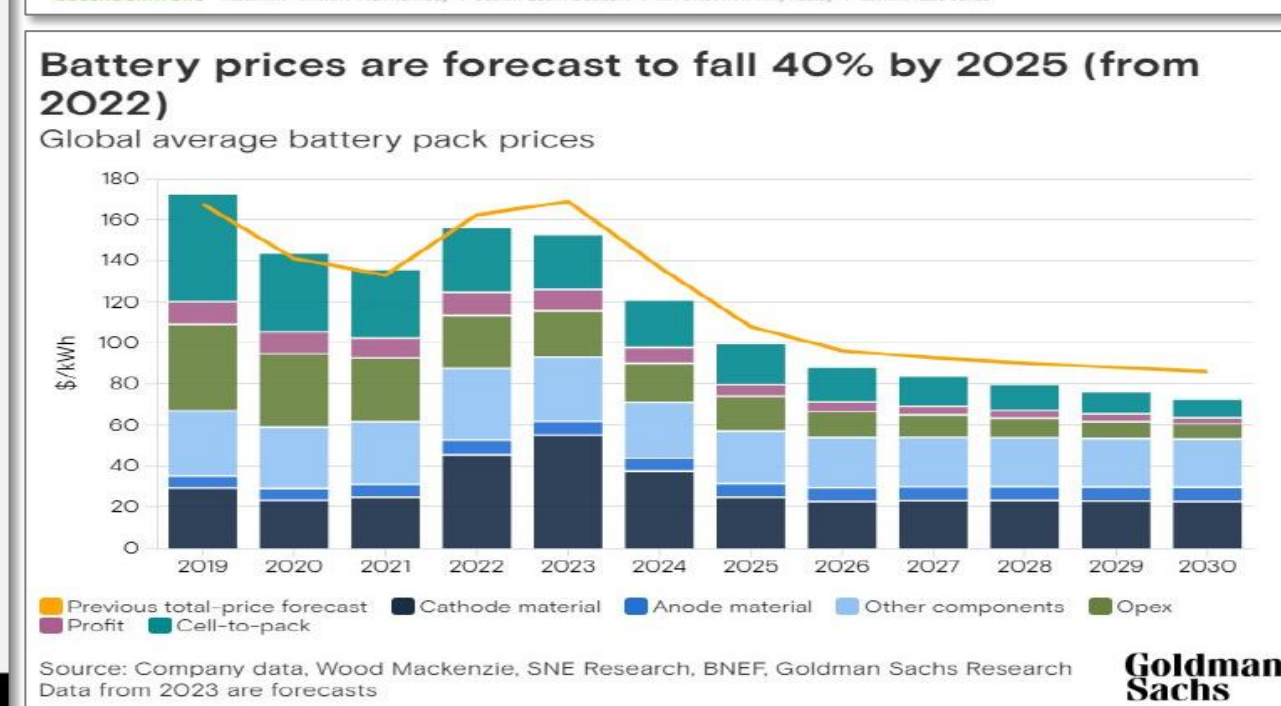
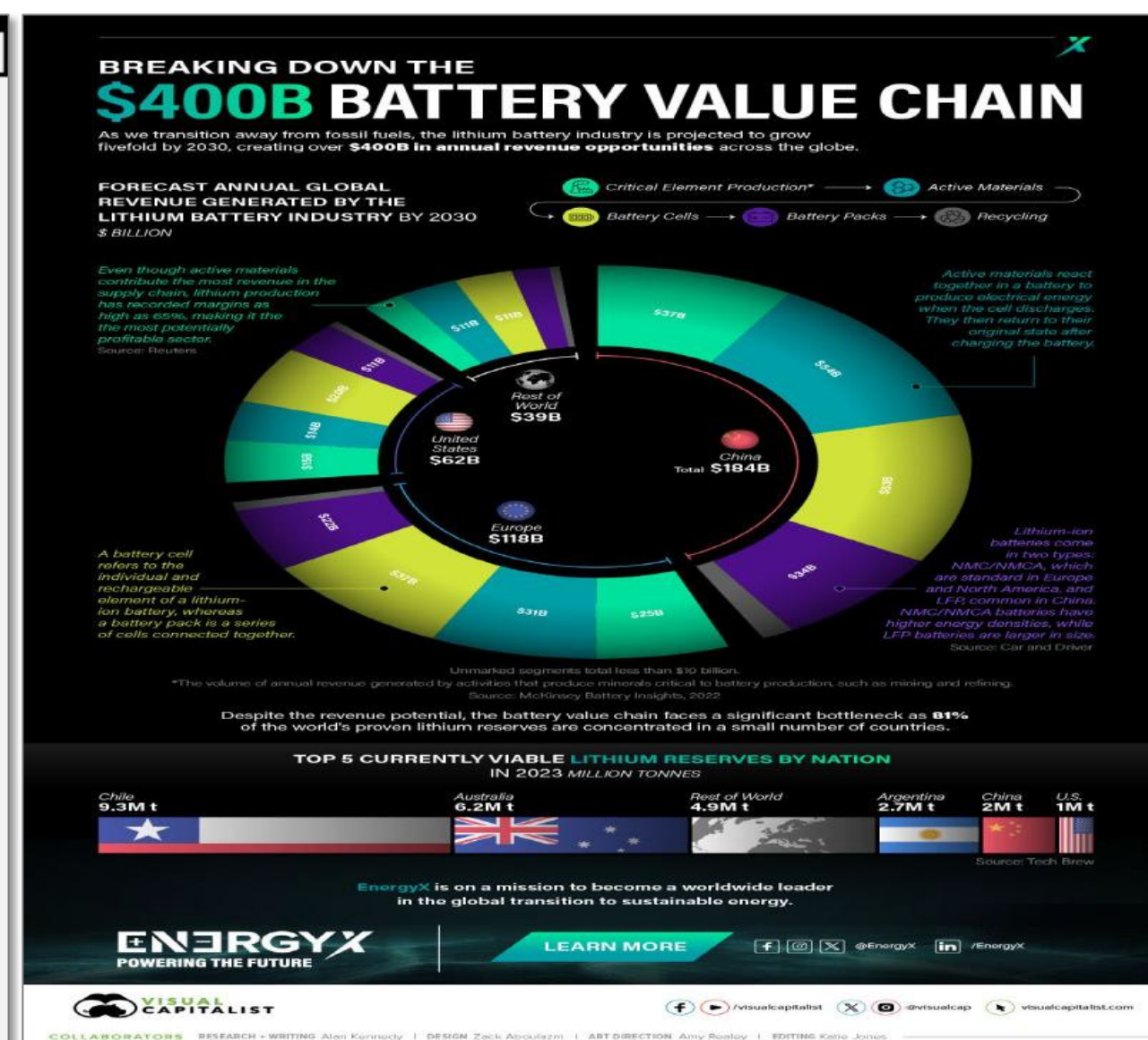
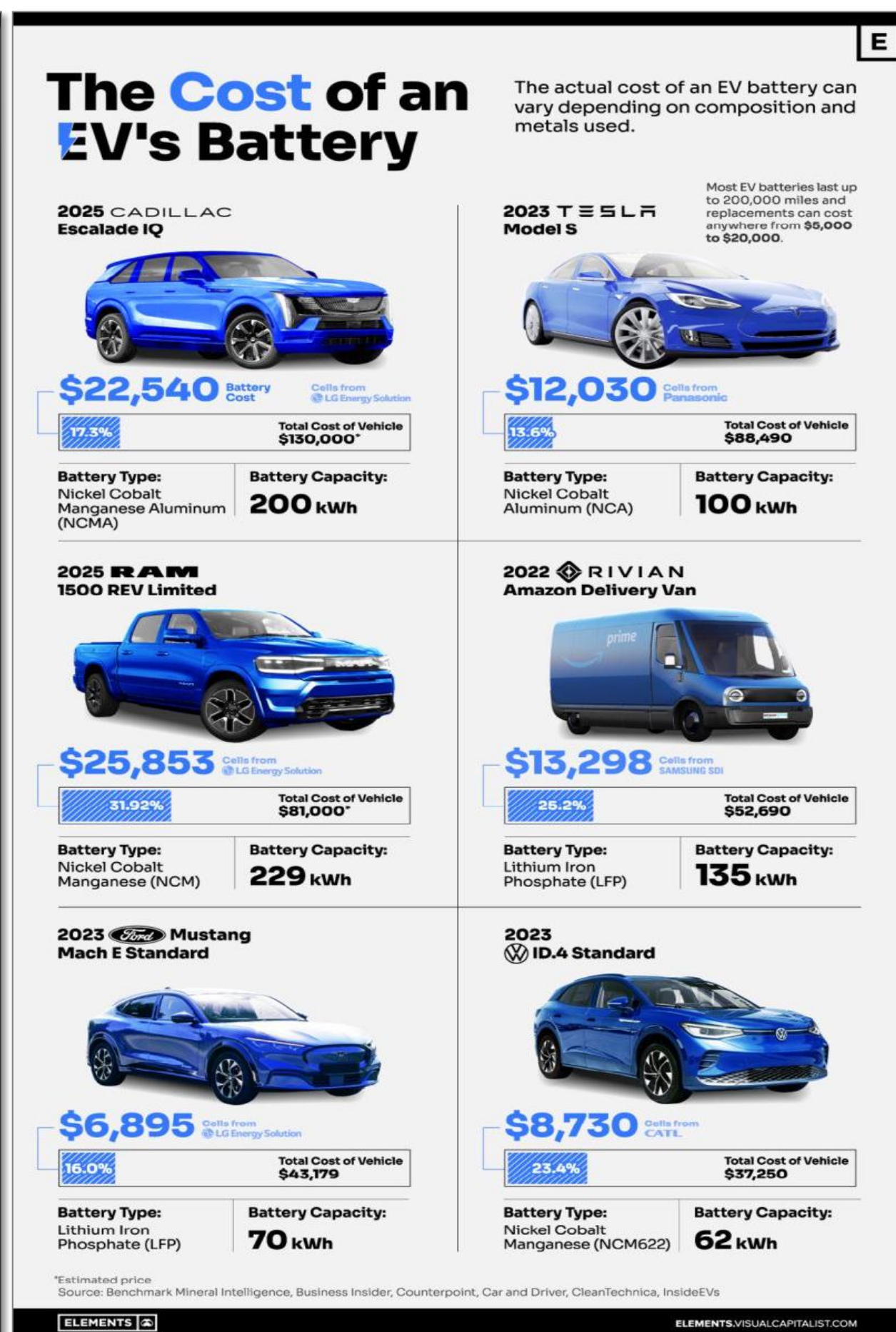
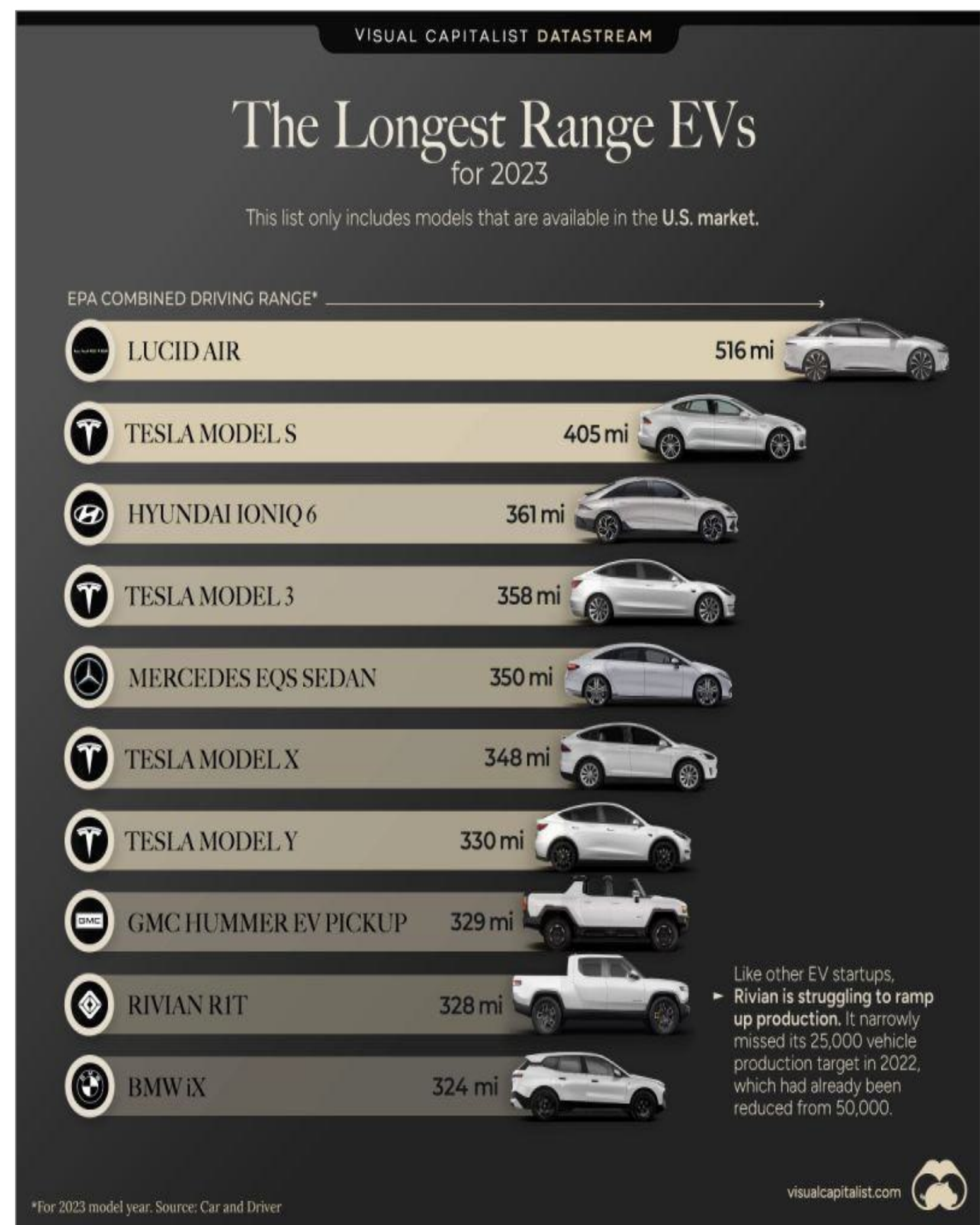
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Descarbonización

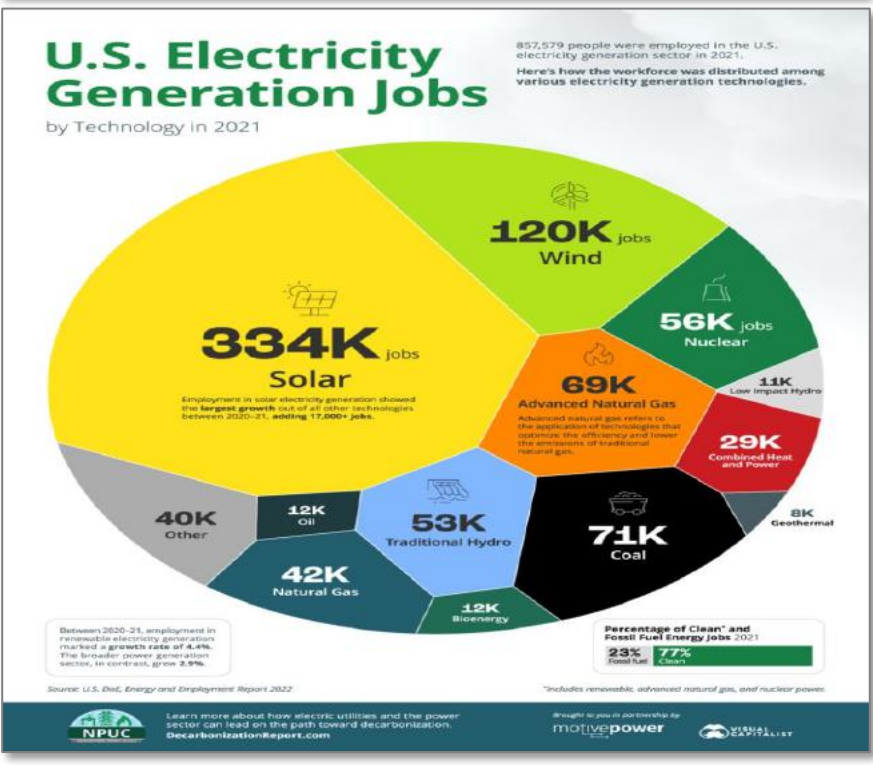
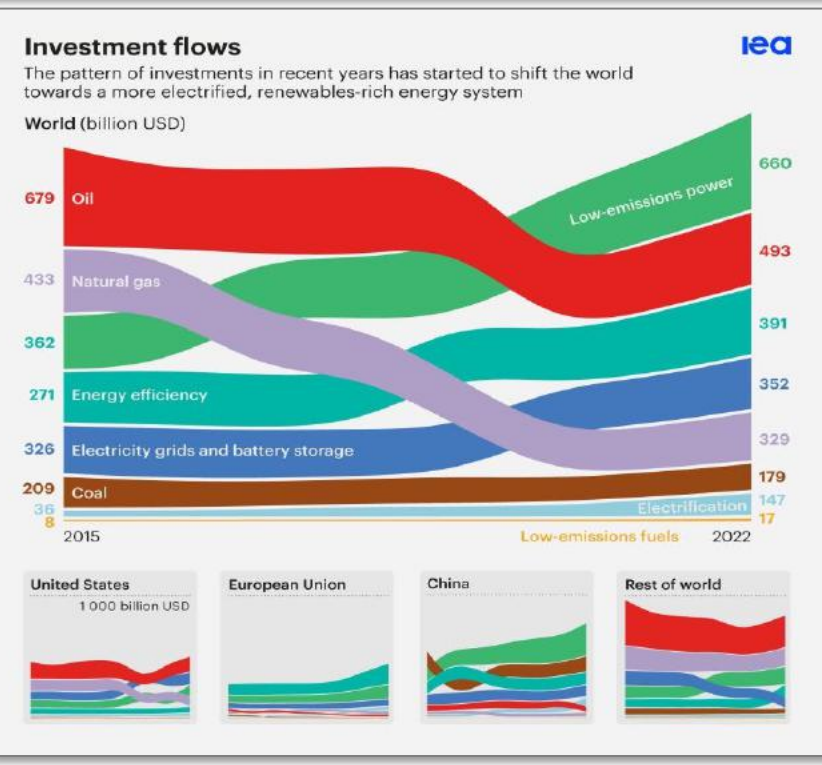
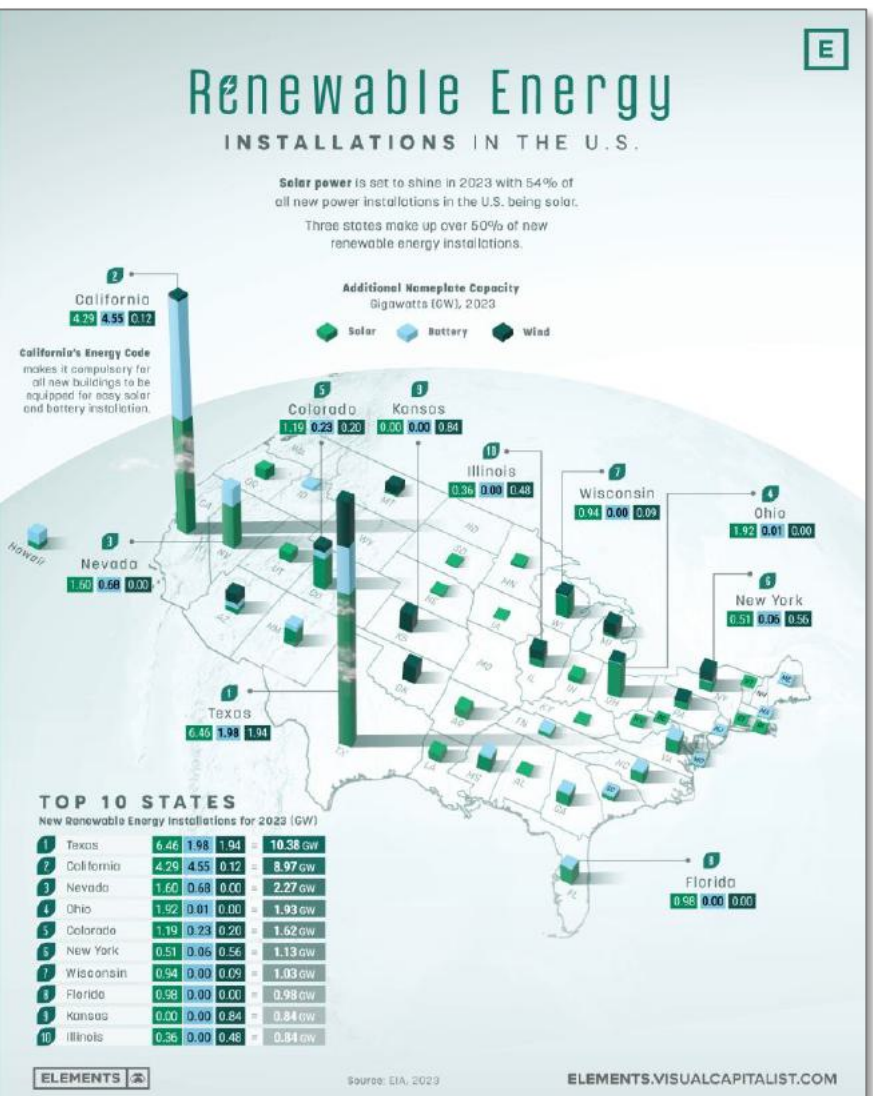
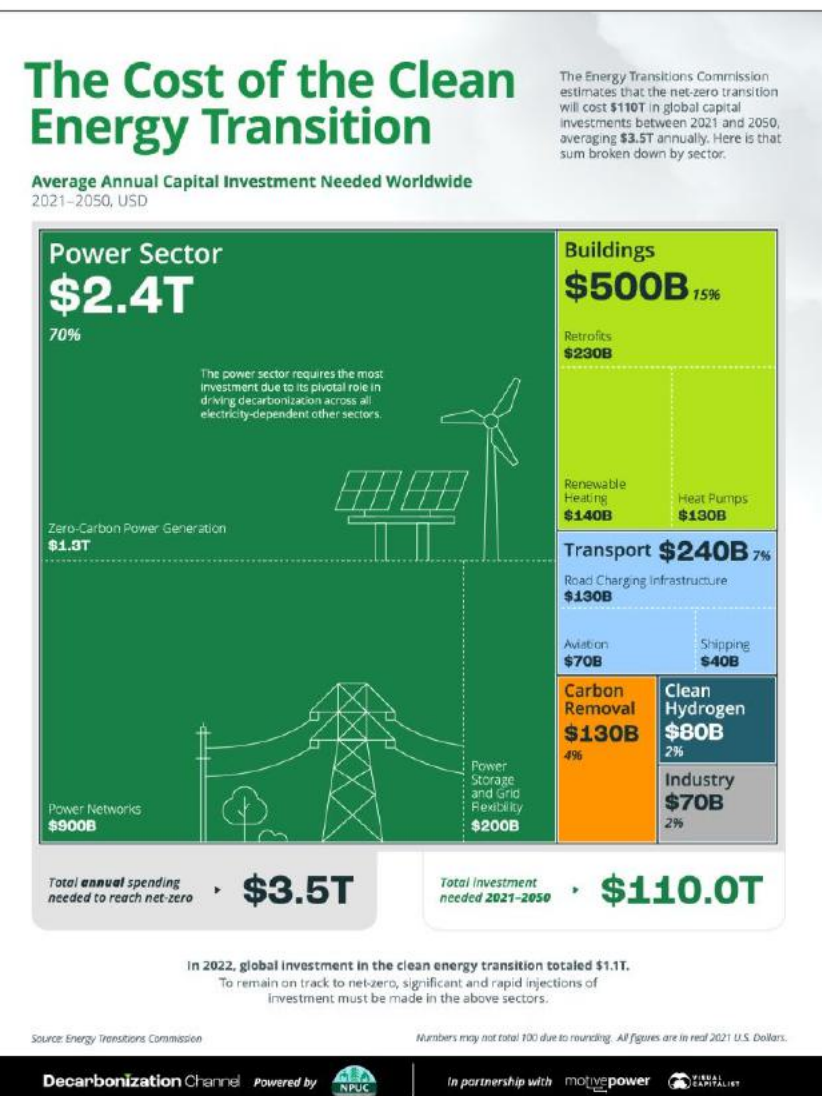
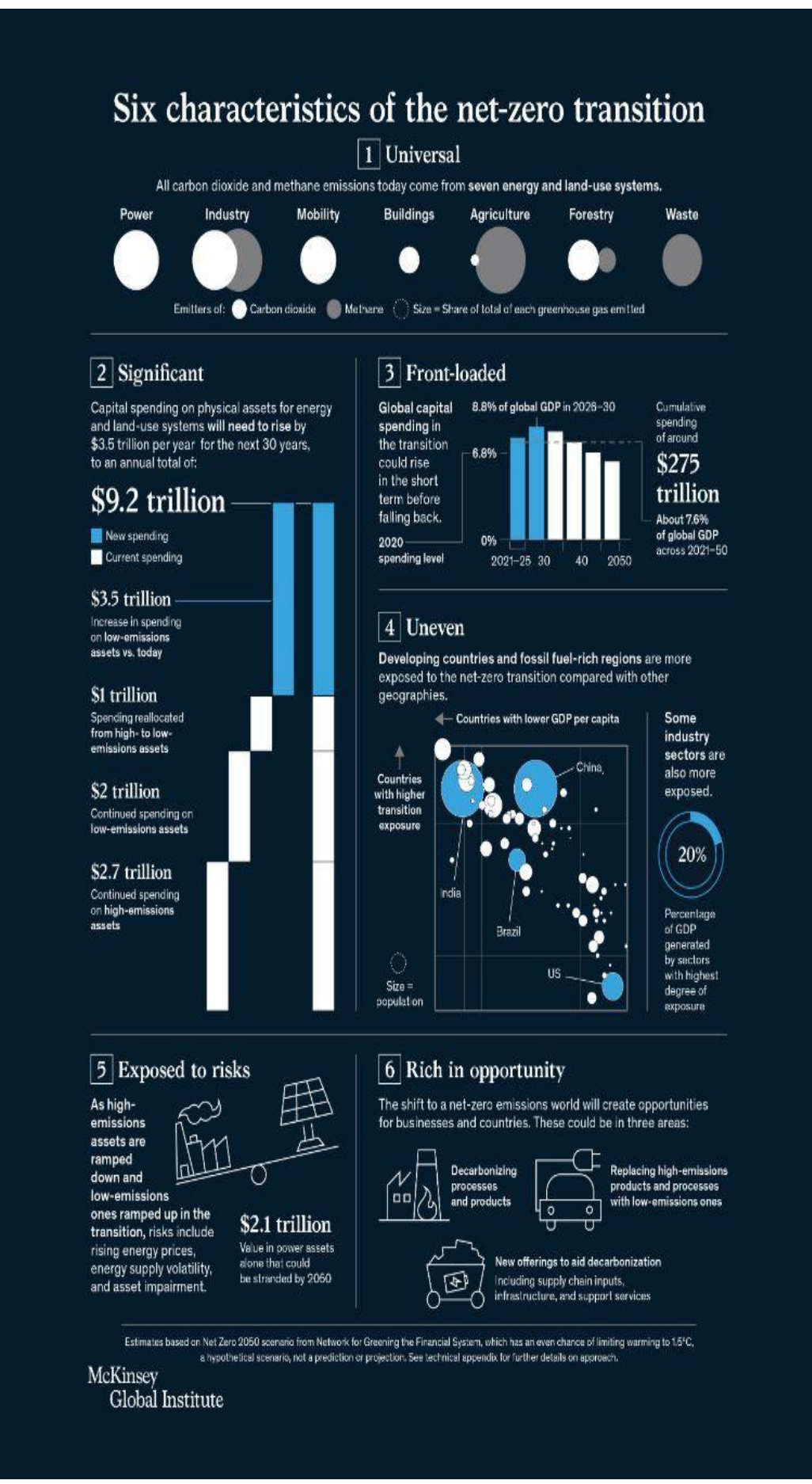
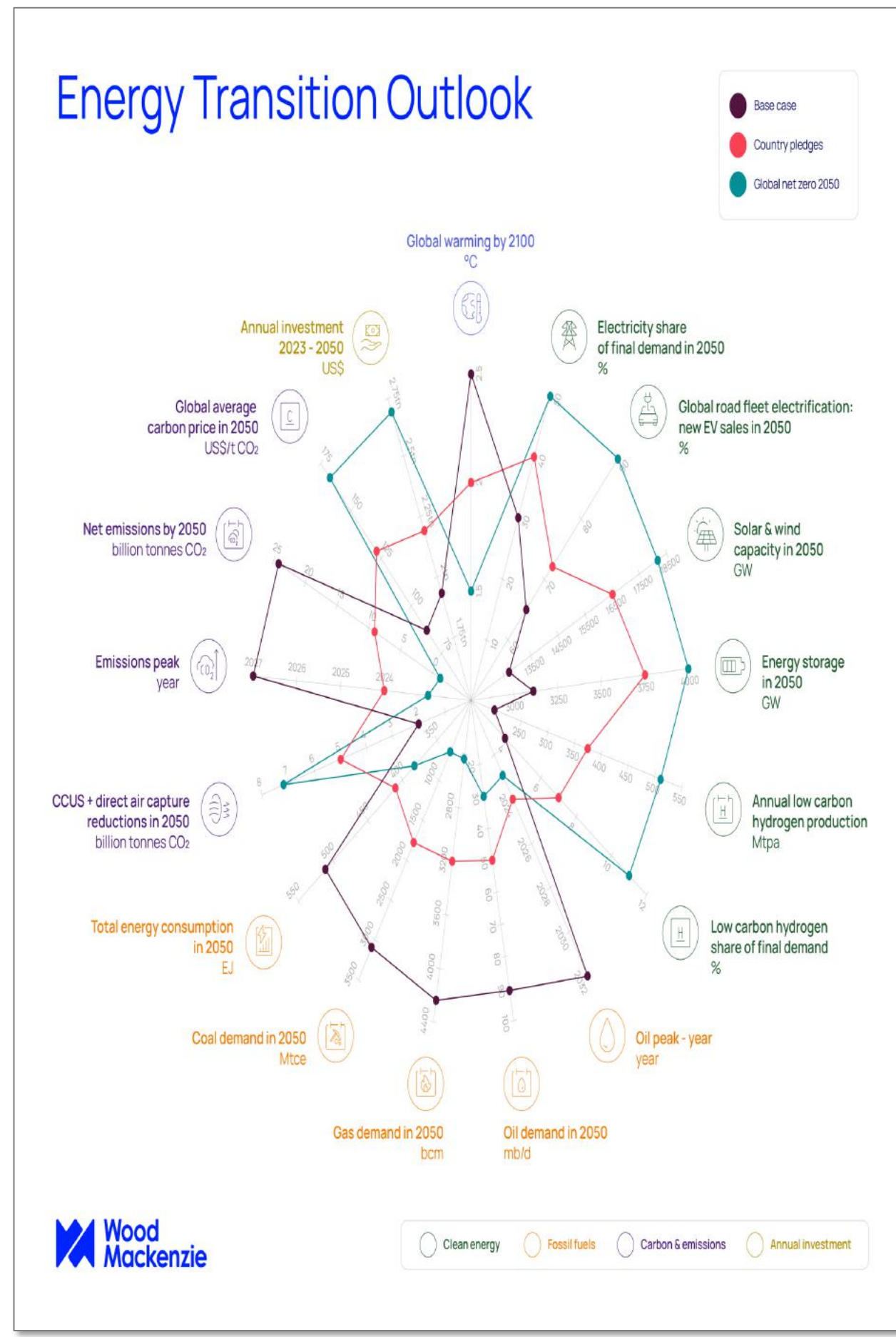


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Electromovilidad



Transición Energética

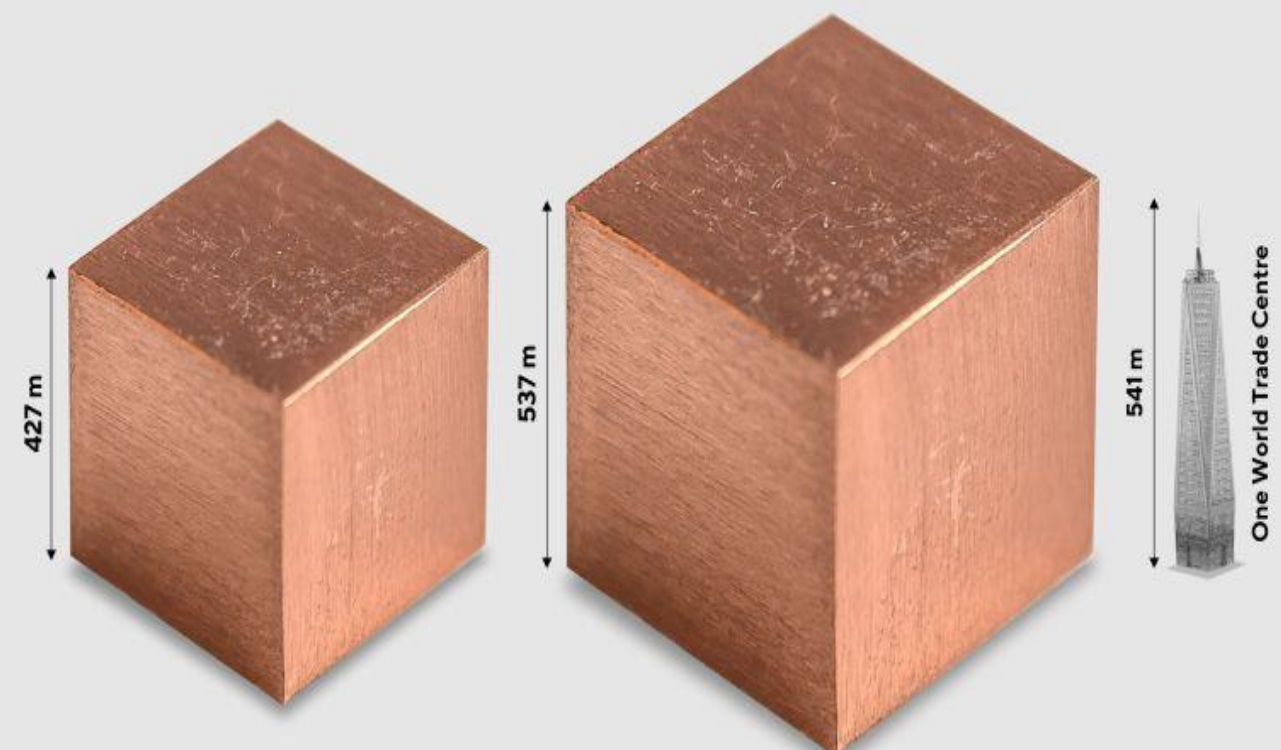


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Minerales Críticos

THE VOLUME OF 2050 NET-ZERO COPPER DEMAND

Reaching net-zero emissions by 2050 demands volumes of copper humanity has never produced before, to be used in electronics, wind and solar installations, nuclear facilities, and more.



700 million tonnes
Total copper produced over the course of human history

1.4 billion tonnes
New copper needed to reach net zero by 2050

Over the next 27 years, the world will demand nearly twice the volumes of copper the world has produced over the last 3000 years.

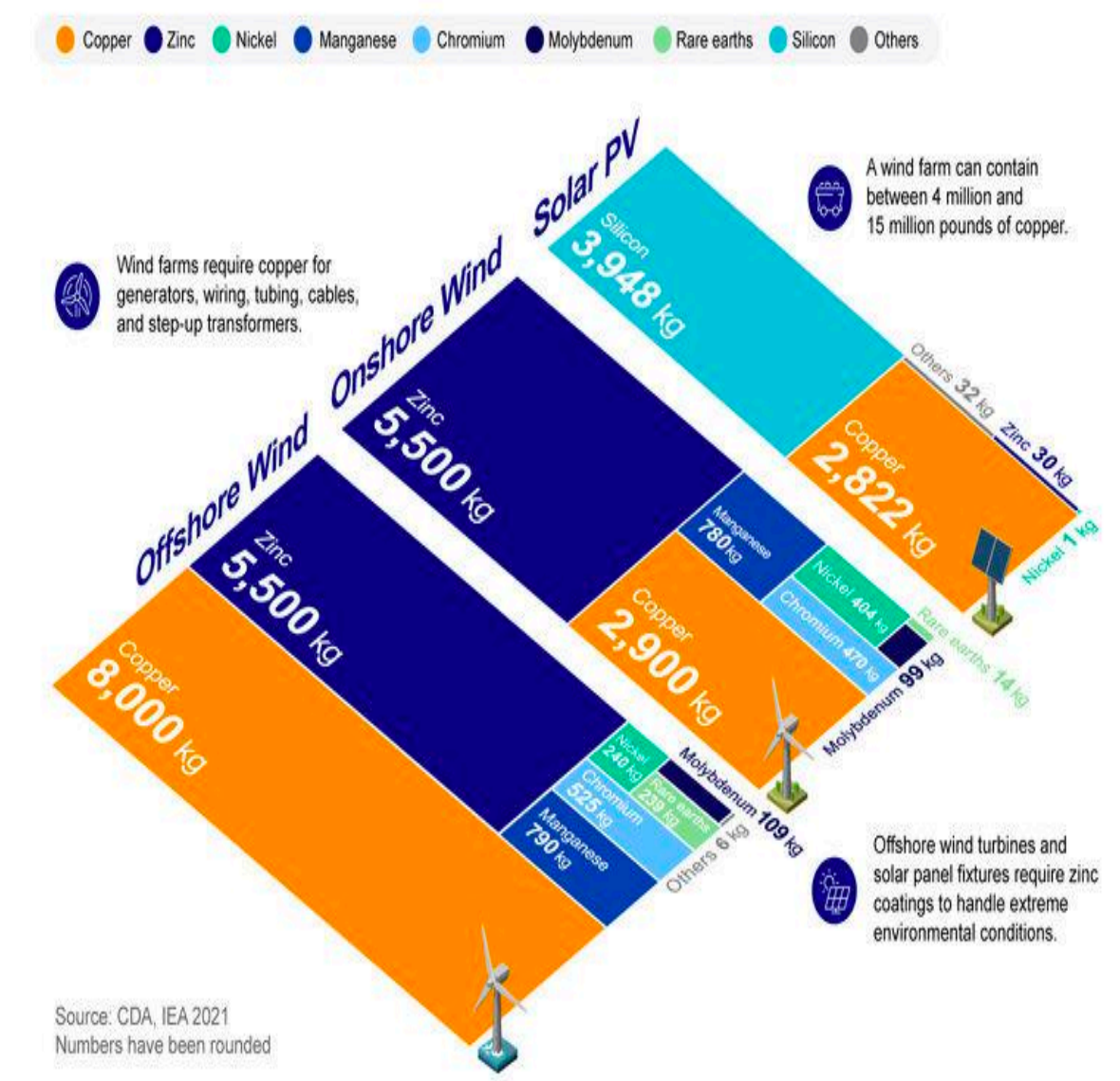
SOURCE: Science Direct, The US Geological Studies, IEA
<https://www.sciencedirect.com/science/article/pii/S0921344918300041>
<https://www.usgs.gov/facts/how-much-copper-has-been-found-world>
<https://www.iaea.org/newsroom/news/2019/02/2019-02-20-04-90-980a-526d9a86fd/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf>

ENERGY
minute

How Much Metal is Used in Clean Energy Technology?

Minerals are essential components in many of today's rapidly growing clean energy technologies—from wind turbines and electricity networks to electric vehicles.

Mineral Content of Clean Energy Sources (kg/megawatt)



Source: CDA, IEA 2021
Numbers have been rounded

Presented by **Teck**

As one of the world's largest producers of copper and zinc, Teck is committed to delivering the metals necessary for a low-carbon future.

Teck.com NYSE:TECK TSX:TECKA TSX:TECKB

The World's Largest Lithium Producing Countries

Lithium demand for electric vehicle batteries and other energy storage devices has grown significantly over the past few years. Over 70% of global lithium production comes from only two countries.

Lithium Production by Country 2022e in Tonnes



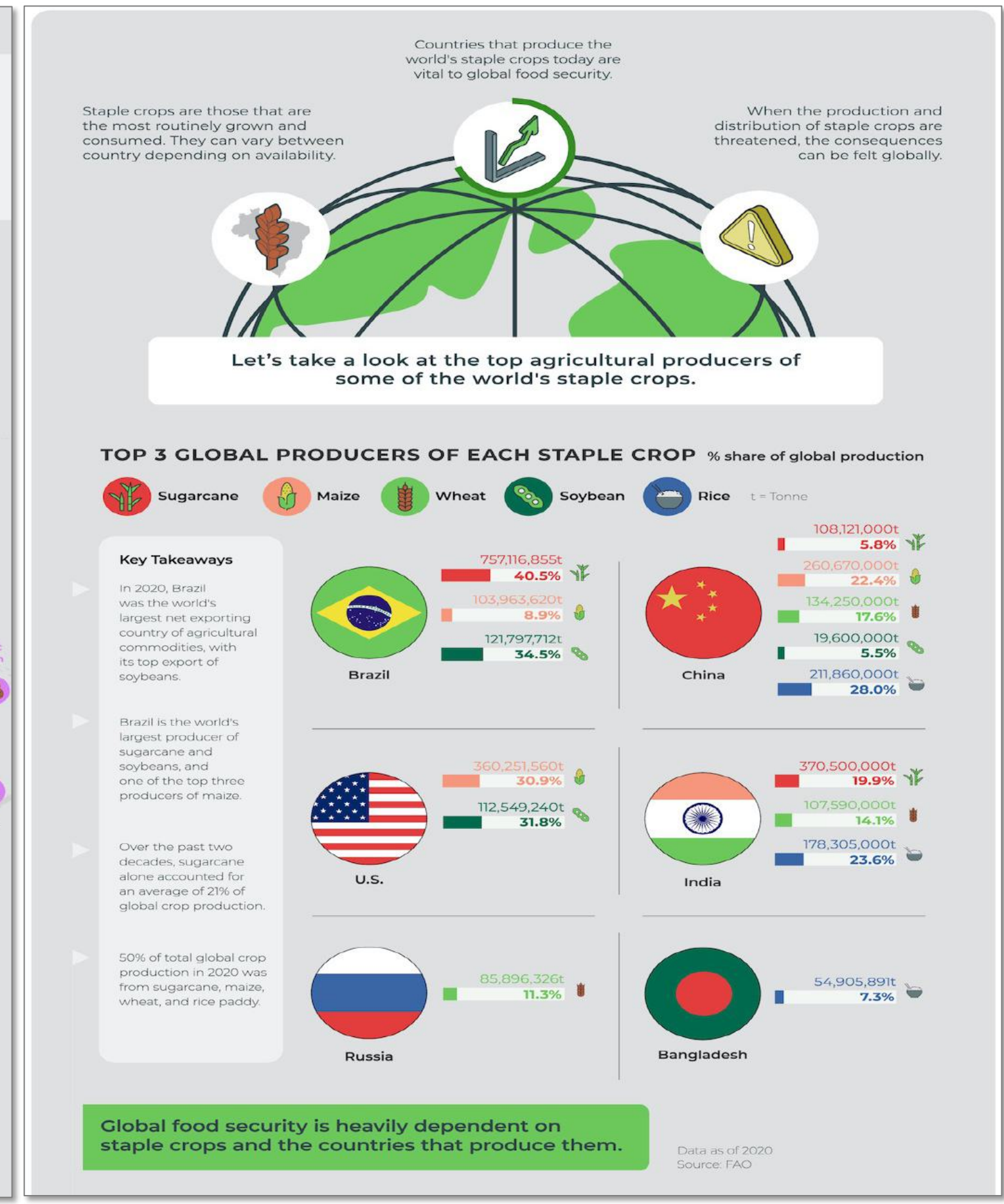
Source: Elements, Teck, Energy Minute



Amazonía

GCC Advisors

Seguridad Alimentaria - Producción



GCC Advisors

Seguridad Alimentaria - Precios

What's Behind The Rise of Food Prices?

March 2022 saw The World Food Price Index reach its highest level on record.

But what caused this spike in food prices, and how can we prevent it from continuing in 2023?

There are many variables contributing to the rise of global food prices, but two major factors are driving the most recent spike in cost: supply chain disruptions and climate change.

Source: World Bank

1 Supply Chain Disruptions

Global food systems have seen major disruptions caused by the COVID-19 pandemic and the war in Ukraine, altering trade patterns, production, and consumption of commodities.

WORLD FOOD PRICE INDEX

The FAO Food Price Index is calculated as the trade-weighted average of cereal, vegetable oil, sugar, meat, and dairy product prices across the major agricultural markets.

March 11, 2020, The World Health Organization declares the COVID-19 outbreak a global pandemic. Global food systems are placed under unprecedented stress causing food prices to rise.

February 24, 2022, Russia invades Ukraine and Black Sea ports are blocked, preventing exports of vital commodities for international food systems, causing a sharp spike in food prices. Source: MDPI

What's more, global fertilizer supplies from leading exporters Russia and Belarus have been disrupted, causing financial strain on farmers and weakening crop production.

TOP EXPORTERS OF FERTILIZERS

Total value between 2016 - 2020 | Source: UN Comtrade

Russia	China	Canada	U.S.	Belarus
\$41.4B	\$33.4B	\$35.1B	\$19.1B	\$14.5B

2 Climate Change

Changes in weather patterns are causing extreme weather conditions that continue to damage harvests.

FOOD AFFECTED BY CLIMATE CHANGE 2021-2022

- Rice:** Flooding, Drought. Countries: India, Thailand.
- Coffee:** Drought, Frost. Country: Brazil.
- Wheat:** Drought. Countries: India, U.S.
- Orange:** Extreme weather. Country: U.S.
- Maize:** Drought. Countries: U.S., France.
- Tomato:** Extreme weather, Drought. Country: U.S.

Source: The Washington Post, The Guardian

These are just some examples of how food prices have been affected in recent years. By strengthening global food systems, the world can reduce the likelihood of extreme price hikes in the future.

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Seguridad Alimentaria - Fertilizantes

4 Things Investors Need to Know About the Fertilizer Market in 2023

Food security has become a key focus for governments around the globe. Fertilizer is essential to this as it supports the affordability and availability of food for a growing world. Fertilizers play a critical role in food security as they increase the quality and quantity of harvest.

1 FEEDING 10 BILLION PEOPLE BY 2050

The world's population is increasing rapidly, and is expected to reach nearly 10 billion by 2050.

World Population by REGION

Growth is particularly strong in developing countries where food security is already strained.

As the population grows, more crops are needed to support global food systems. Increasing crop production is essential, and fertilizers are vital in improving crop yields.

2 LESS FARMLAND

After around 10-12,000 years of reshaping land for agriculture, the remaining amount of arable land on earth is declining.

An estimated 593 million hectares of agricultural land, nearly twice the size of India, will be needed between global agricultural lands area in 2030 and anticipated agriculture expansion by 2050.

With little room left to grow, fertilizer will take an increasingly critical role in boosting crop production.

Arable Land Use PER PERSON

Note: The FAO defines arable land as land under temporary crops, meadows for mowing or pasture, land under market or kitchen gardens, and land that is temporarily idle. Source: FAO

3 THE WORLD NEEDS MORE FERTILIZER

The global fertilizer market reached \$163.2 billion in 2021 and is expected to reach \$203.5 billion by 2027, growing at a CAGR of 3.9% during 2022-2027. Fertilizer production will continue to increase alongside population growth, meaning investment in fertilizer production is essential to the growing market.

Source: IMARC Group

4 THE GLOBAL FERTILIZER SUPPLY CHAIN

Supply chain disruptions of fertilizer put the global food supply chain at risk. Farmers' ability to access an affordable and consistent fertilizer supply directly impacts crop yields, production, and food prices.

Increasing the supply of domestically produced fertilizer in countries that rely heavily on imports will support low-cost, sustainable, in-market fertilizer to farmers who need it.

Top 5 Fertilizer Exporting & Importing Countries BASED ON VALUE

Brazil is the largest importer of fertilizer based on an import value of approximately \$15.2 billion.

Source: Statista, data as of 2021

Large agricultural producers that rely heavily on fertilizer imports, such as Brazil, would benefit from a local fertilizer supply that farmers can easily and affordably access to improve crop production.

Fertilizer Why It's More Important Than You Think

The global population is expected to reach nearly 10 billion by 2050. In order to feed the growing number of people sustainably, we need more crops. Fortunately, farmers have been able to more than double their crop production over the last number of decades thanks to fertilizer.

Source: WRI

3 Nutrients for Crop Growth

Nitrogen, phosphorus, and potassium (NPK) are three primary macronutrients that are the building blocks of all fertilizers. Each plays a key role in plant nutrition and promoting crop growth with higher yields.

Nitrogen (N)

Needed for the formation of all plant and animal proteins.

Why it's needed?

What does it do?

What happens without it?

Phosphorus (P)

Vital for plant photosynthesis.

Why it's needed?

What does it do?

What happens without it?

Potassium (K)

Essential for robust high quality crops.

Why it's needed?

What does it do?

What happens without it?

Around 98% of potassium in the soil is unavailable to plants in its existing form.

Without NPK macronutrients, plants are more vulnerable to stress from weather, pests, and disease. Balancing these three macronutrients is essential to growing healthy high yielding crops.

Source: The Fertilizer Institute

The Effects of Fertilizer Shortages

Fertilizer is in high demand with supply shortages adding to the complex dynamics of the market.

High Prices

Supply chain issues have pushed up fertilizer prices since the pandemic and again since the start of the war in Ukraine.

FERTILIZER PRICE INDEX

Although fertilizer prices have begun to cool down, they are still above pre-pandemic levels. Long-term prices are expected to grow with demand driven by:

- Population growth
- Changes in productivity

War in Ukraine

COVID-19 Pandemic

When fertilizer prices rise, it becomes less accessible to farmers, particularly in low-income food-deficit countries. This can lead to higher food prices and insecurity.

Higher fertilizer prices → Lower crop yields → Higher food prices → Higher food insecurity

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La Amazonía

The Amazon's Vital Role in Growing Our Food

The Amazon plays a vital role in supporting crop growth by regulating water cycles and stabilizing the climate. Let's look at how.

1 Rainfall

1 "Flying rivers" are created by air currents that carry enormous amounts of water vapor across the sky.

Water evaporates from the Atlantic Ocean

Wind currents take water vapors across the continent

Moisture is exchanged with the Amazon Forest through evapotranspiration

The flying rivers distribute this moisture as rain across regions of South America

These atmospheric rivers play a critical role in regulating the rainfall in the Amazon region and beyond.

Only ~6% of cropland in Brazil is irrigated, making the region heavily dependent on rainfall.

20 billion tonnes of water is released daily into the atmosphere by the trees of the Amazon. That's around 13 times more than is discharged by the Mississippi River.

Brazil relies heavily on the water cycles created by the Amazon rainforest to support crop growth that feeds local and global communities.

Source: WWF, Forbes, The Future Climate of Amazonia, Rios Voadores, NPS

2 Temperature

The Amazon absorbs billions of tons of carbon dioxide (CO₂) annually through photosynthesis. By absorbing this CO₂ it regulates temperatures and lessens the effects of climate change.

~11 million hectares of agricultural land in Brazil may be lost by the 2050s due to the cumulative effects of climate change accelerated by deforestation.

The continued sustainable production of Brazil's crops is essential to food security, but deforestation can harm these efforts.

Source: NASA, World Bank

How to Grow More With Less

60% of the Amazon rainforest is within Brazilian borders. Also the country is one of the world's largest exporters of agricultural goods.

Source: Britannica

It's vital that crop yields are increased in areas already designated for farming to avoid additional deforestation.

Recent research shows a significant yield gap in Brazil's primary export, soybeans.

SOYBEAN YIELD GAP IN BRAZIL BY REGION 2022

Region	Yield	Yield Gap
Amazon	69%	31%
Cerrado	62%	38%
Atlantic Forest	76%	24%
Pampa	92%	8%

Source: University Of Nebraska-Lincoln

A yield gap is the difference between actual crop yield and potential crop yield.

Steps to Optimize Land Use

	Increasing crop yields	This can be done in part by optimizing and increasing fertilizer use. Local fertilizer suppliers are essential to this by providing affordable and accessible fertilizer year-round.
	Double cropping	Continuing to grow a second crop of corn on soybean fields between seasons to optimize land usage. Additional fertilizer is essential for this to maintain the soil's nutrients after harvests.
	Raising cattle on smaller pastures	By streamlining the space provided for cattle, additional cropland can be added to support food for both people and livestock.

Brazil Potash aims to support the preservation of the Amazon by working with farmers to increase crop yields through optimal fertilizer application rates to improve the quality and quantity of food grown without the need for land expansion.

Source: Nature Sustainability

Brazil Potash is also committed to supporting communities in many other ways.

- Continuous environmental monitoring
- Vaccination support and food supply
- Putting communities on the electrical grid
- Provision of clean drinking water
- Planting of trees on deforested land

Source: Visual Capitalist, Brazil Potash



Perspectivas

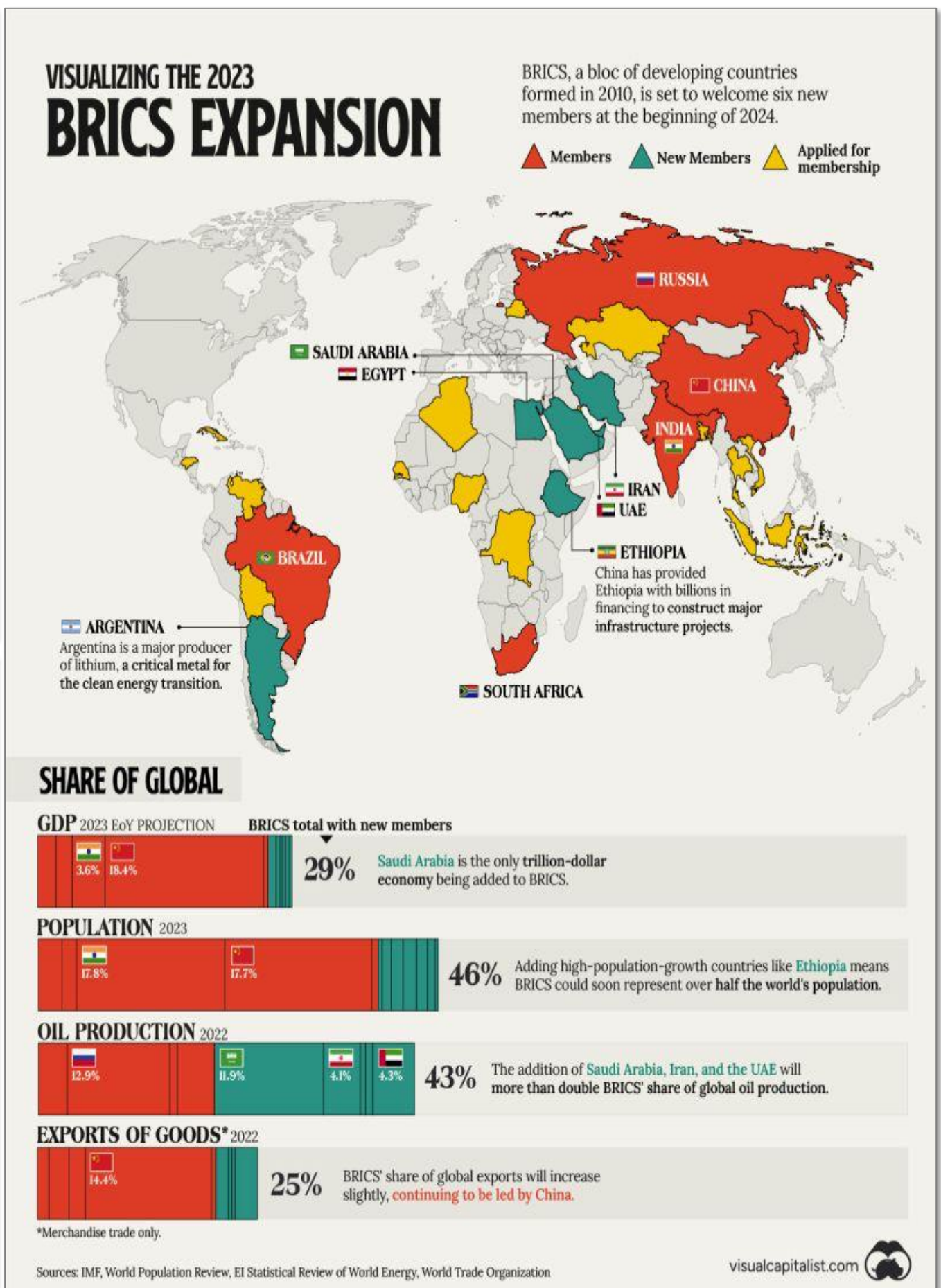
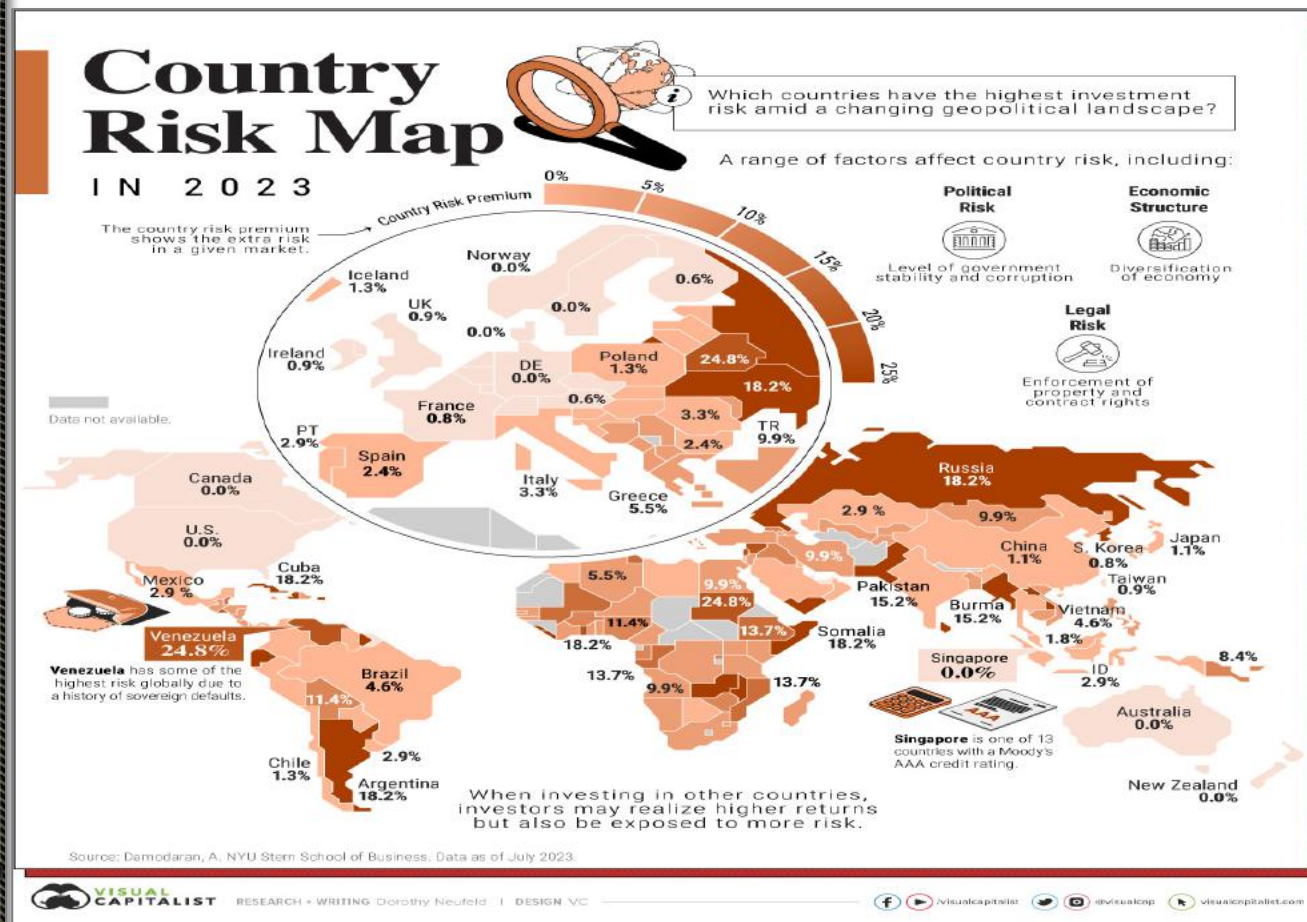
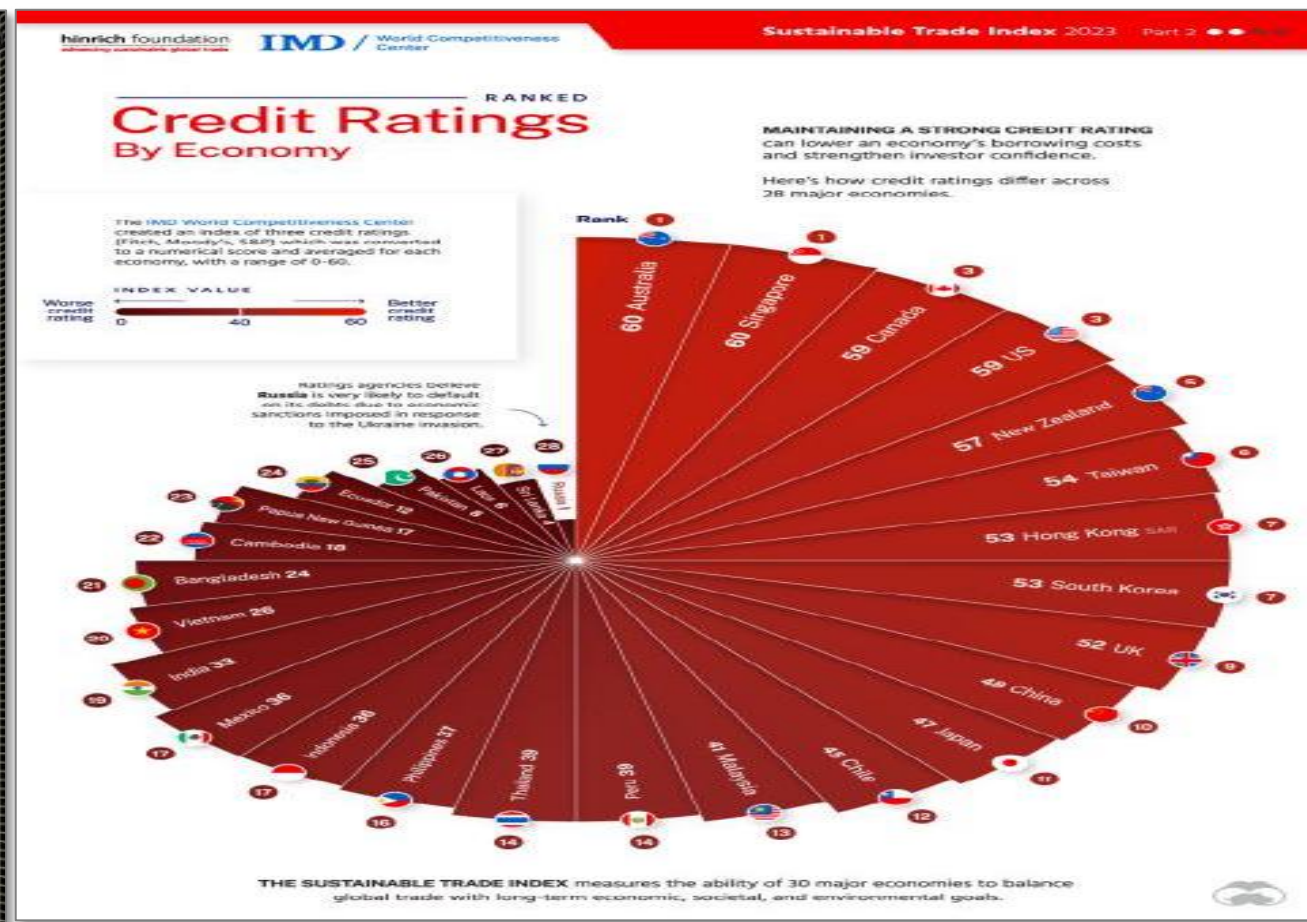
sales are followed up and the activities your doing to develop your offers.

The Global South Perspectives 2020

Marketing strategy's goal is to increase sales and achieve advantage over other competitors. It includes short term and long term activities of marketing

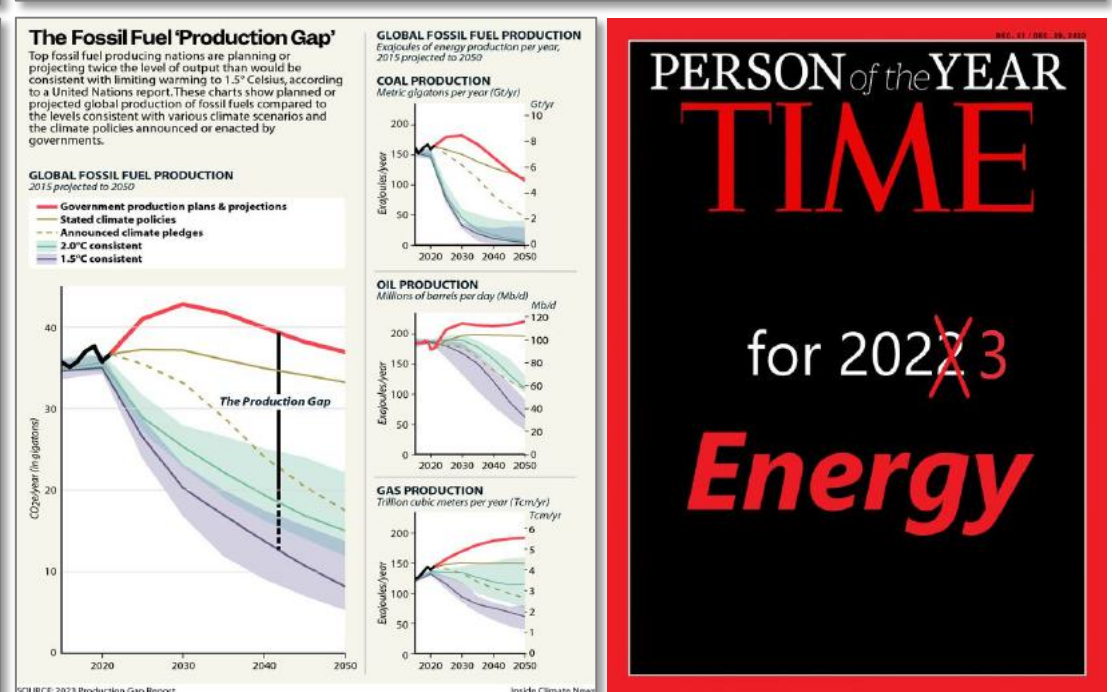
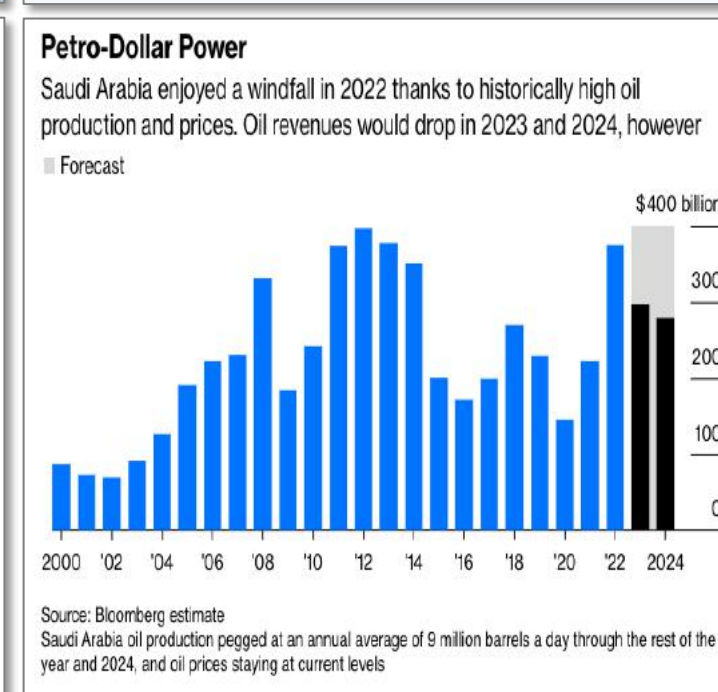
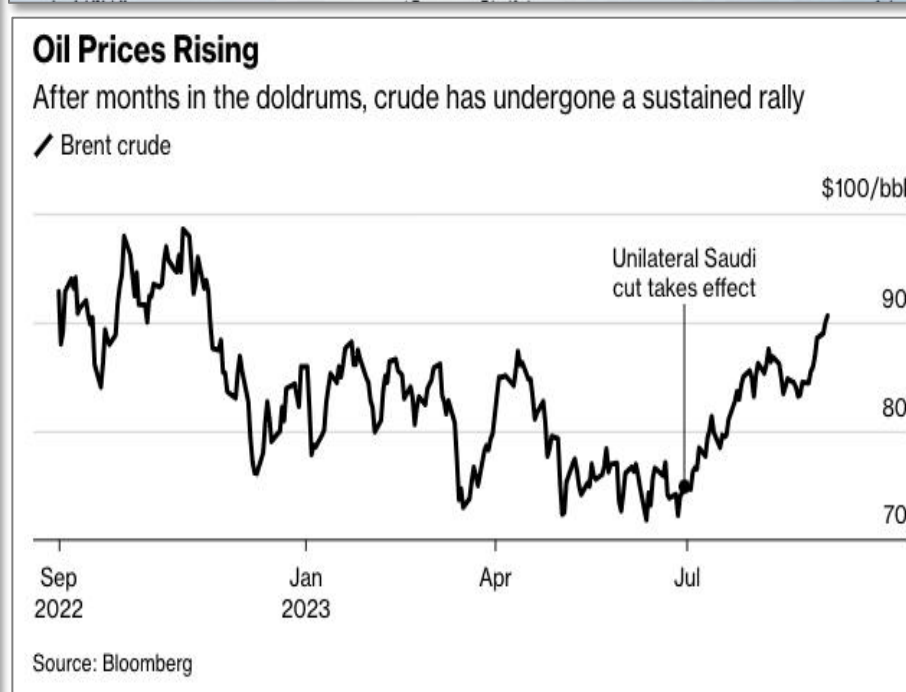
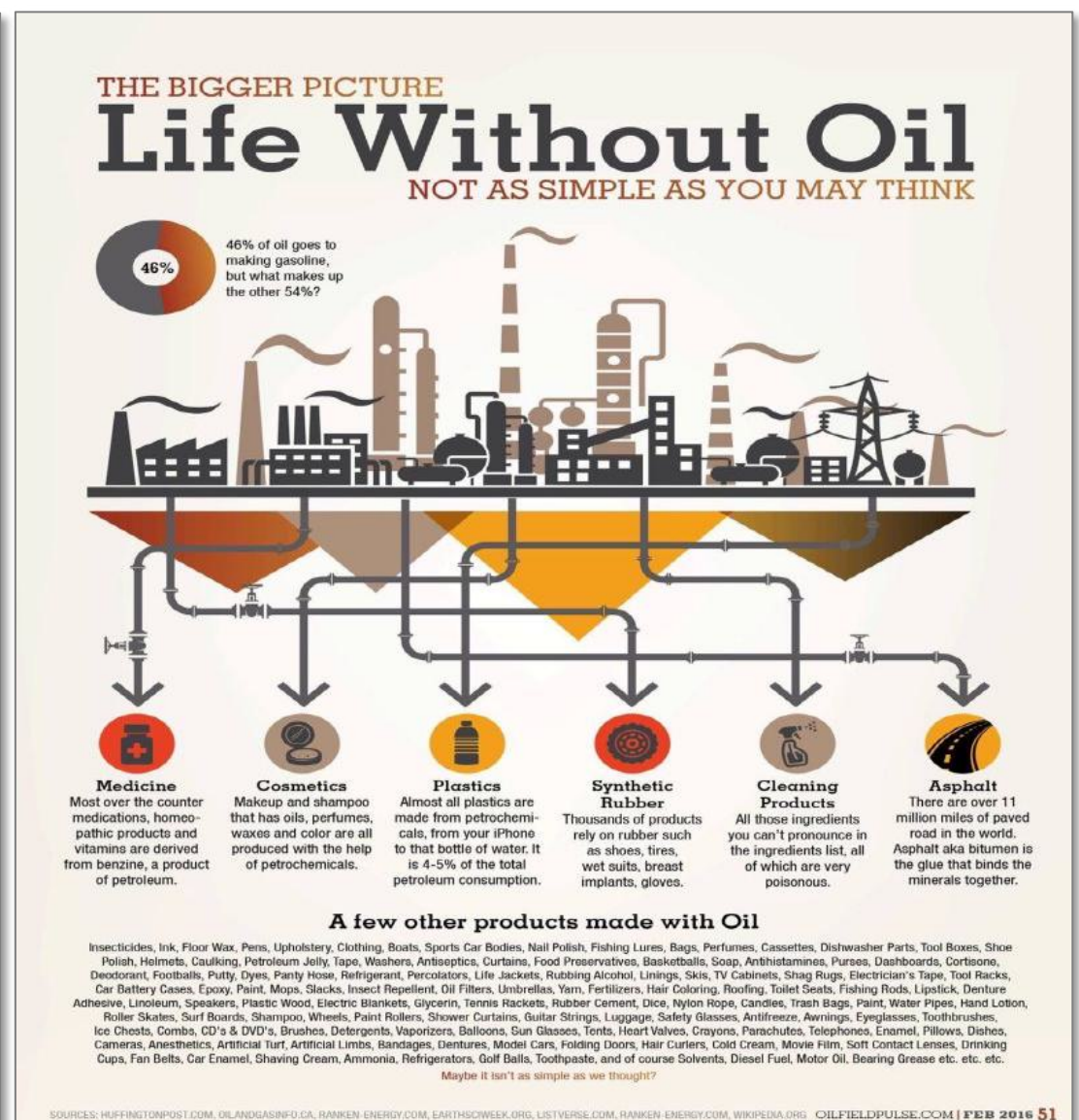
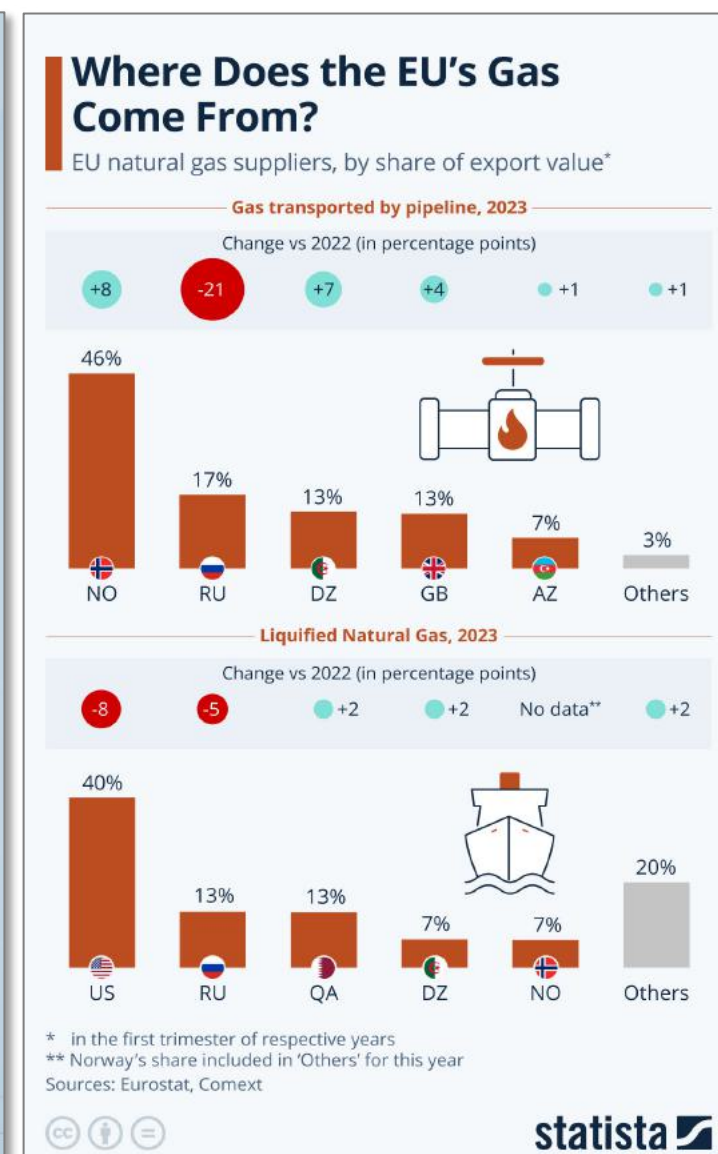
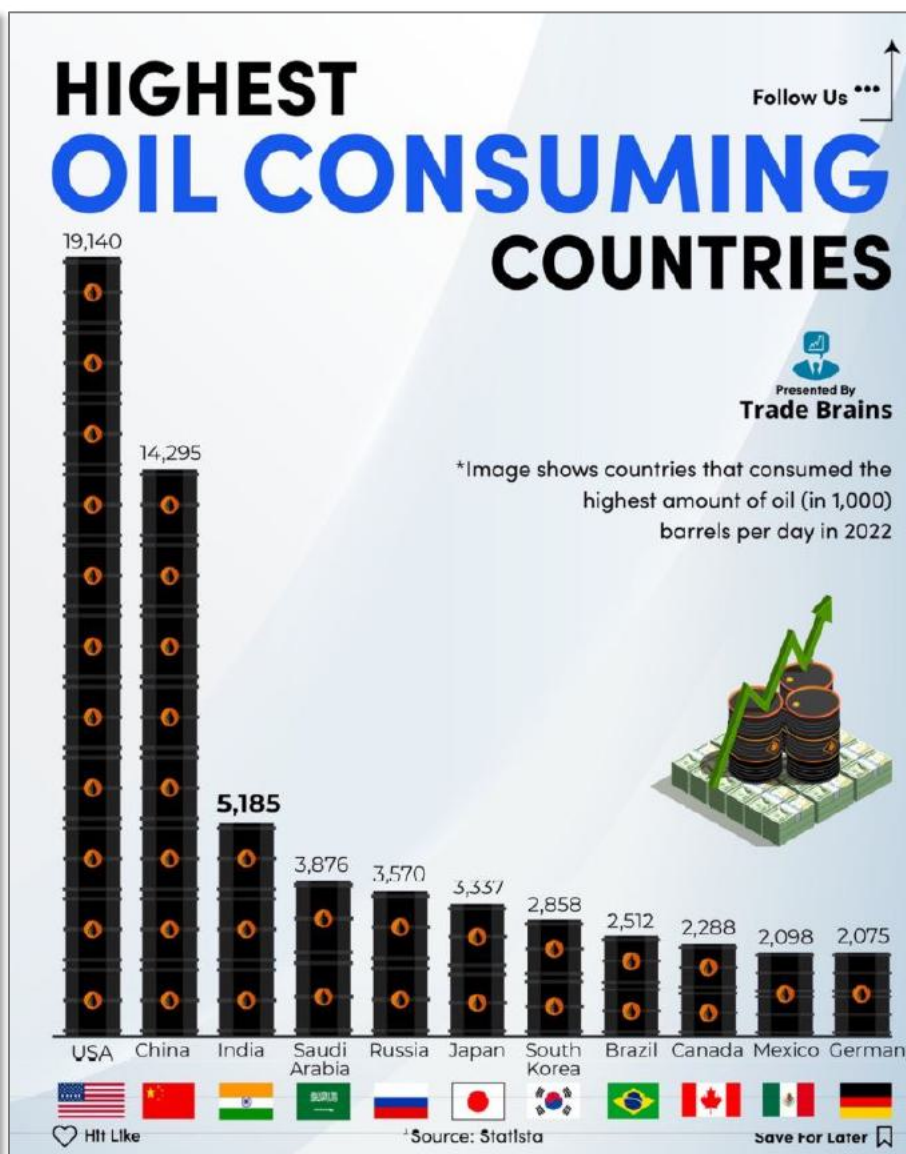
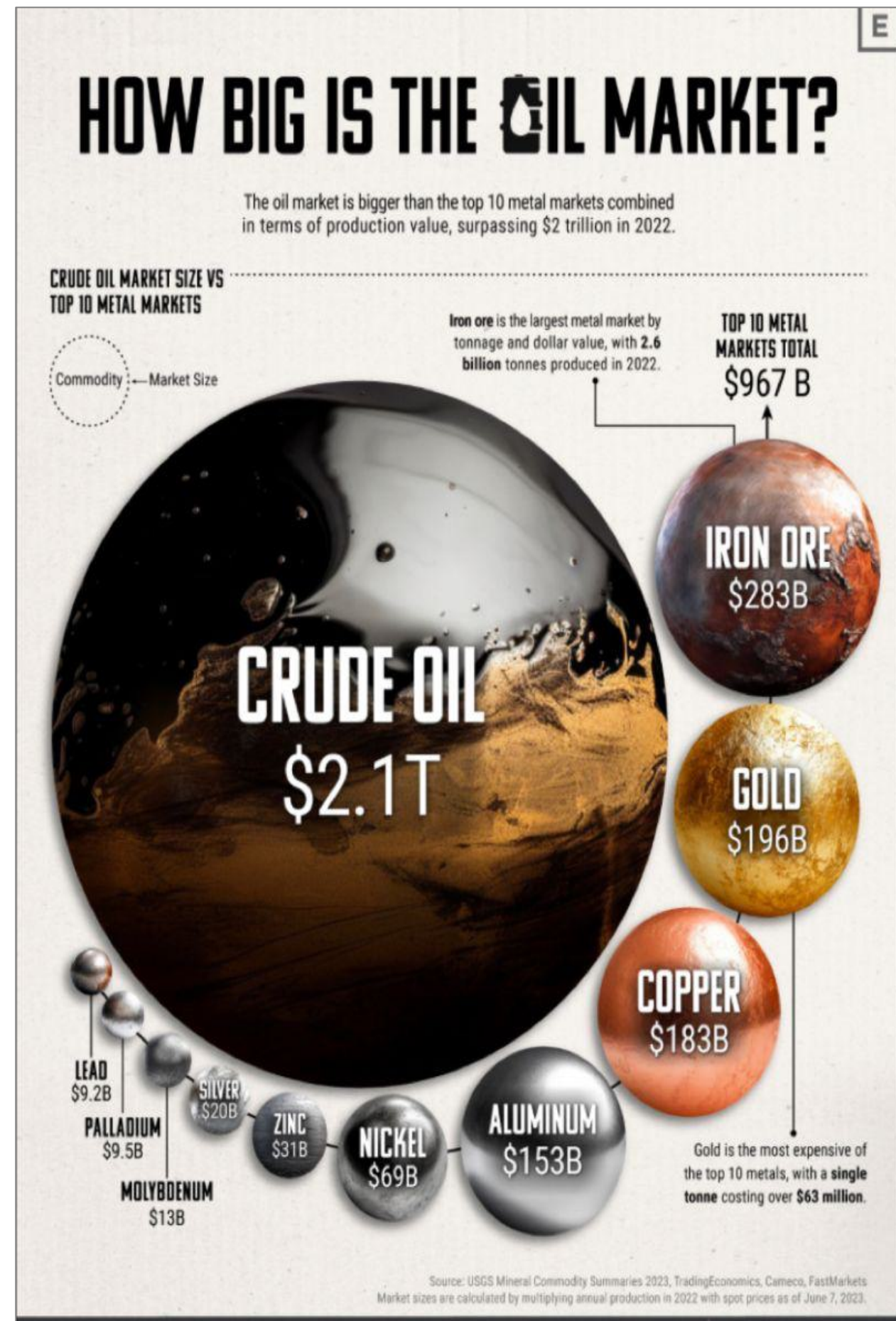
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Economía



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Energía



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GCC Advisors Minería

A NEW EPOCH FOR EARTH'S TIMELINE

In July 2023, the International Commission on Stratigraphy announced a new geologic epoch called the Anthropocene.

1 WHAT IS AN EPOCH?
An epoch is a long period of time that is characterized by great change. The Anthropocene is characterized by significant and lasting human influence. It is the current epoch we are living in.

2 HOW IS AN EPOCH DISCOVERED?
Reference points called **golden spikes**—or significant global events that are recorded into rock. Scientists examine rock sections or mud cores for a persistent, widespread recording of a major past global event. Golden spikes have been determined based on 4 different types of data:

- Climatic
- Magnetic
- Biologic
- Isotopic (chemical)

3 WHAT IS THE GOLDEN SPIKE OF THE ANTHROPOCENE?
Radioactive plutonium from nuclear weapons testing in the 1950s has widespread, global impacts that are recorded in rock.

4 WHAT DO OTHER GOLDEN SPIKES TELL US ABOUT EARTH?
Below are three examples of golden spikes that capture key events of Earth's history:

- END OF THE ICE AGE**
Shifting values of excess deuterium reflect a time when Earth entered a warmer climate.
- REVERSING THE EARTH'S MAGNET**
Measuring photons in lake sediments reveals the time when Earth's magnetic field reversed.
- THE LAST EXTINCTION EVENT**
An enriched layer of iridium coincides with a major meteorite impact that eliminated the dinosaurs.
- THE FIRST EXTINCTION EVENT**
Graptolites were once widespread in Earth's oceans and their fossils can be found in deep sea sediments.

The golden spikes of the earliest geologic epochs, such as the Archaean or the Hadean, are still being investigated. For now, they remain unknown.

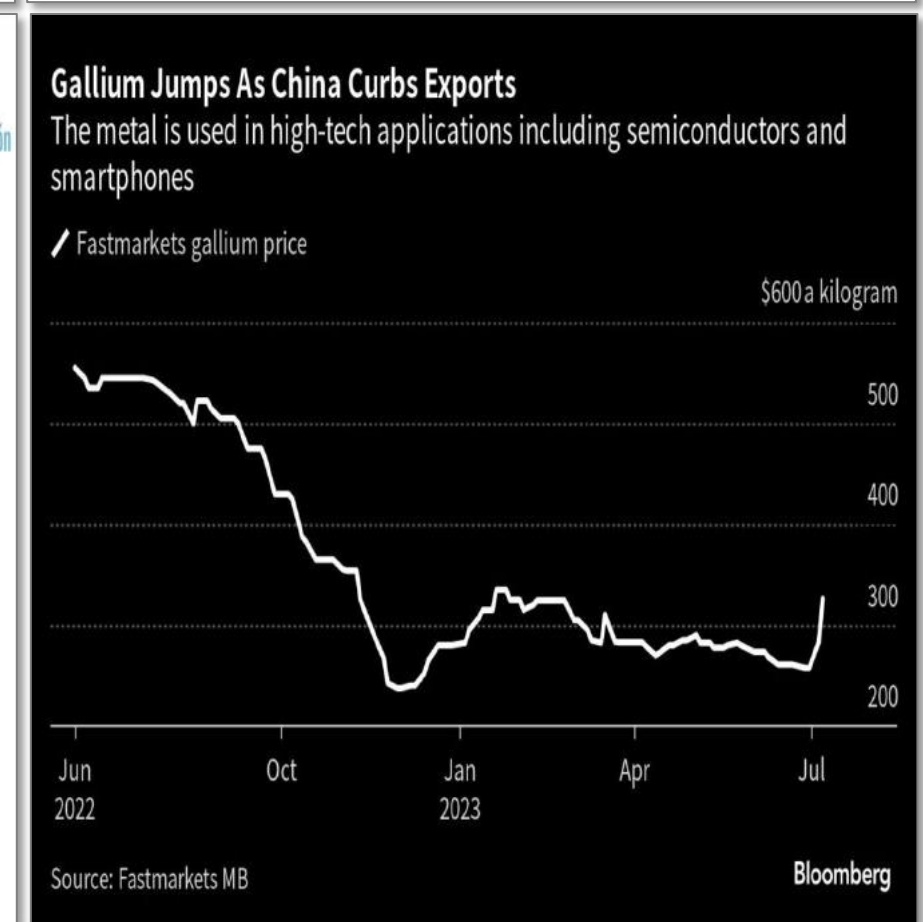
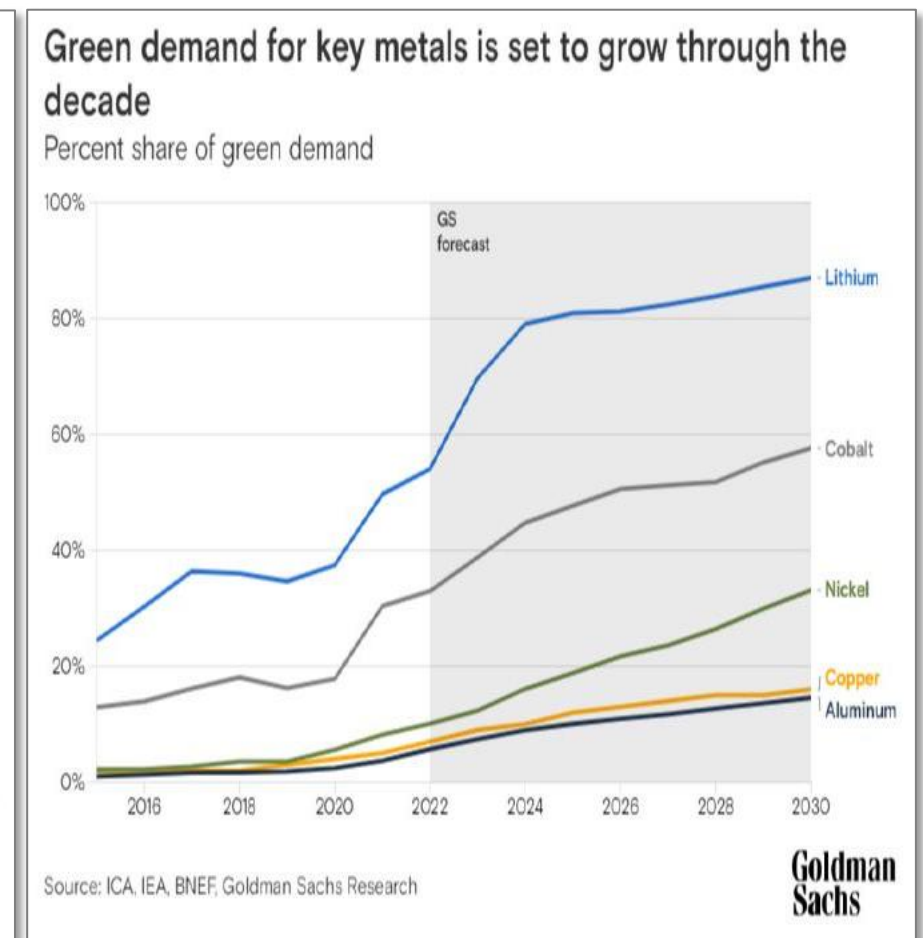
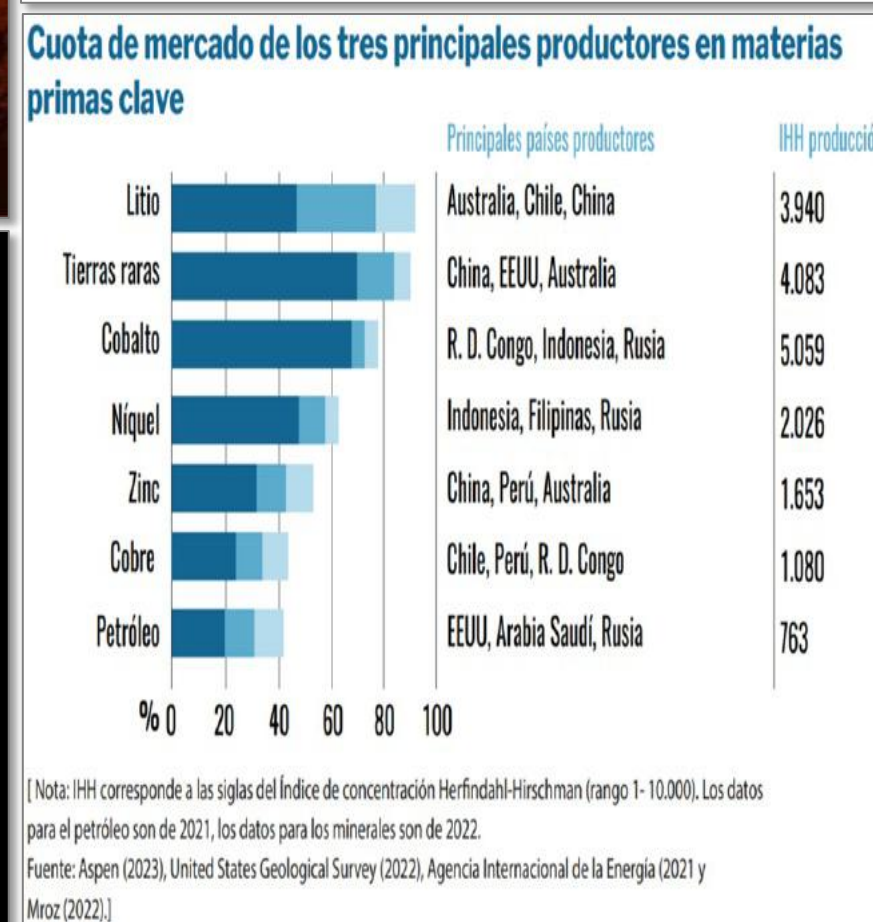
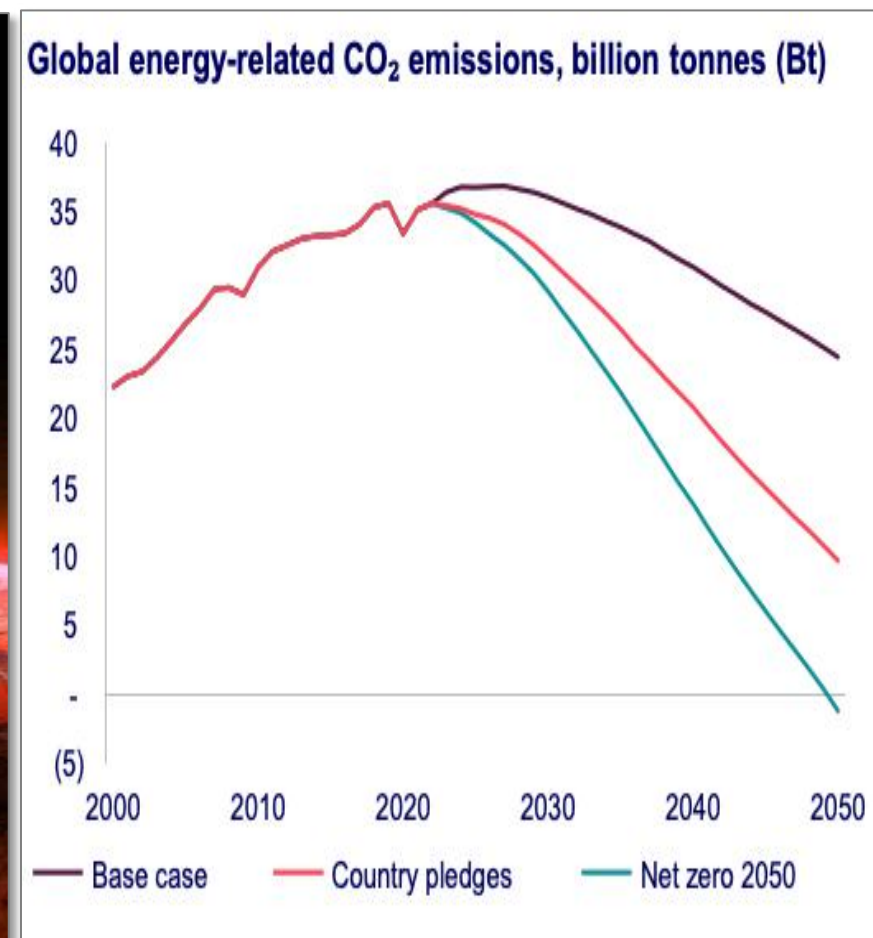
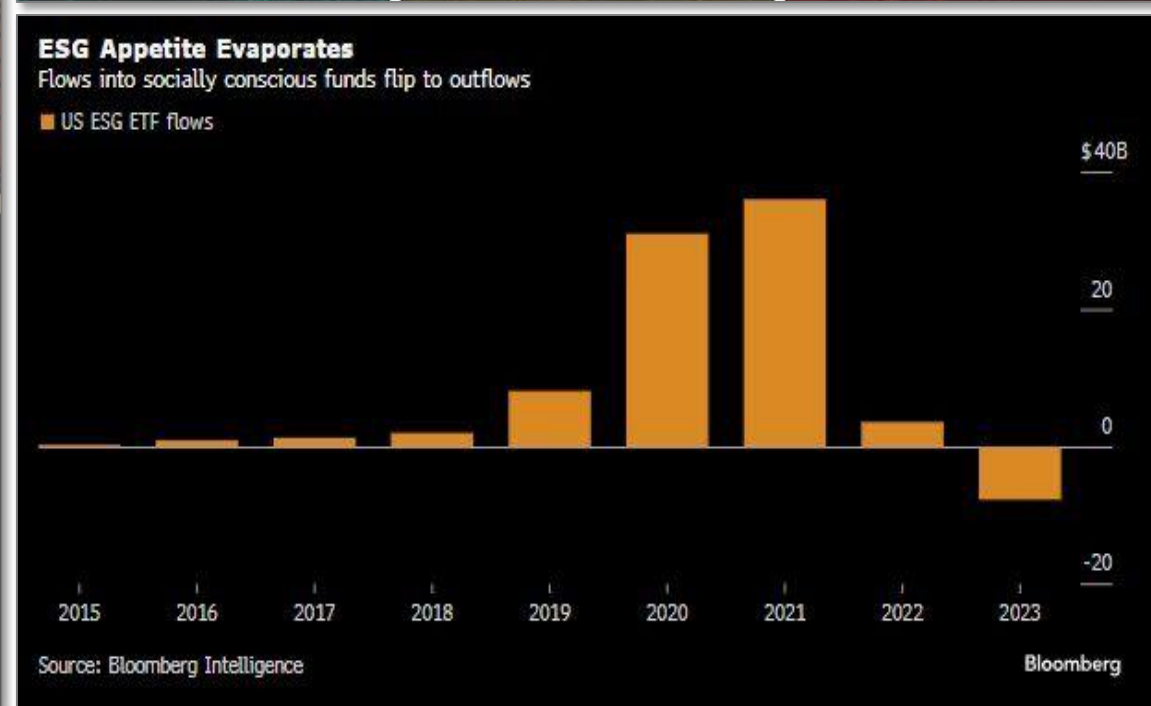
VISUAL CAPITALIST

RESEARCH, ART DIRECTION & DESIGN Mark Belton

United Nations Climate Change

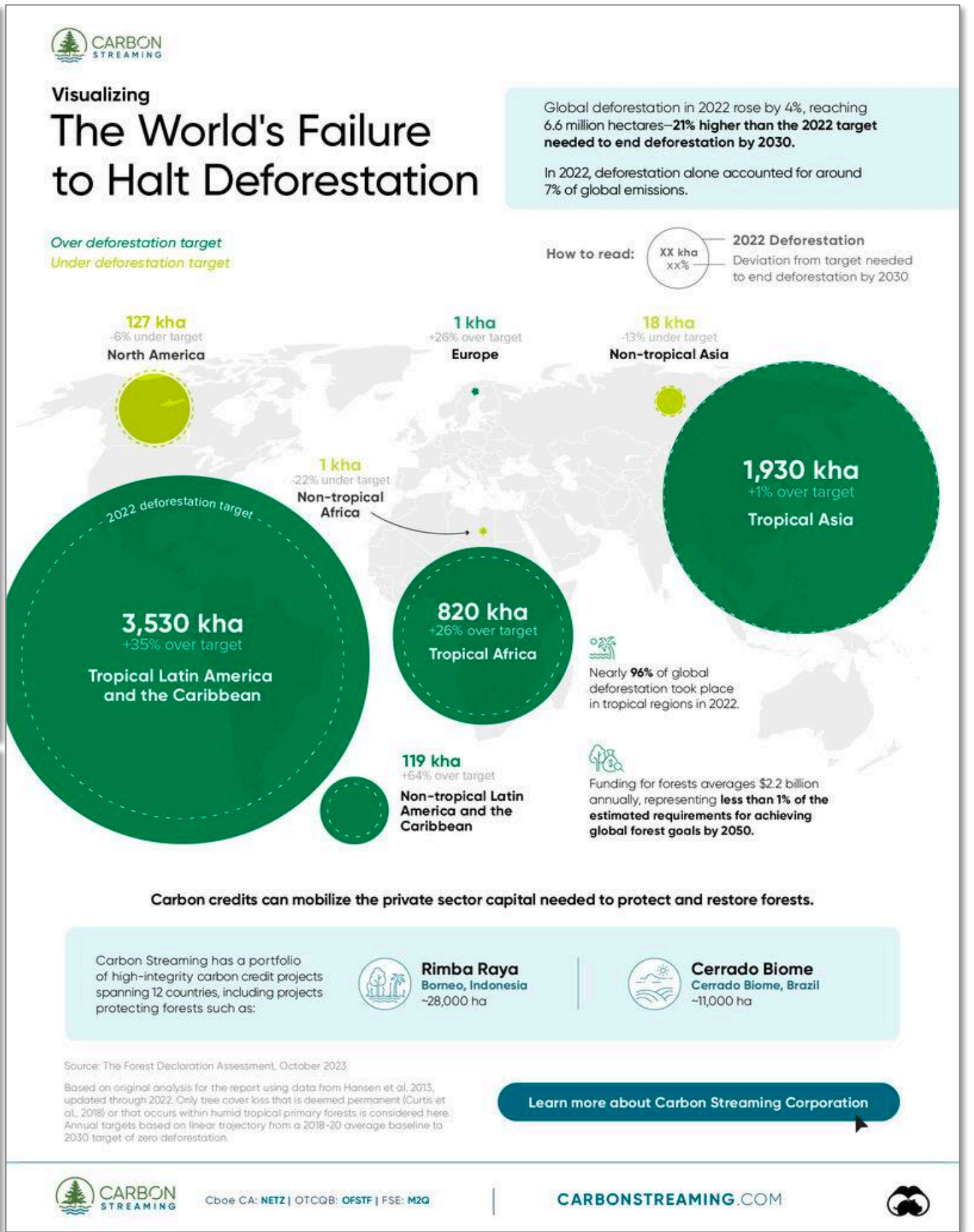
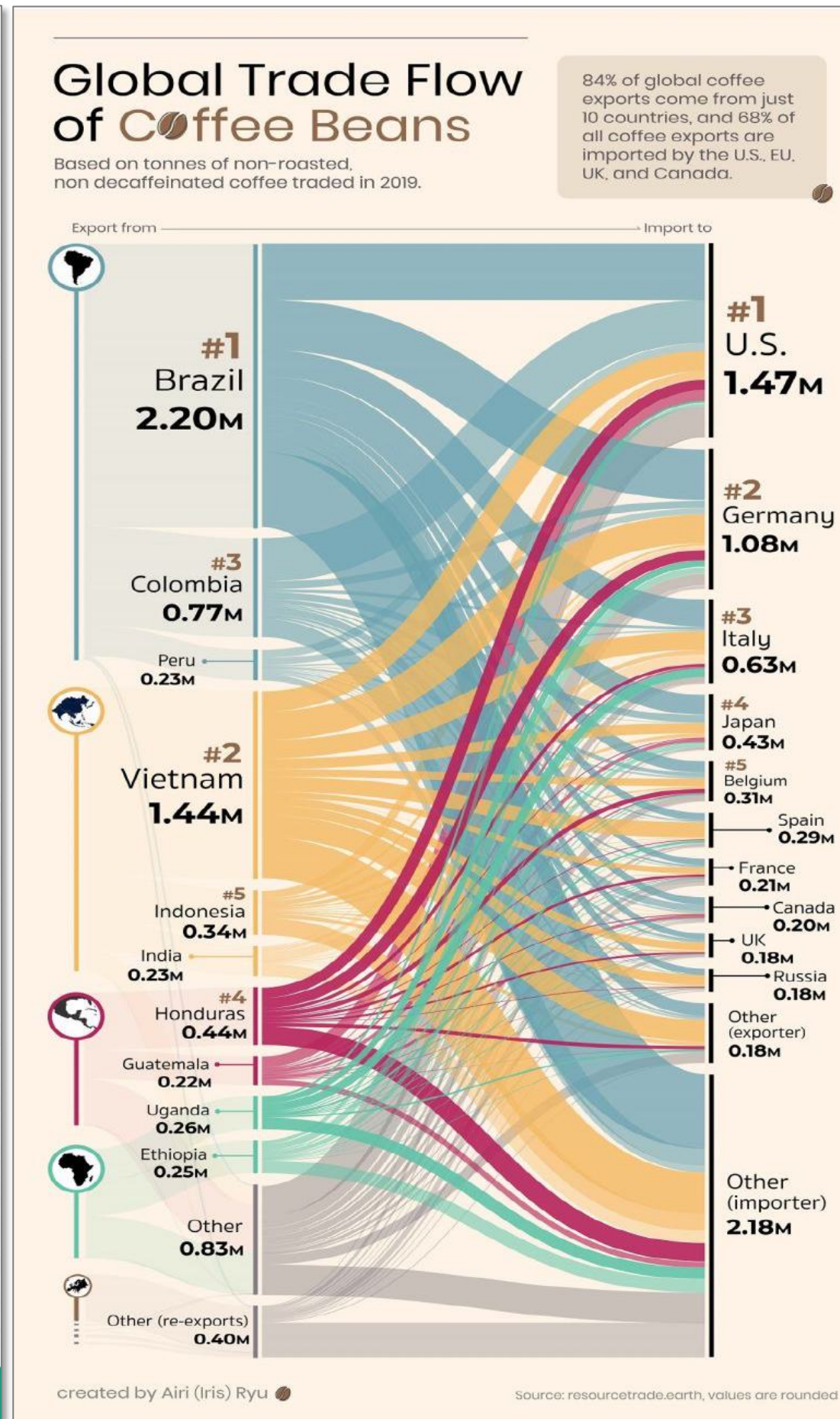
Los distintos futuros que nos esperan.

+1.5°C +2°C +4.5°C



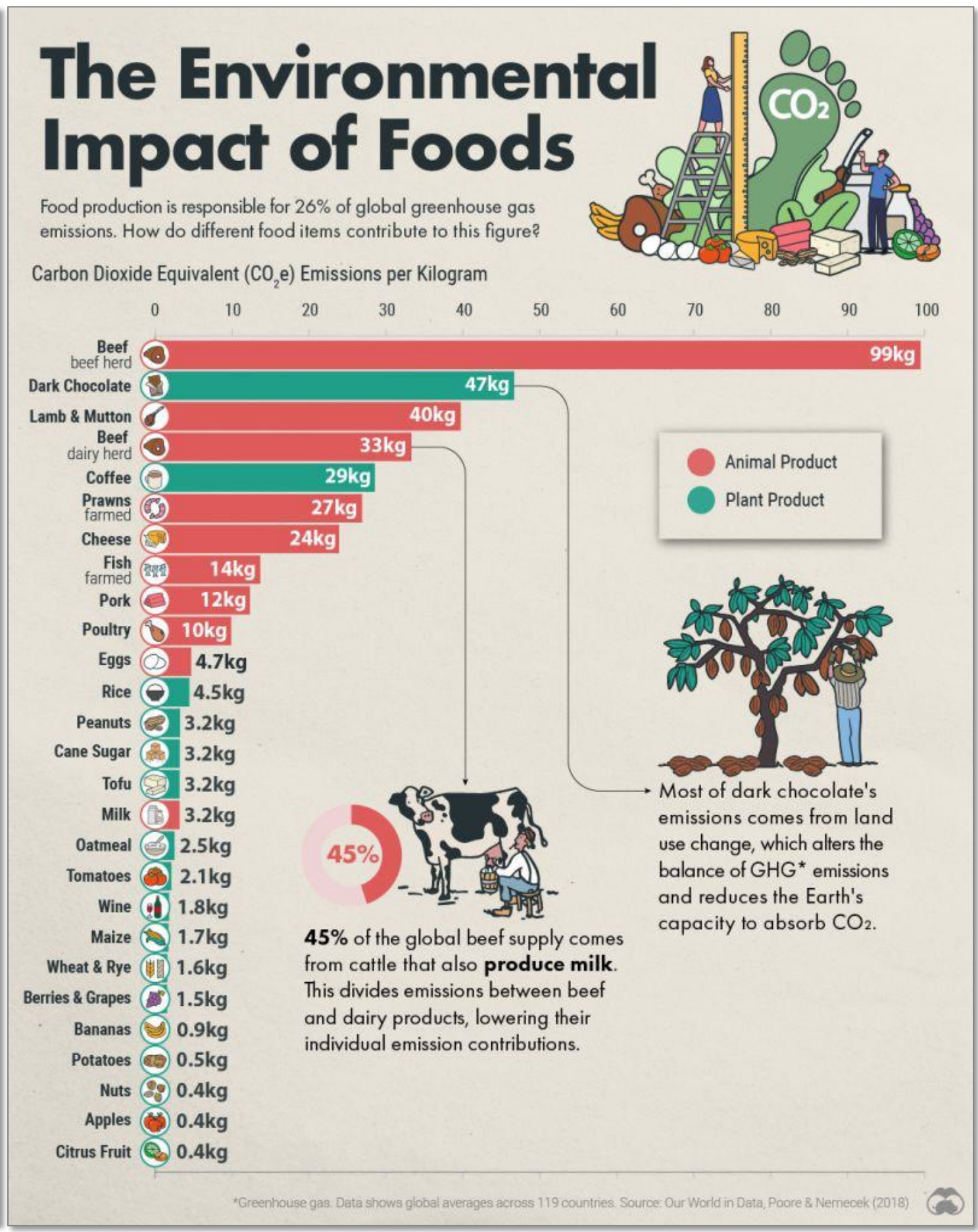
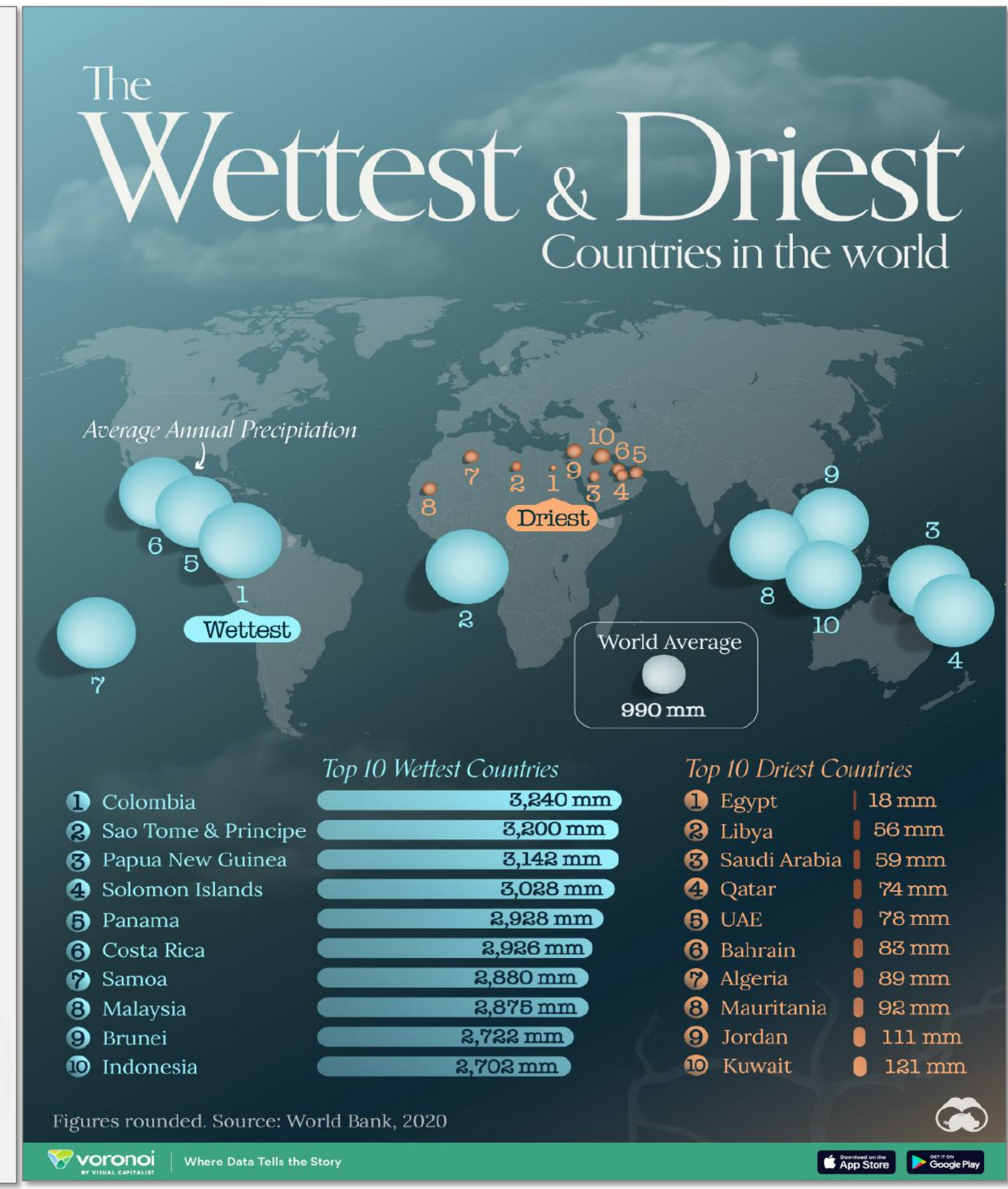
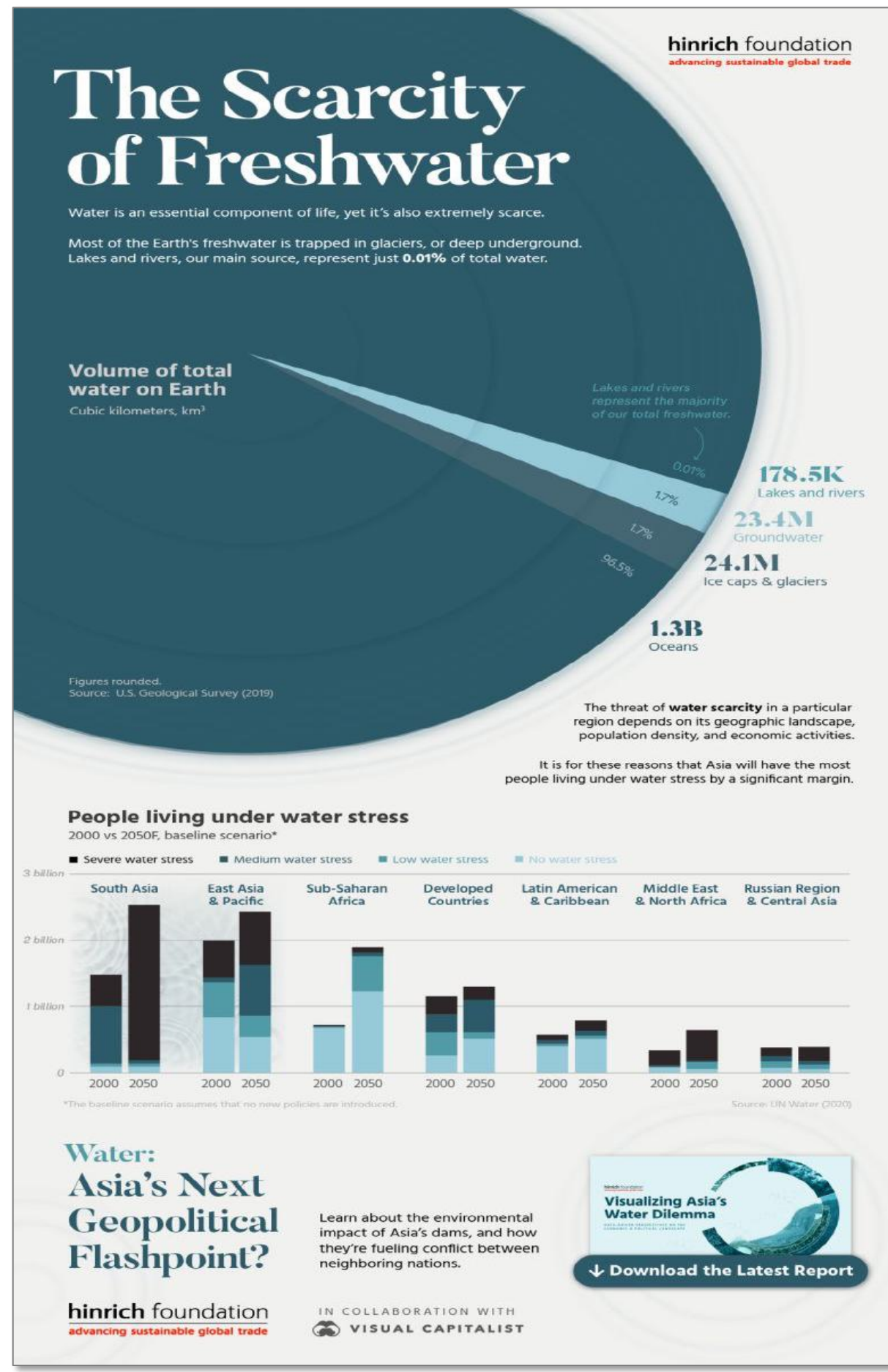
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Naturaleza - Consumo/Deforestación



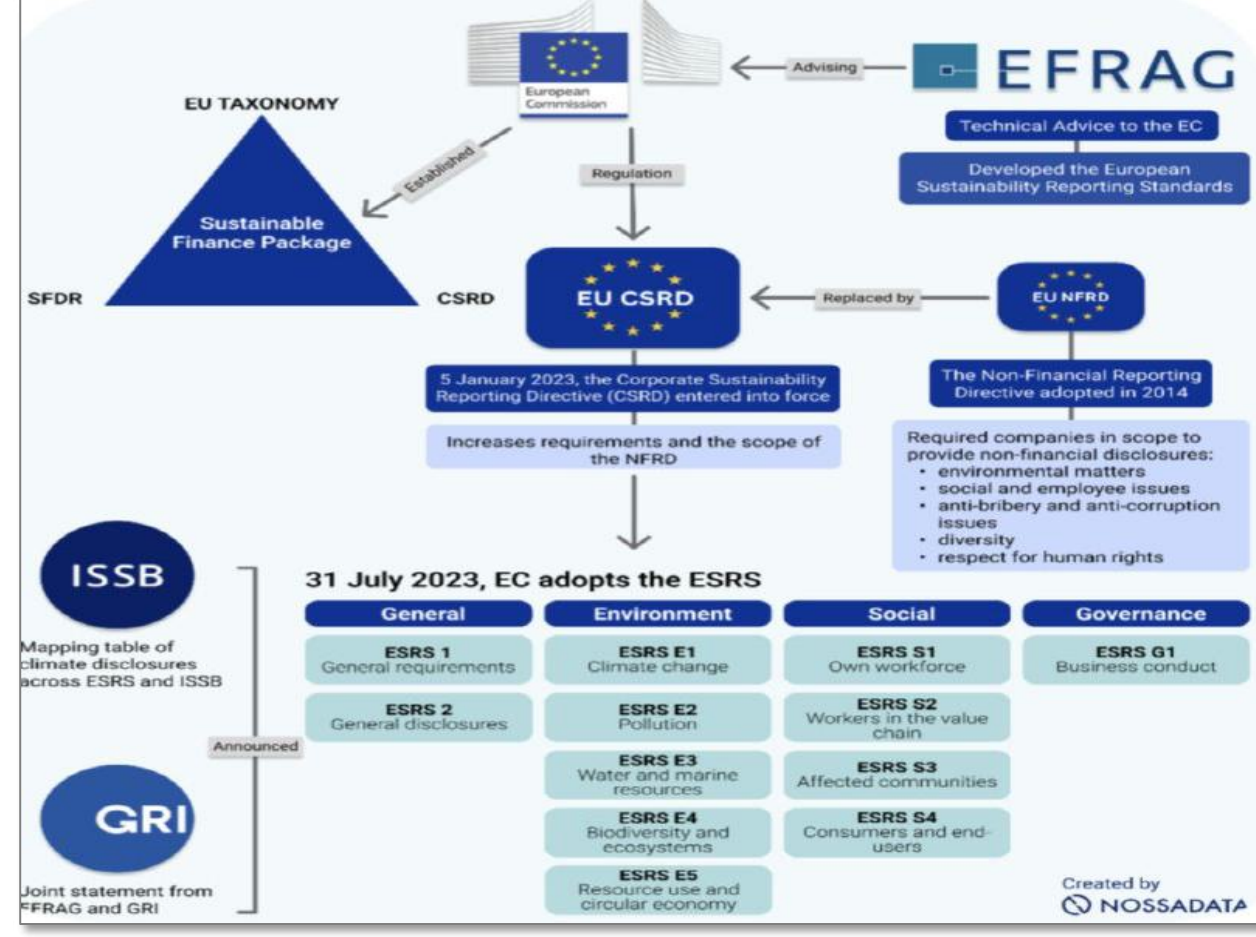
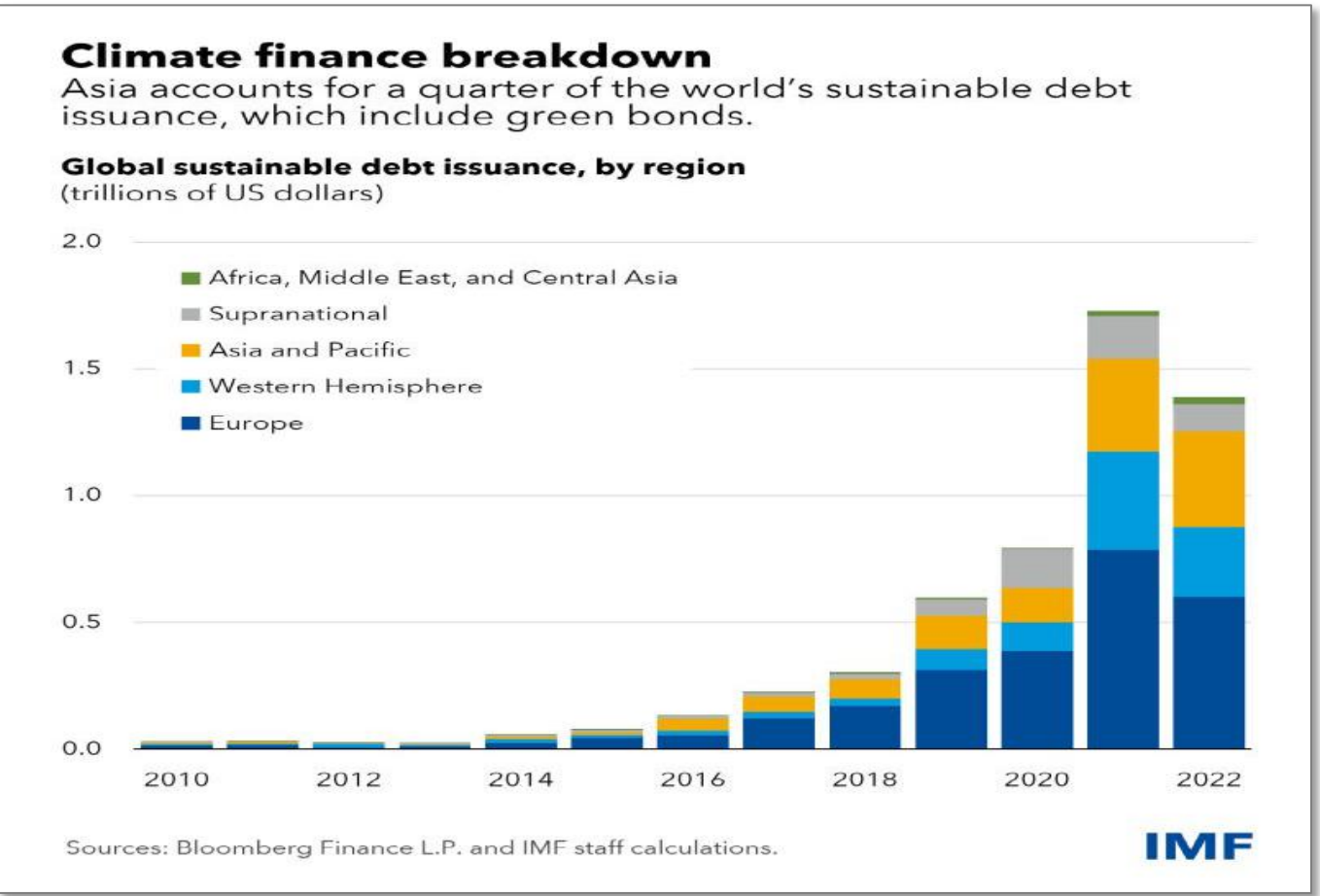
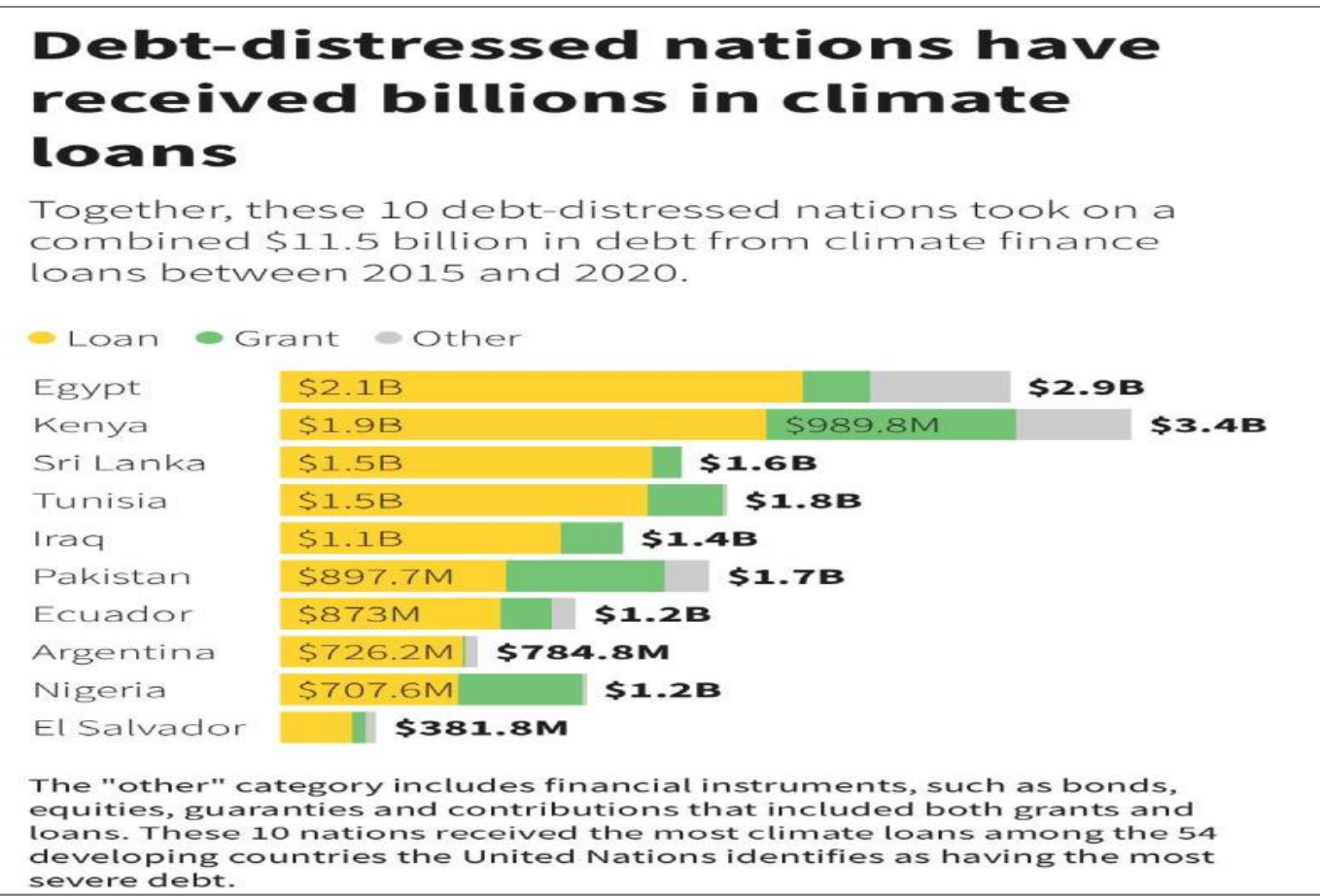
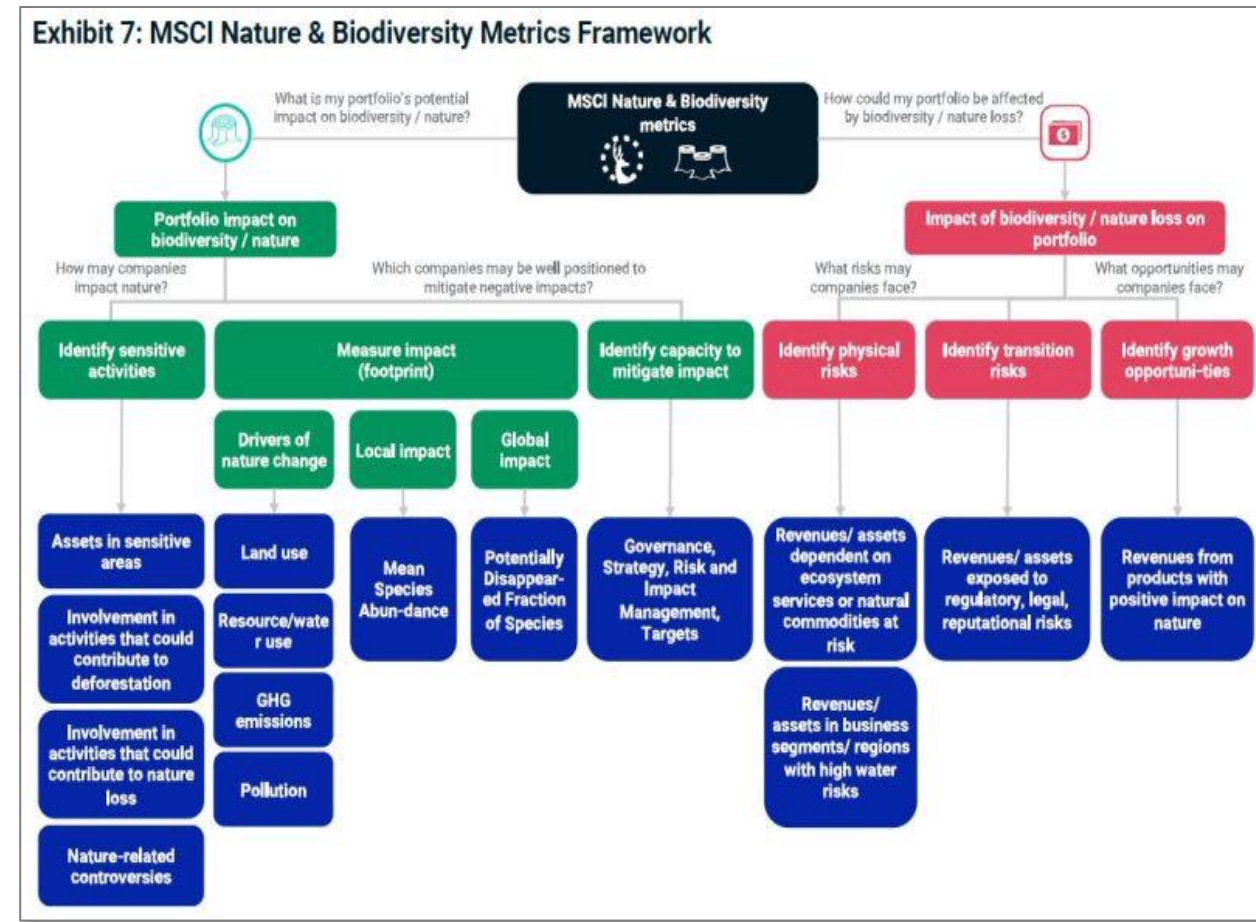
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Naturaleza - Agua/CO2



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Naturaleza - Financiamiento



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Tecnología

The top technology trends of 2023

- 1 Applied AI
- 2 Industrializing Machine Learning
- 3 Generative AI
- 4 Web3
- 5 Next-generation software development
- 6 Trust architecture & digital identity
- 7 Advanced connectivity
- 8 Immersive reality technologies
- 9 Cloud and edge computing
- 10 Quantum technologies
- 11 Future of mobility
- 12 Future of bioengineering
- 13 Space technologies
- 14 Electrification and renewables
- 15 Climate technologies beyond electrification and renewables

McKinsey & Company

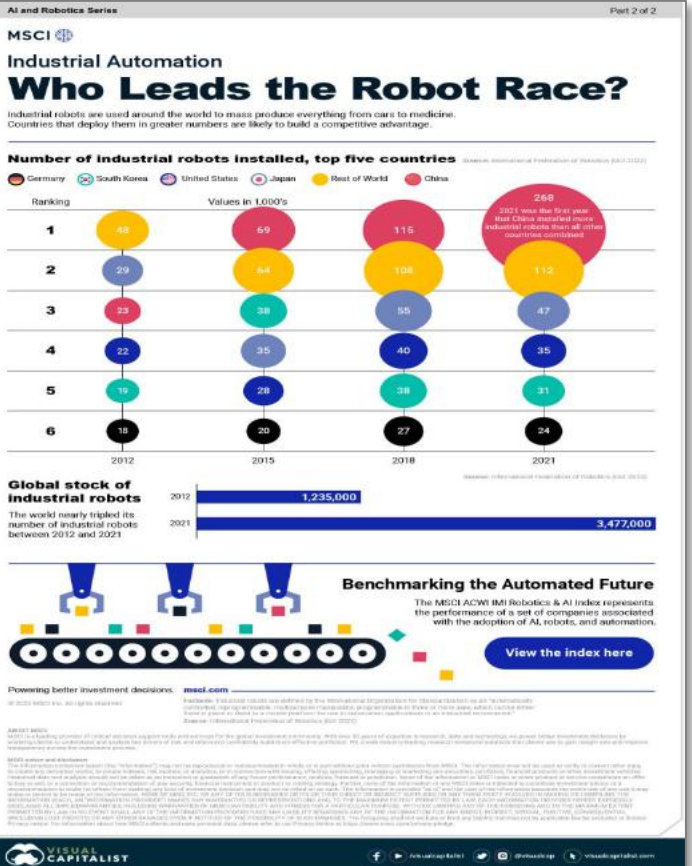
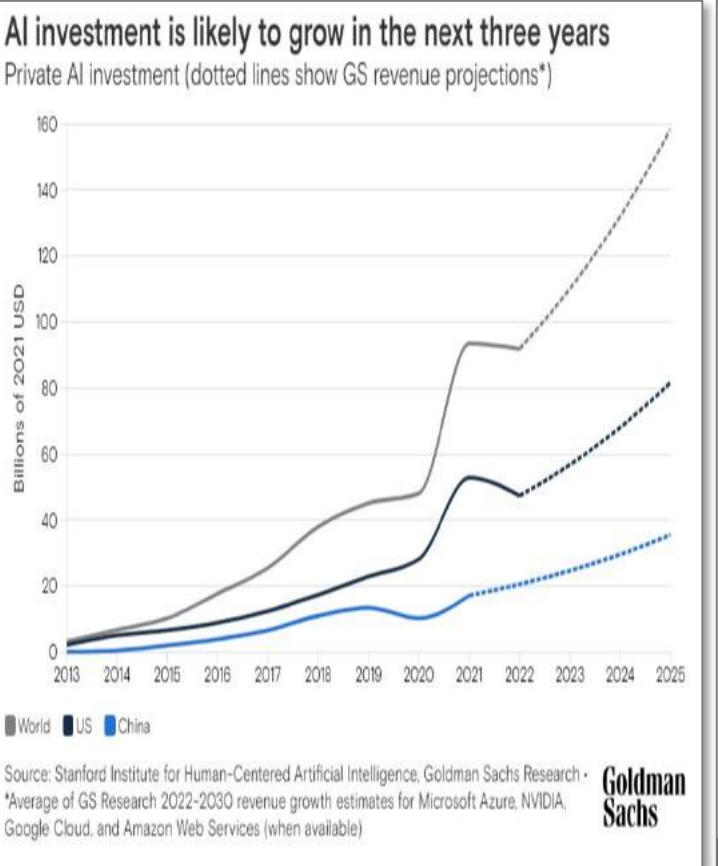
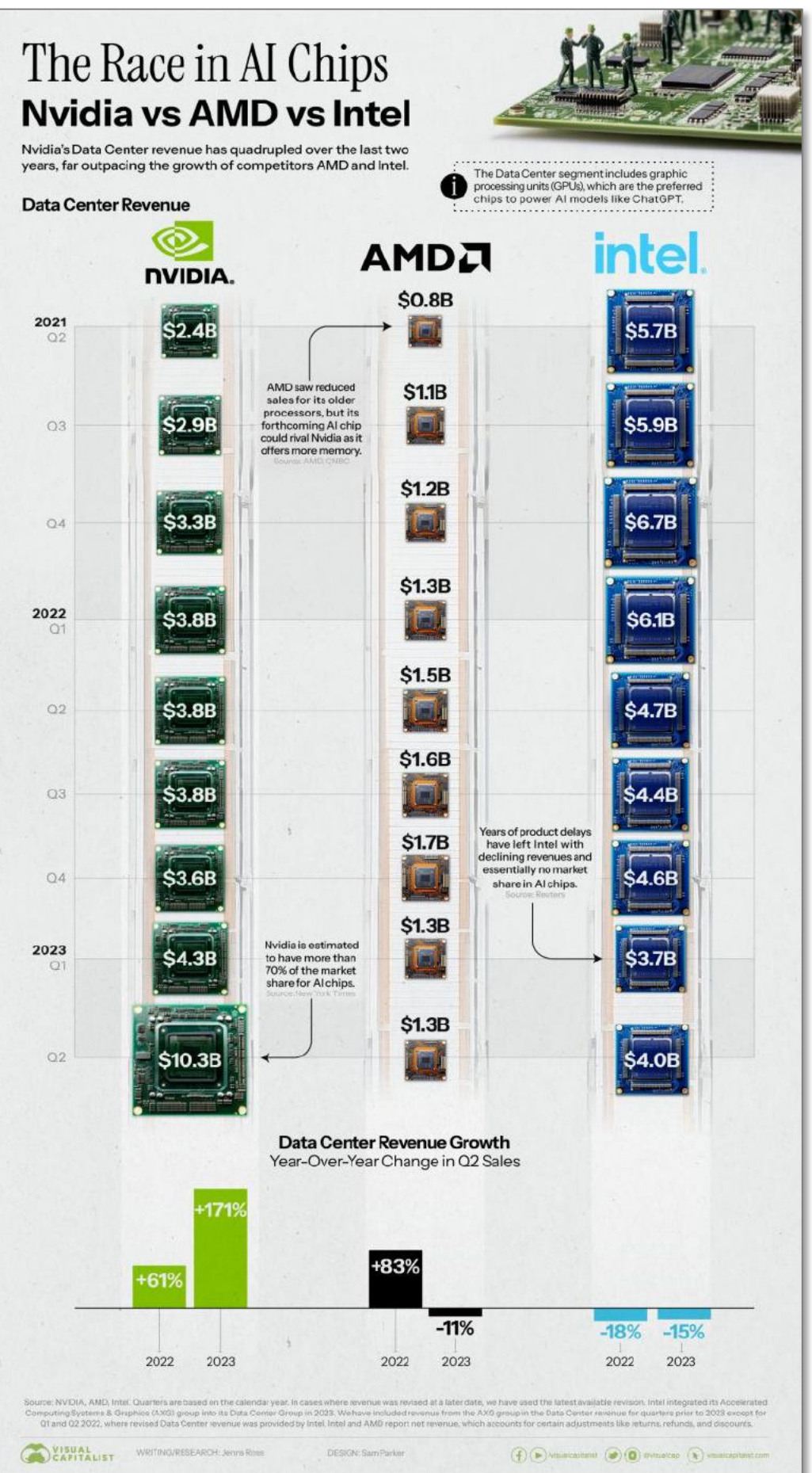
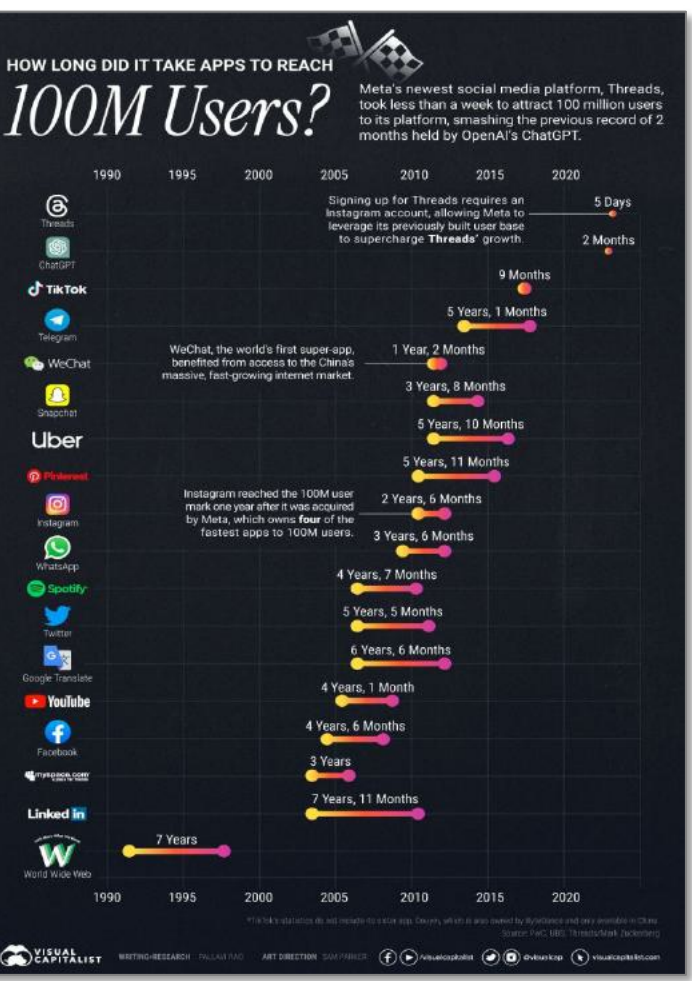
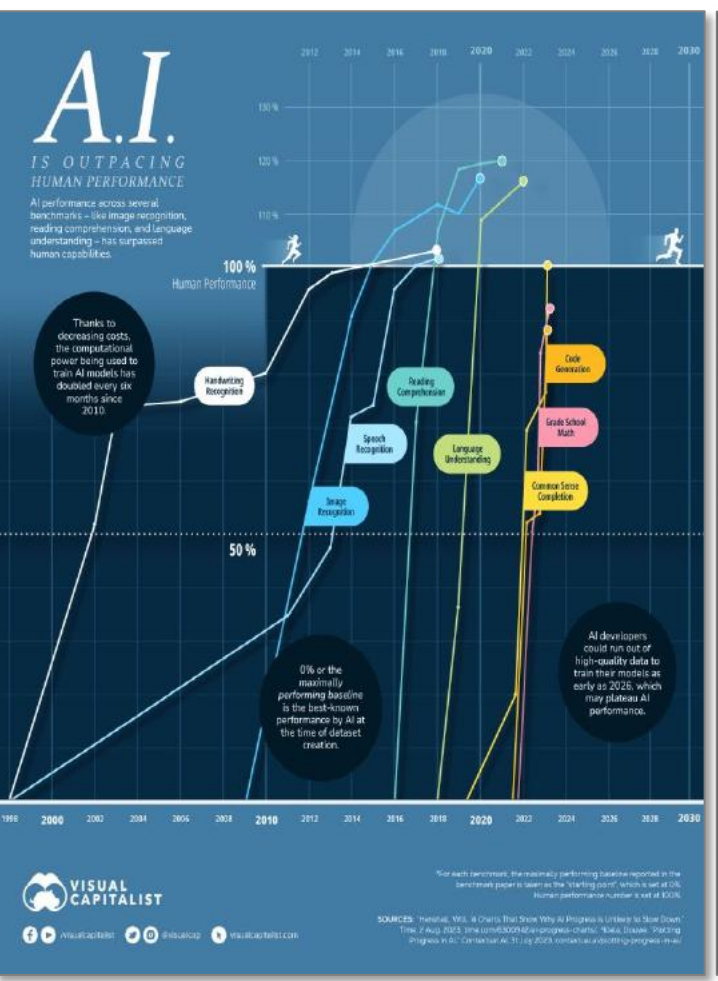
OPTO Thematic Investing How to Invest in the Next Big Idea

Thematic investing unlocks exposure to disruptive innovations like clean tech and artificial intelligence that underpin the next frontier of investment opportunities.

Which 4 trends could define our future?

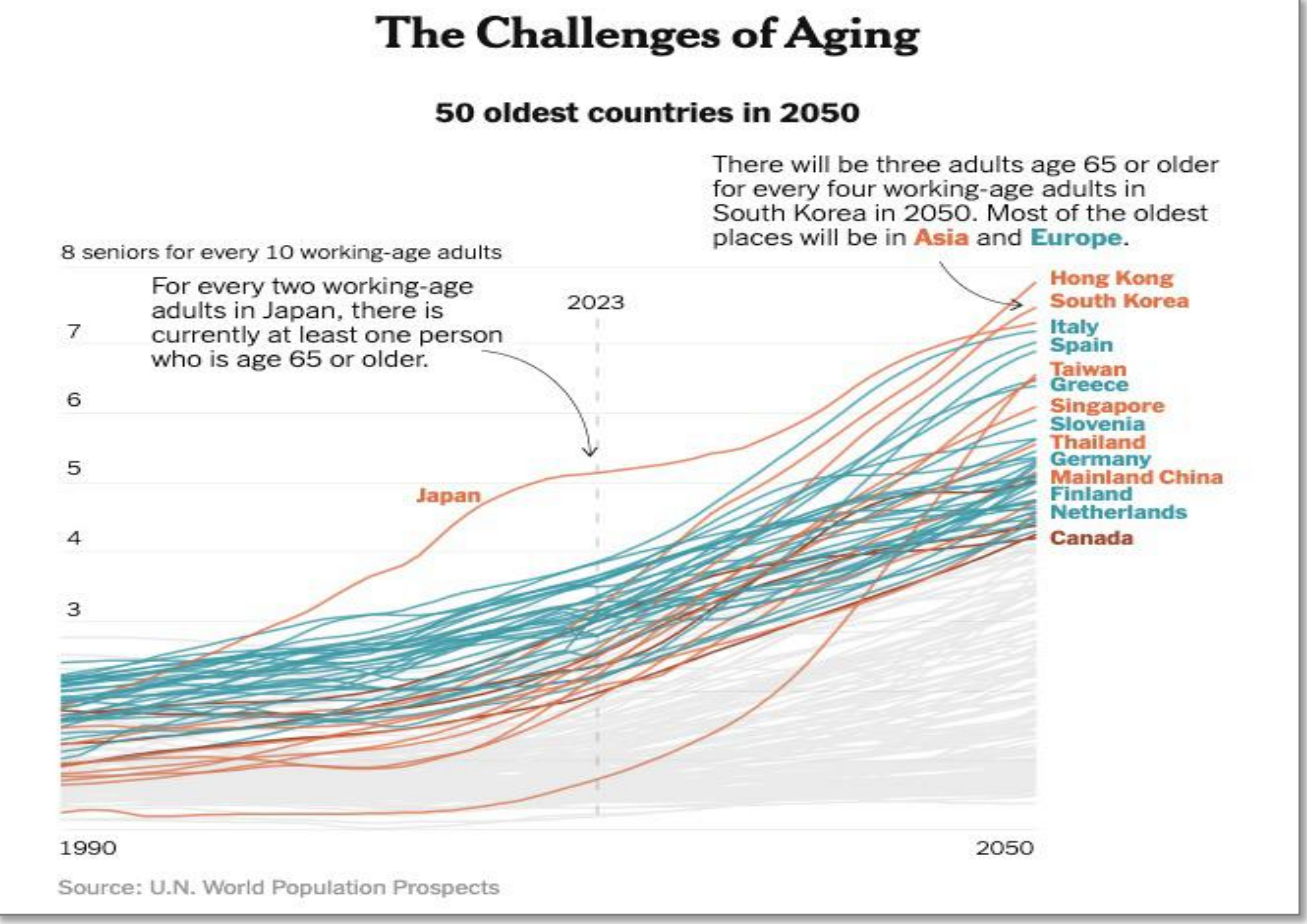
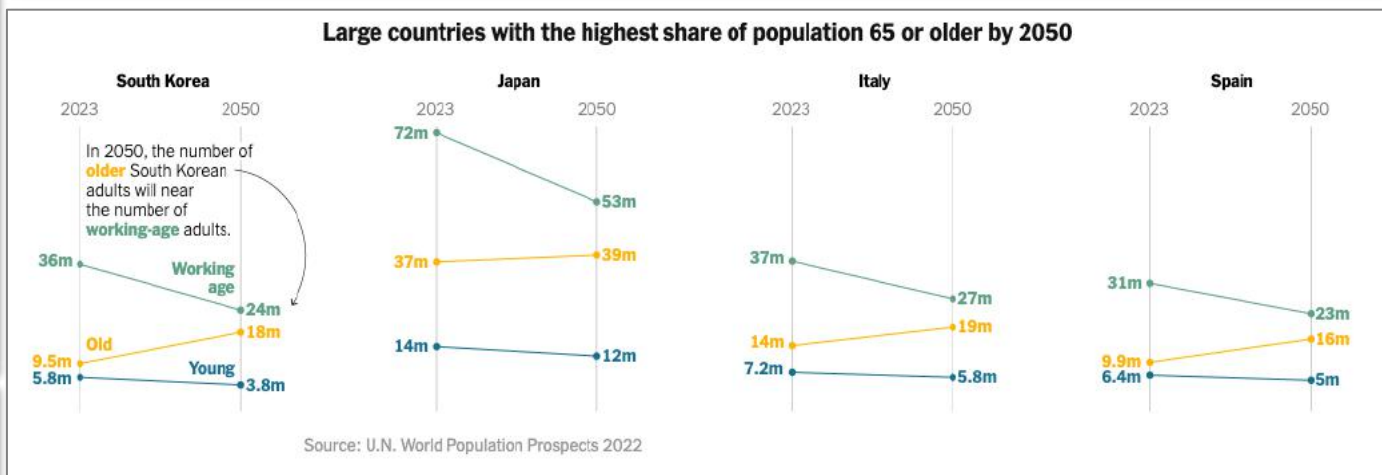
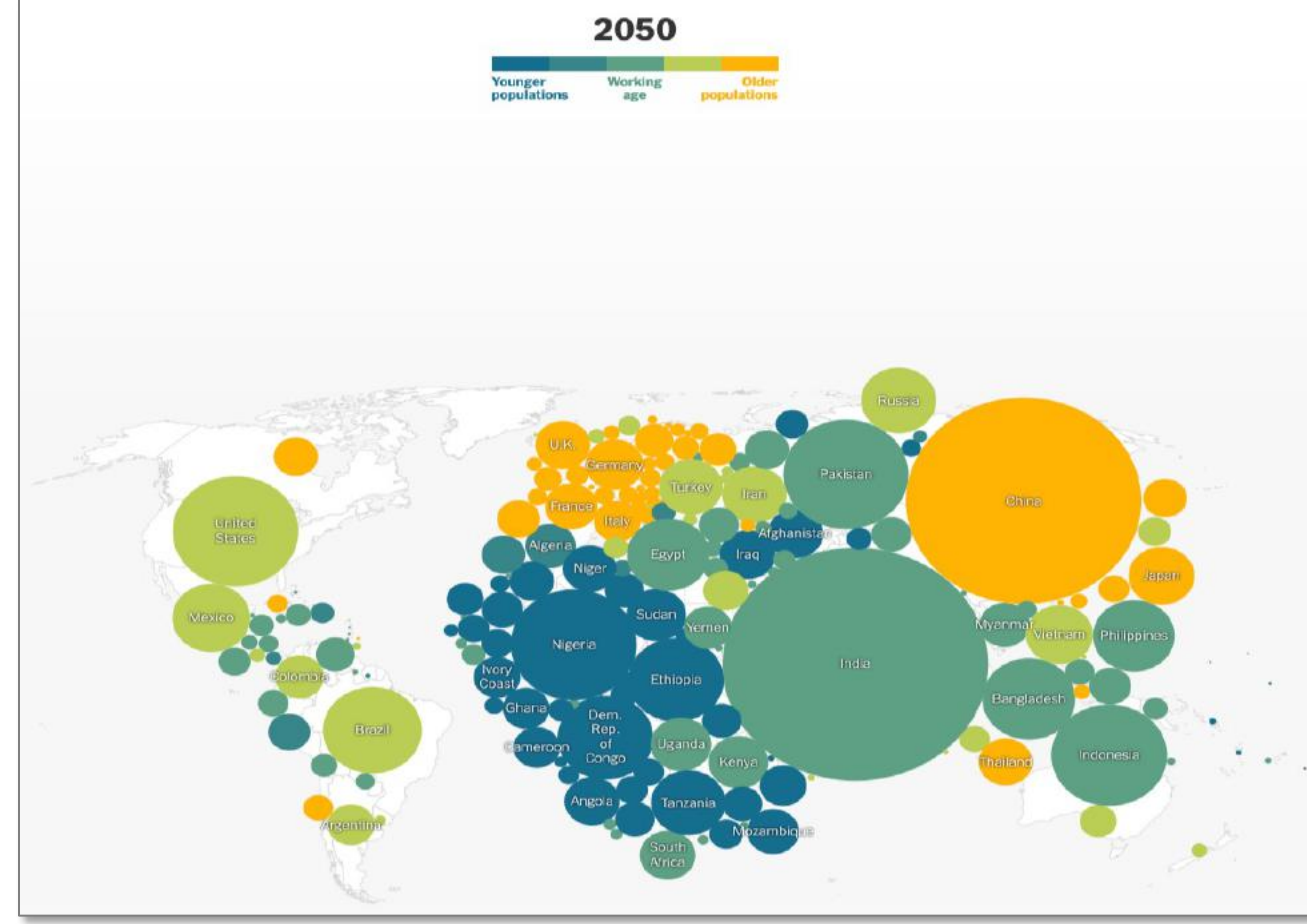
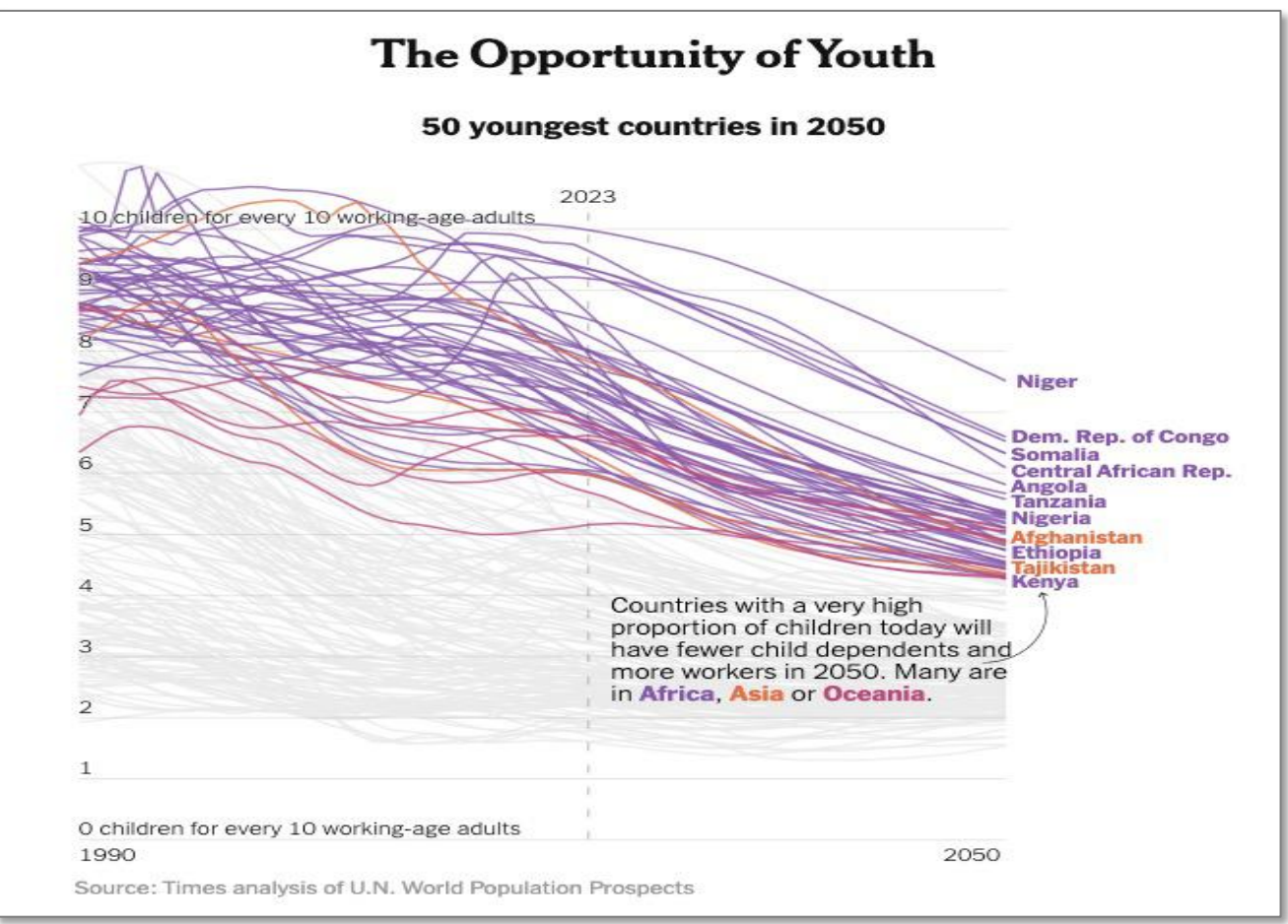
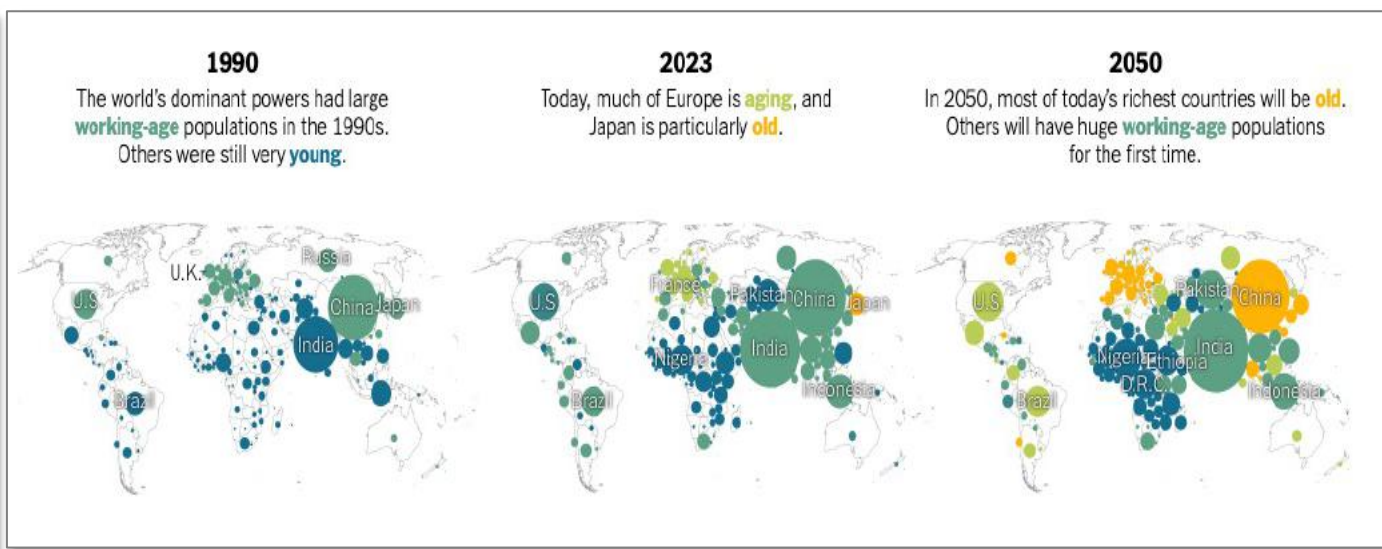
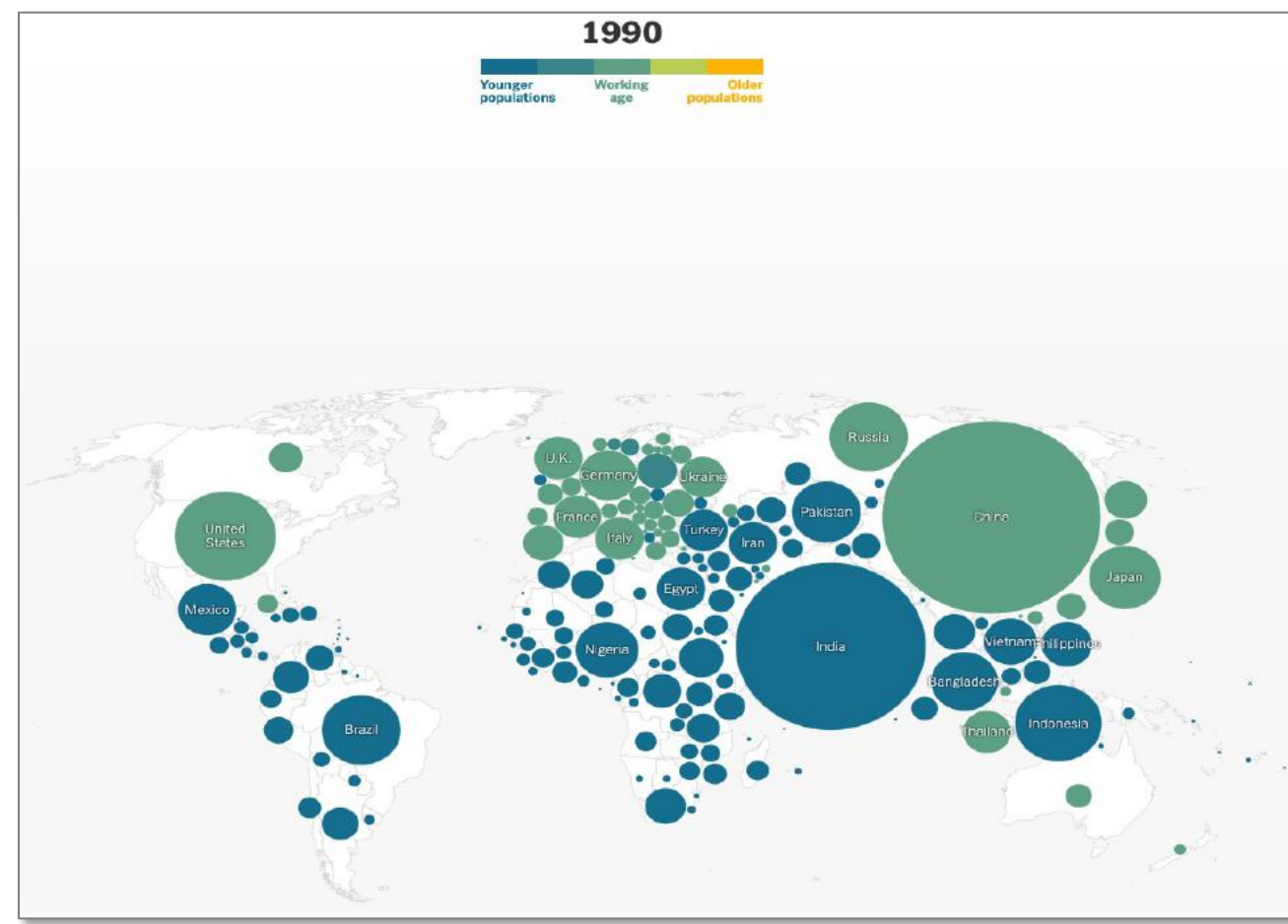
Climate Change, Disruptive Technology, Demographic and Social Change, Next Generation Economy

Visual Capitalist



GCC Advisors

Demografía



Largest working-age share of population

Top 10 largest economies today

1990	2023	2050
Japan	South Korea	South Africa
South Korea	Brazil	Myanmar
Germany	Colombia	Indonesia
Italy	China	Bangladesh
Russia	Thailand	Philippines
United States	Iran	Pakistan
France	Myanmar	Kenya
China	Vietnam	Indonesia
Thailand	Bangladesh	Egypt
United Kingdom	Indonesia	Ethiopia

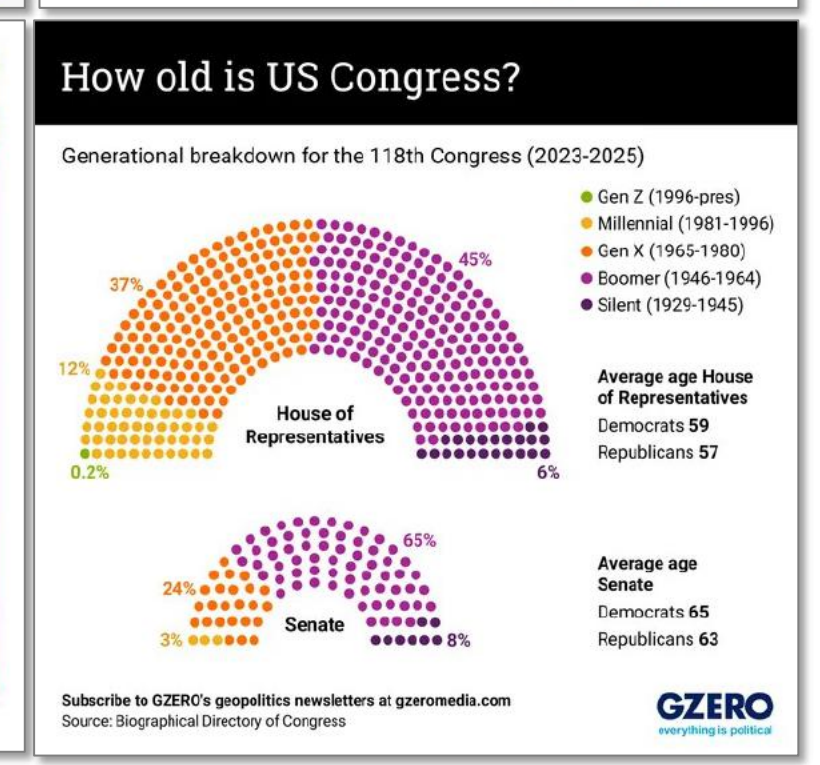
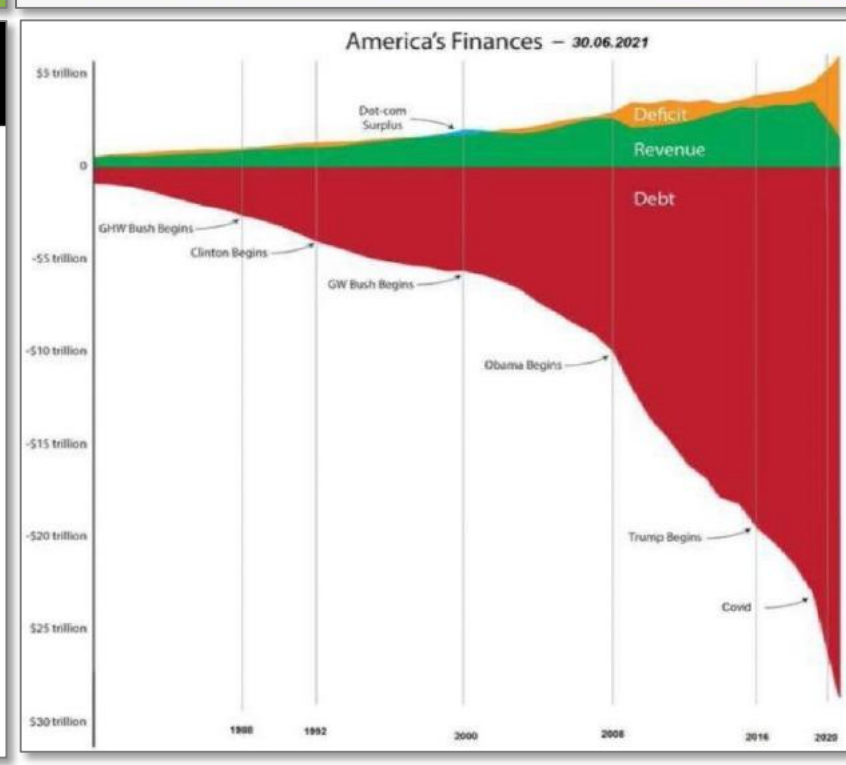
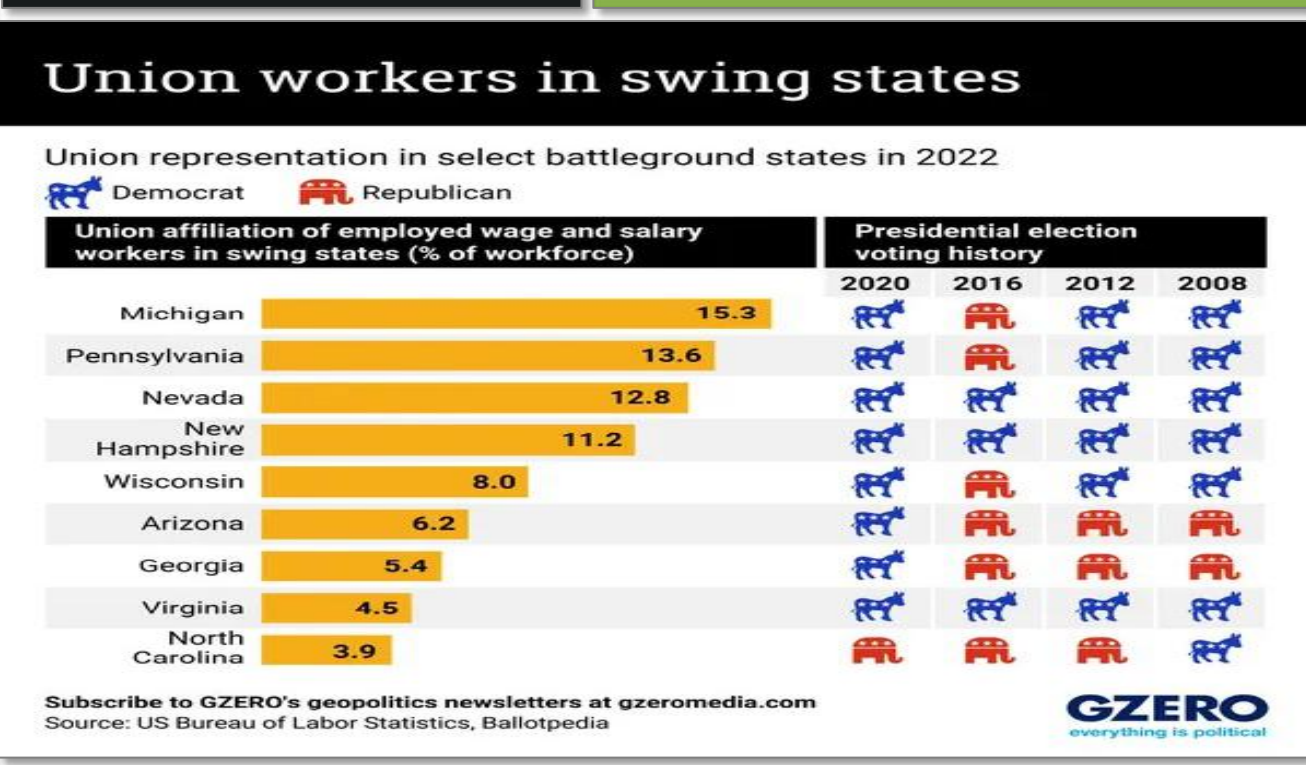
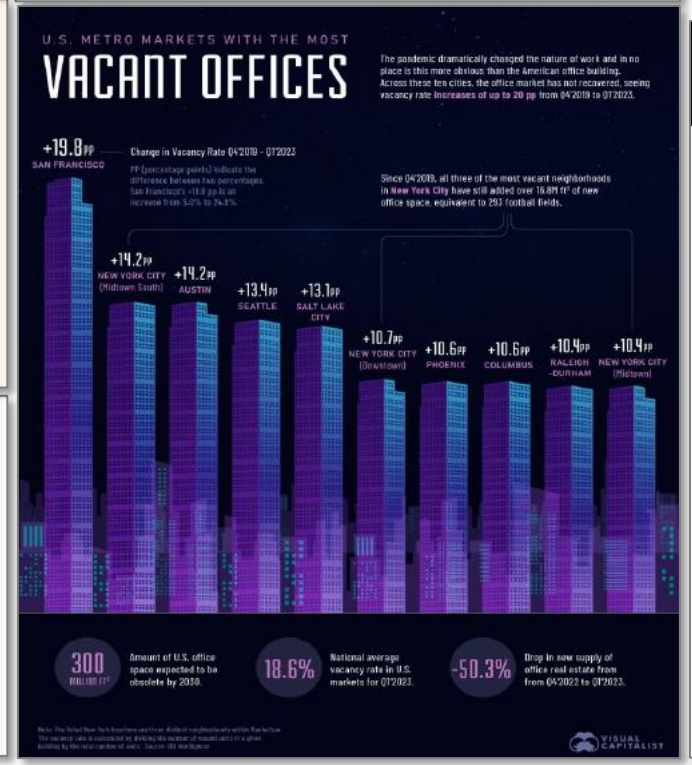
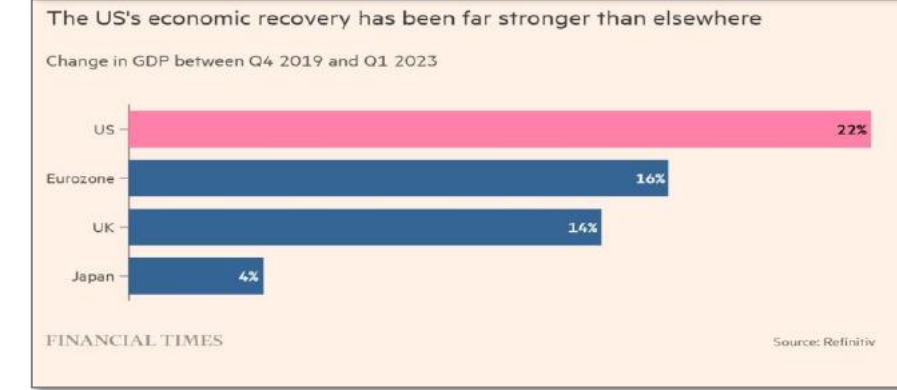
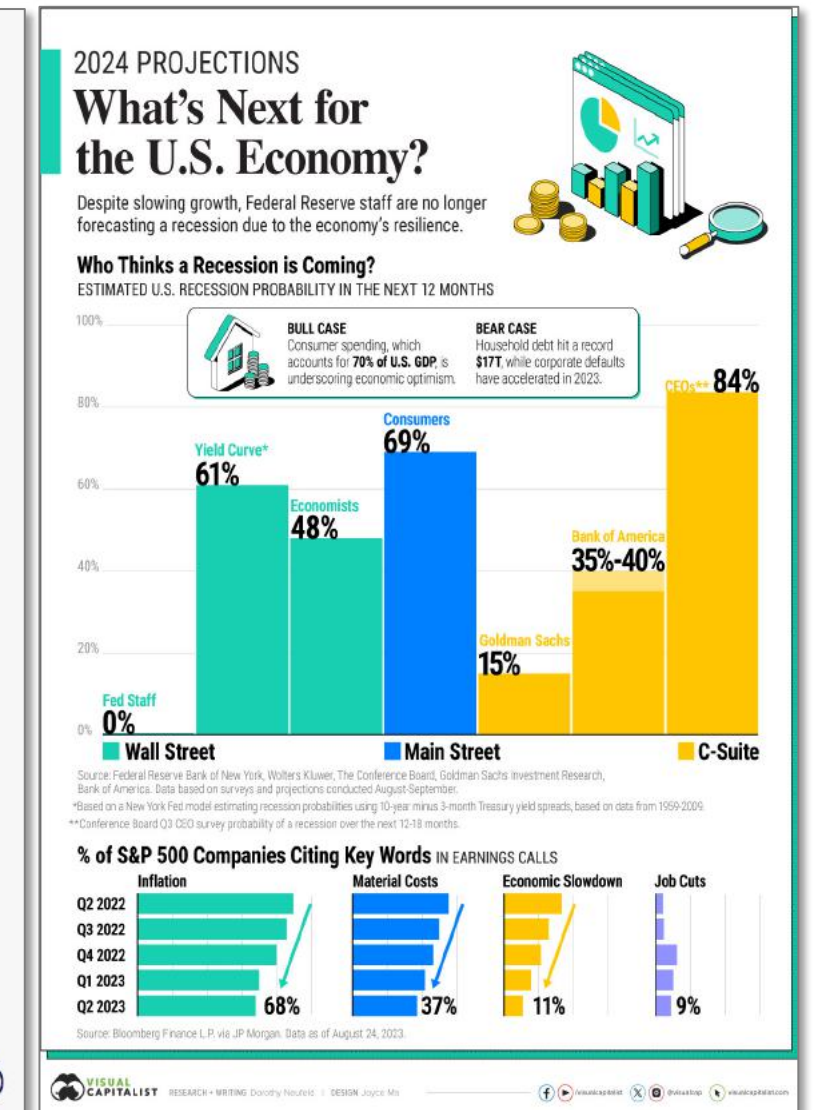
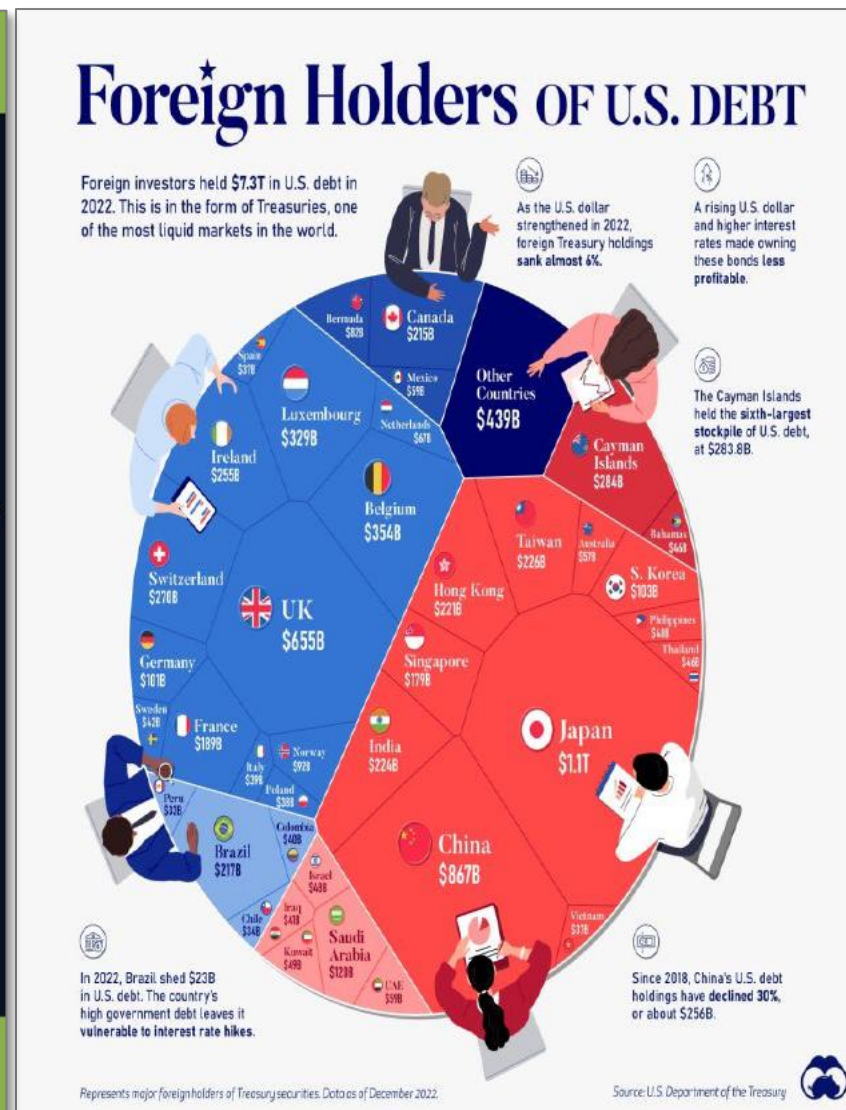
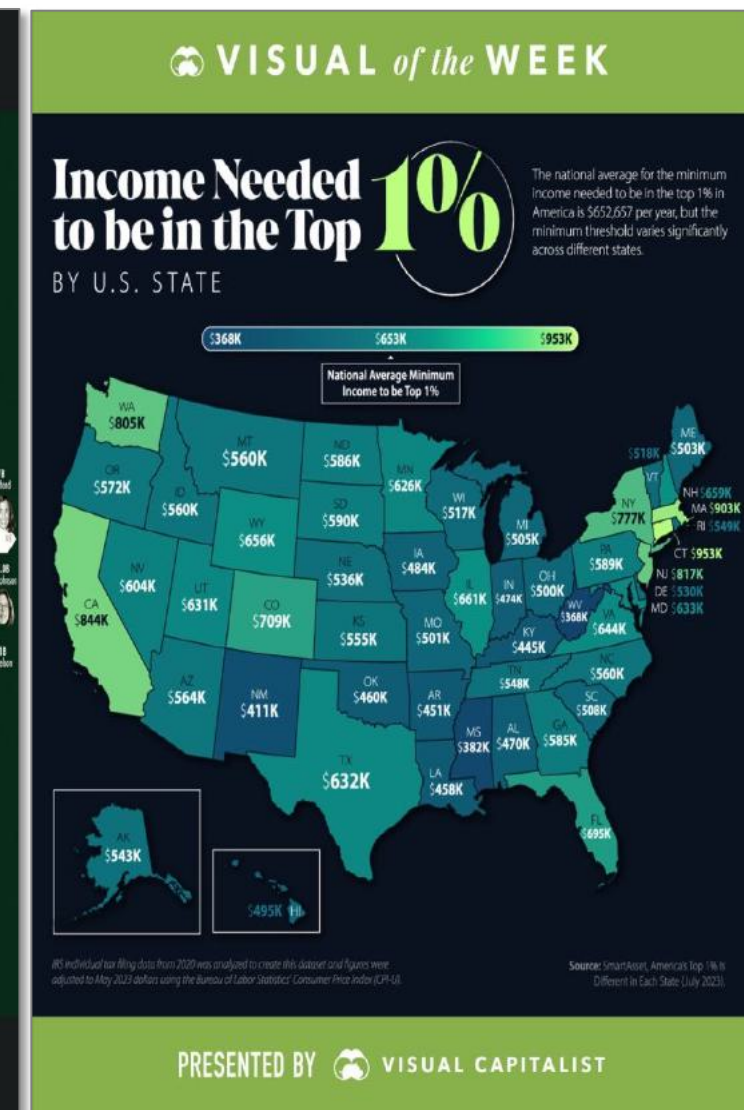
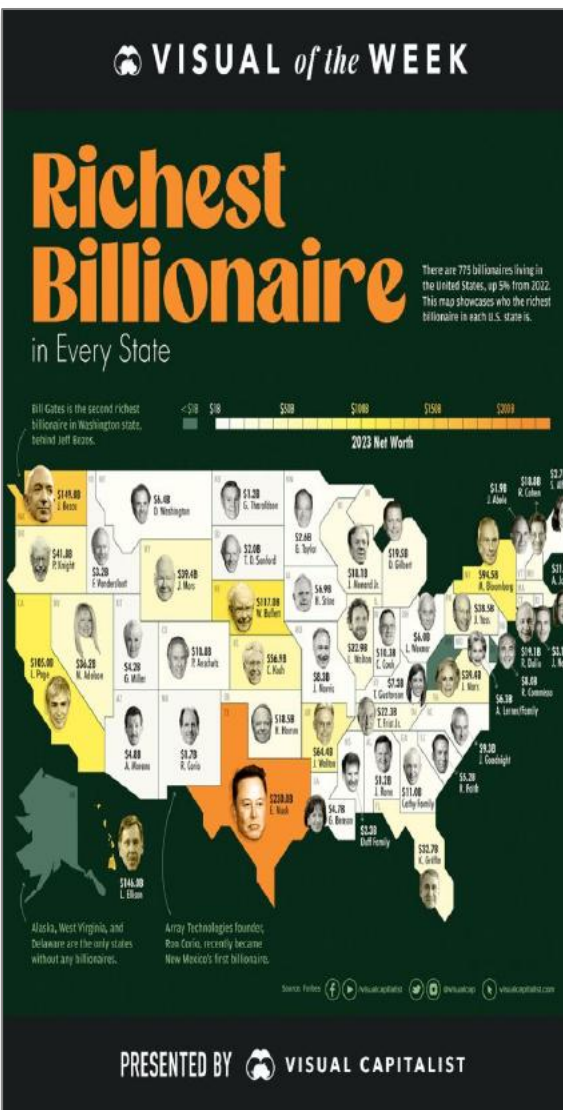
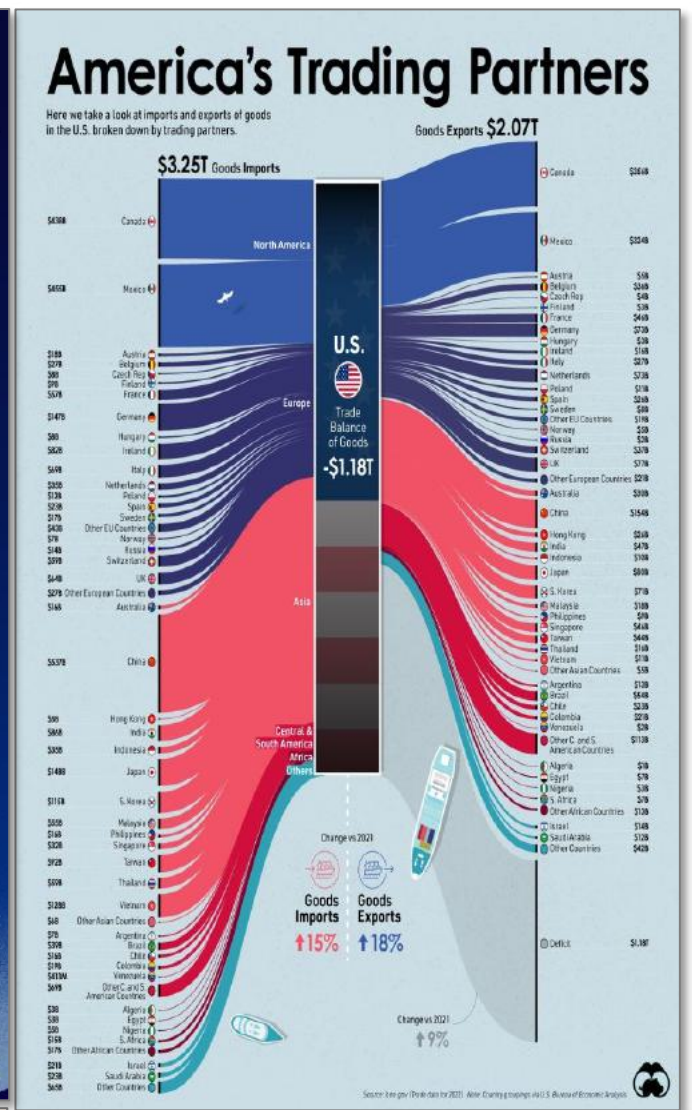
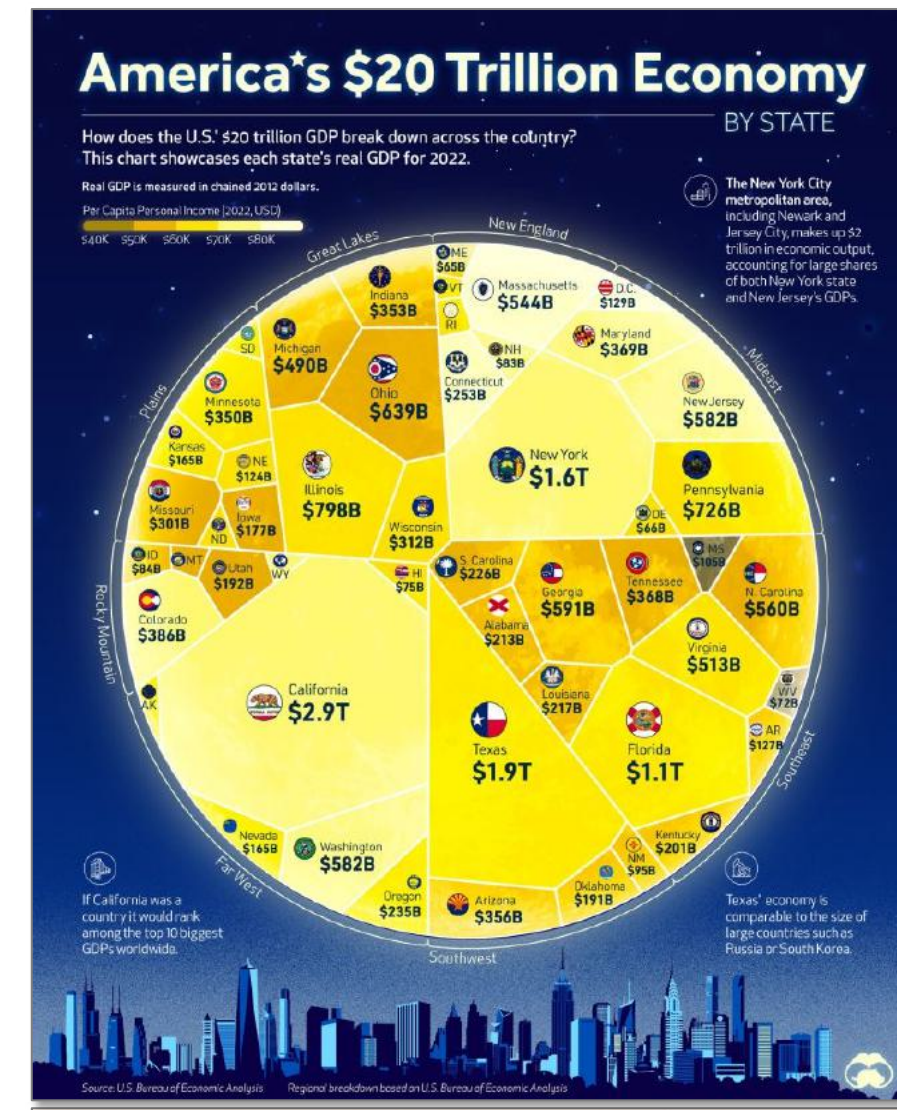
Sources: U.N. World Population Prospects, World Bank - Graphic includes countries with at least 50 million people in 2023. Largest economies are determined by gross domestic product.

Source: The New York Times

Marketing strategy's goal is to increase sales and achieve advantage over competitors. It includes short term and long term activities of marketing.

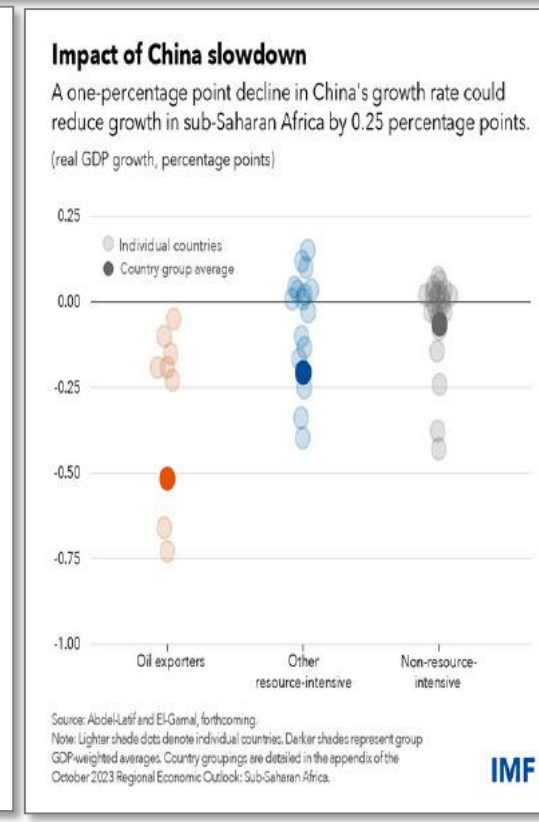
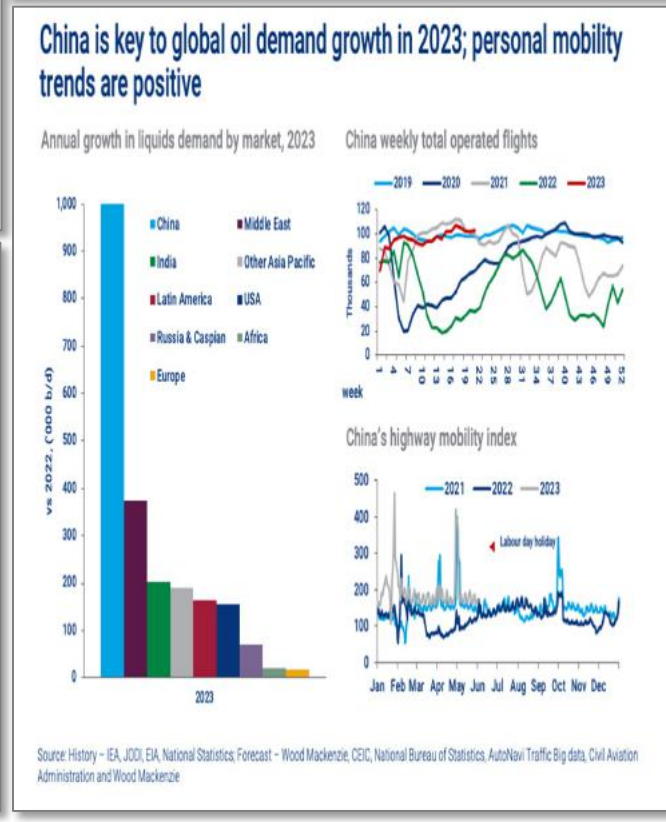
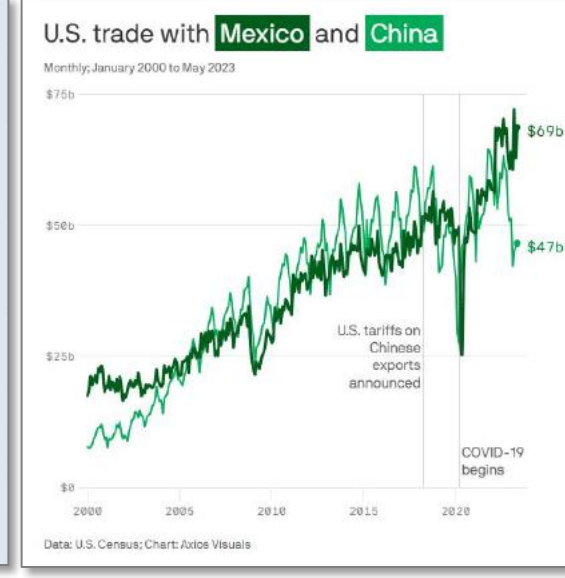
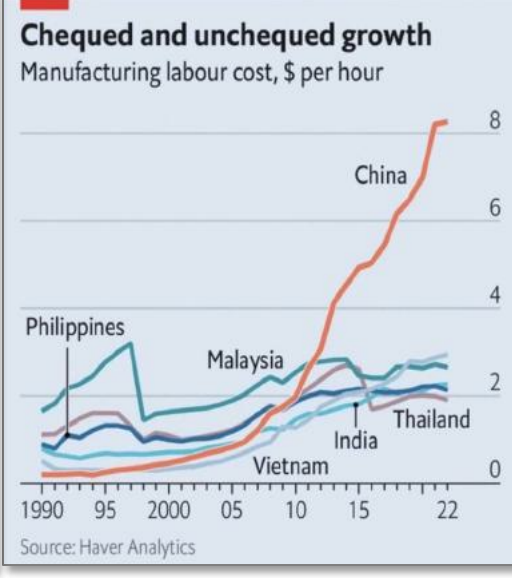
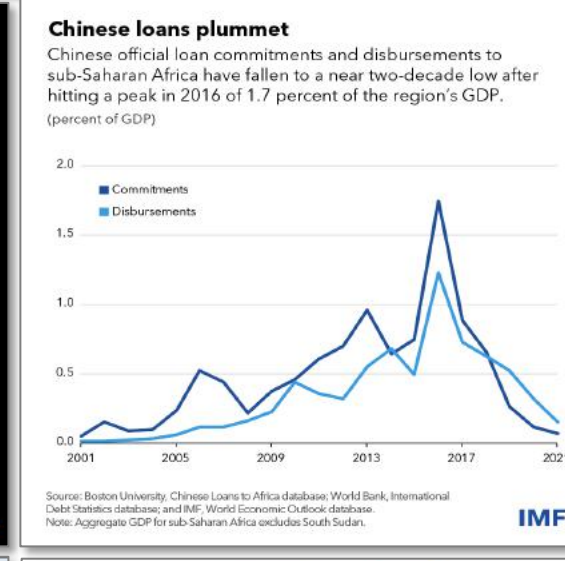
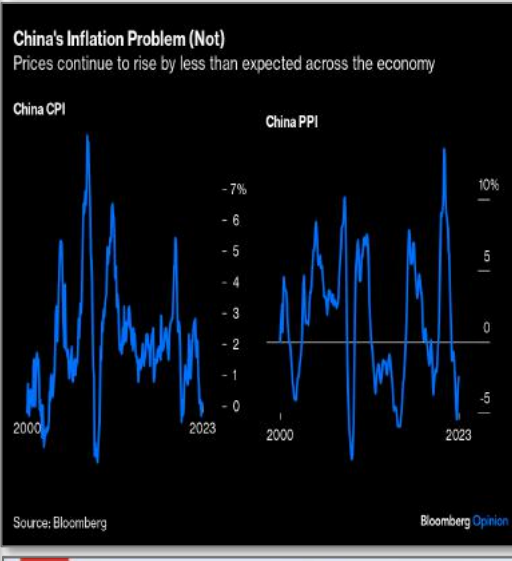
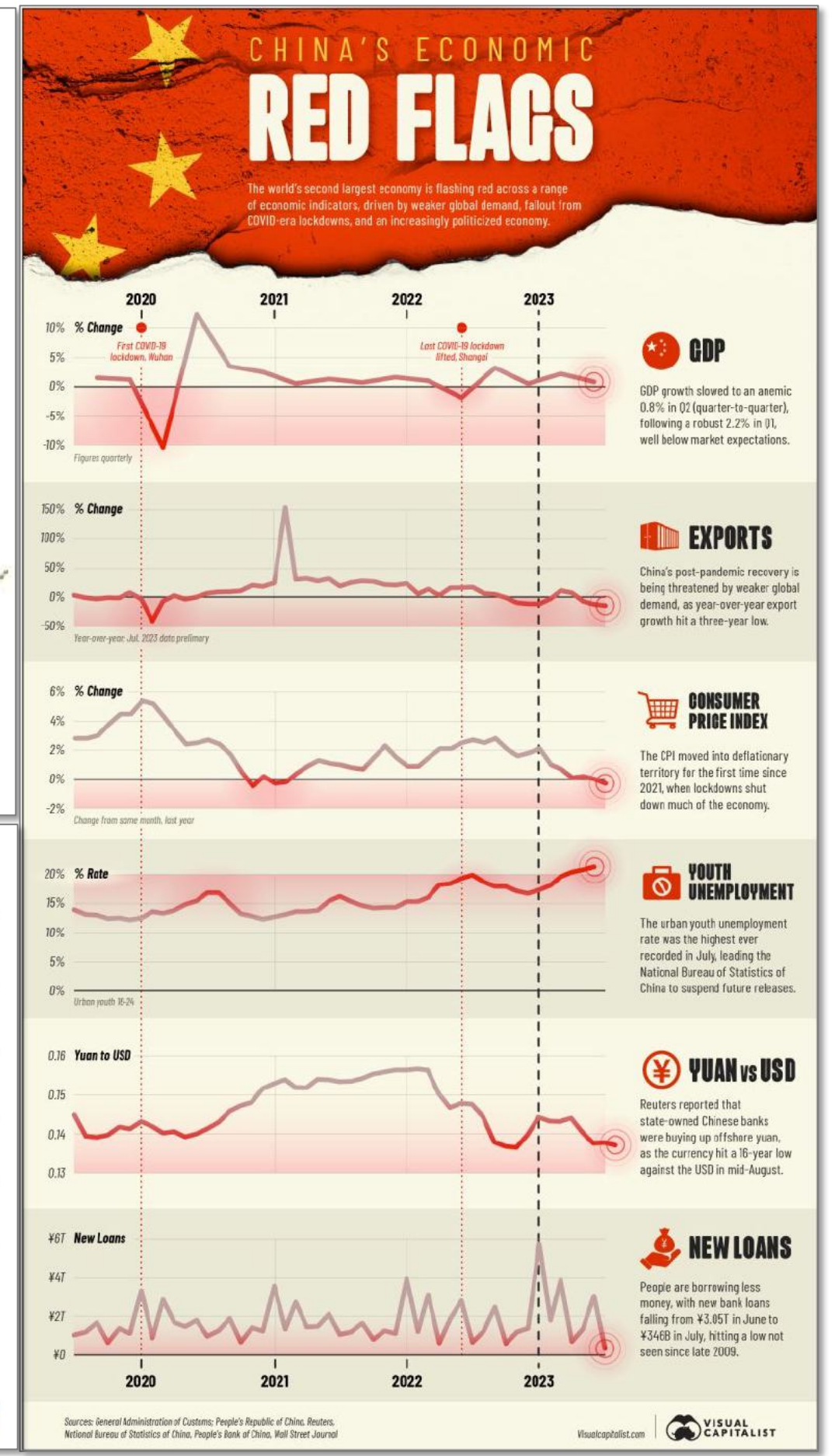
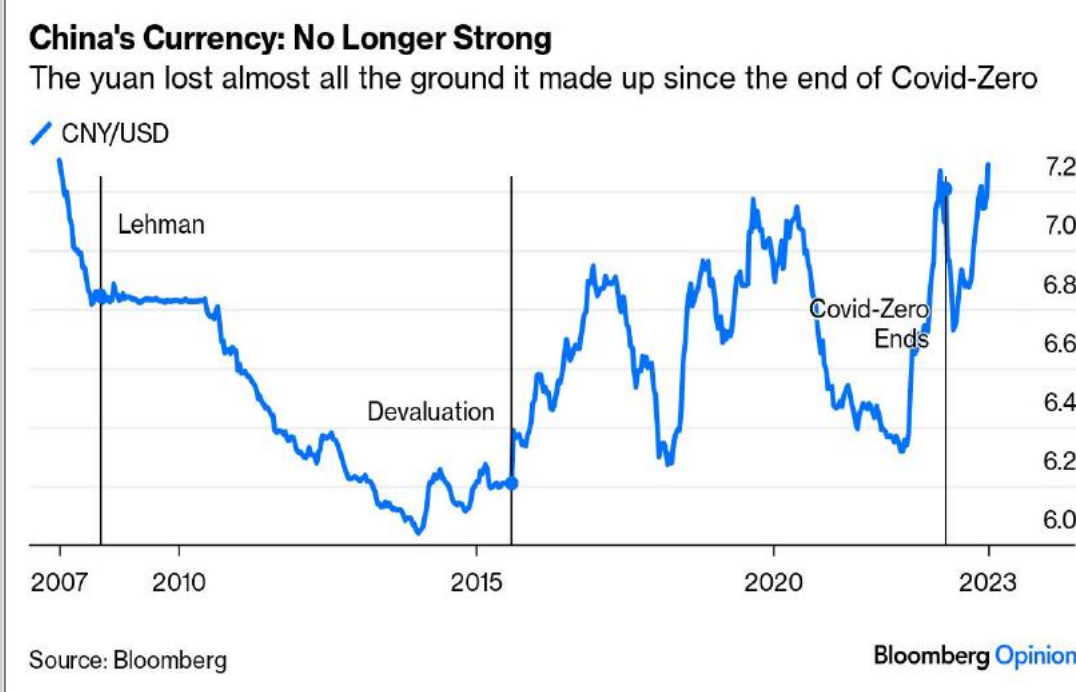
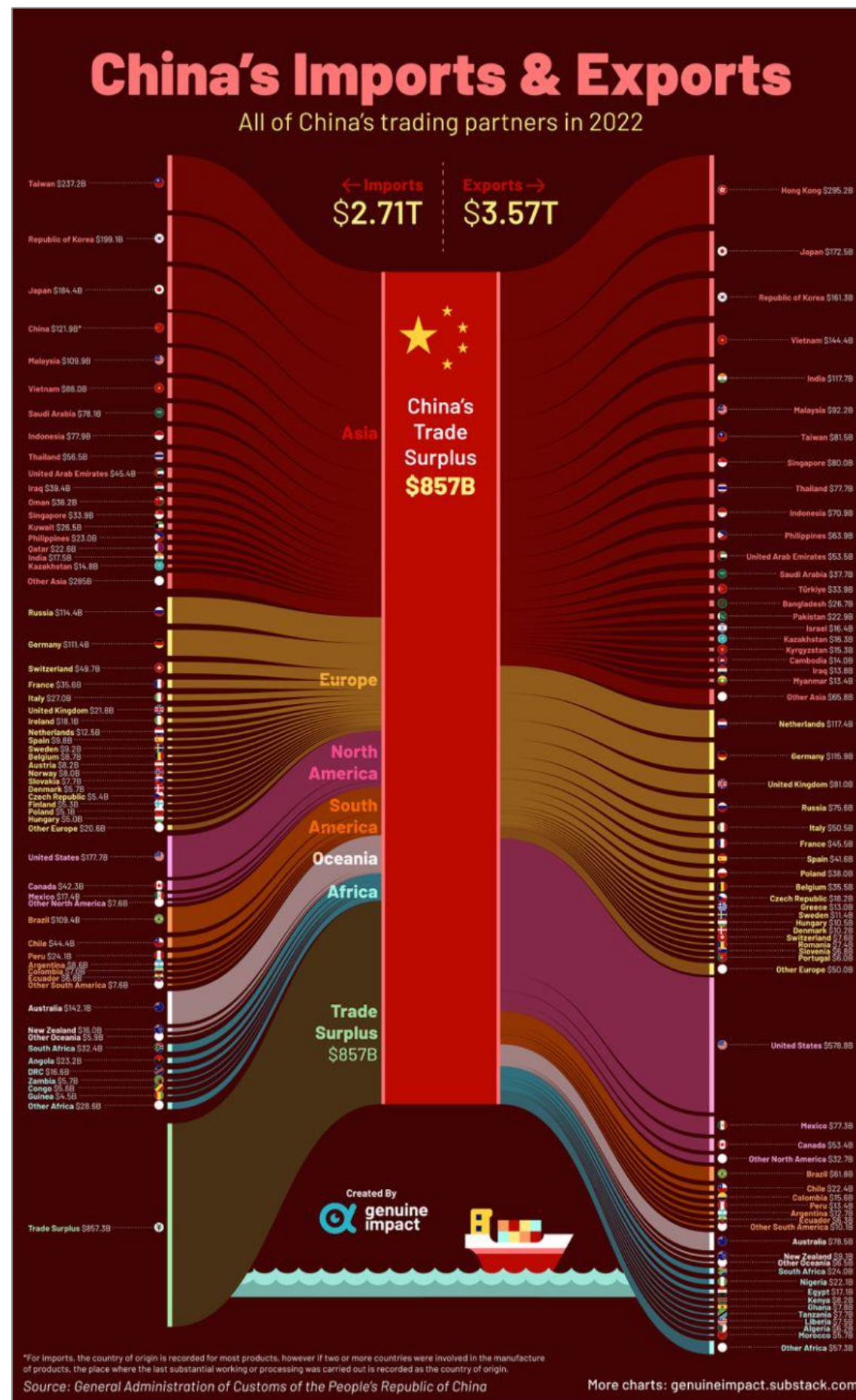
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Geopolítica - Estados Unidos



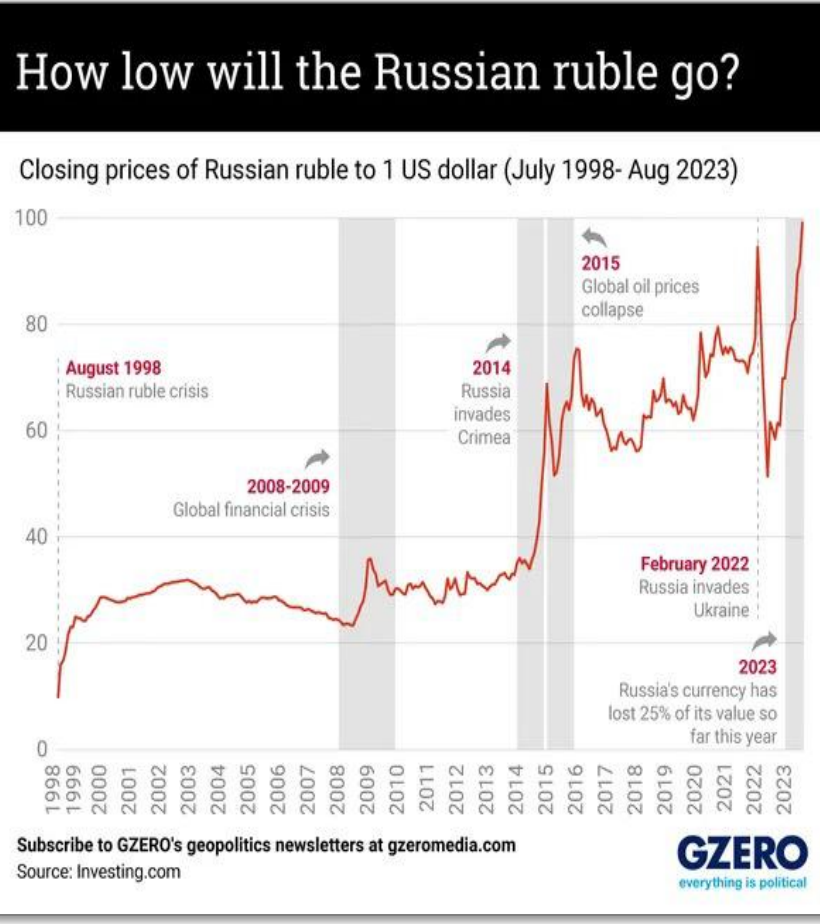
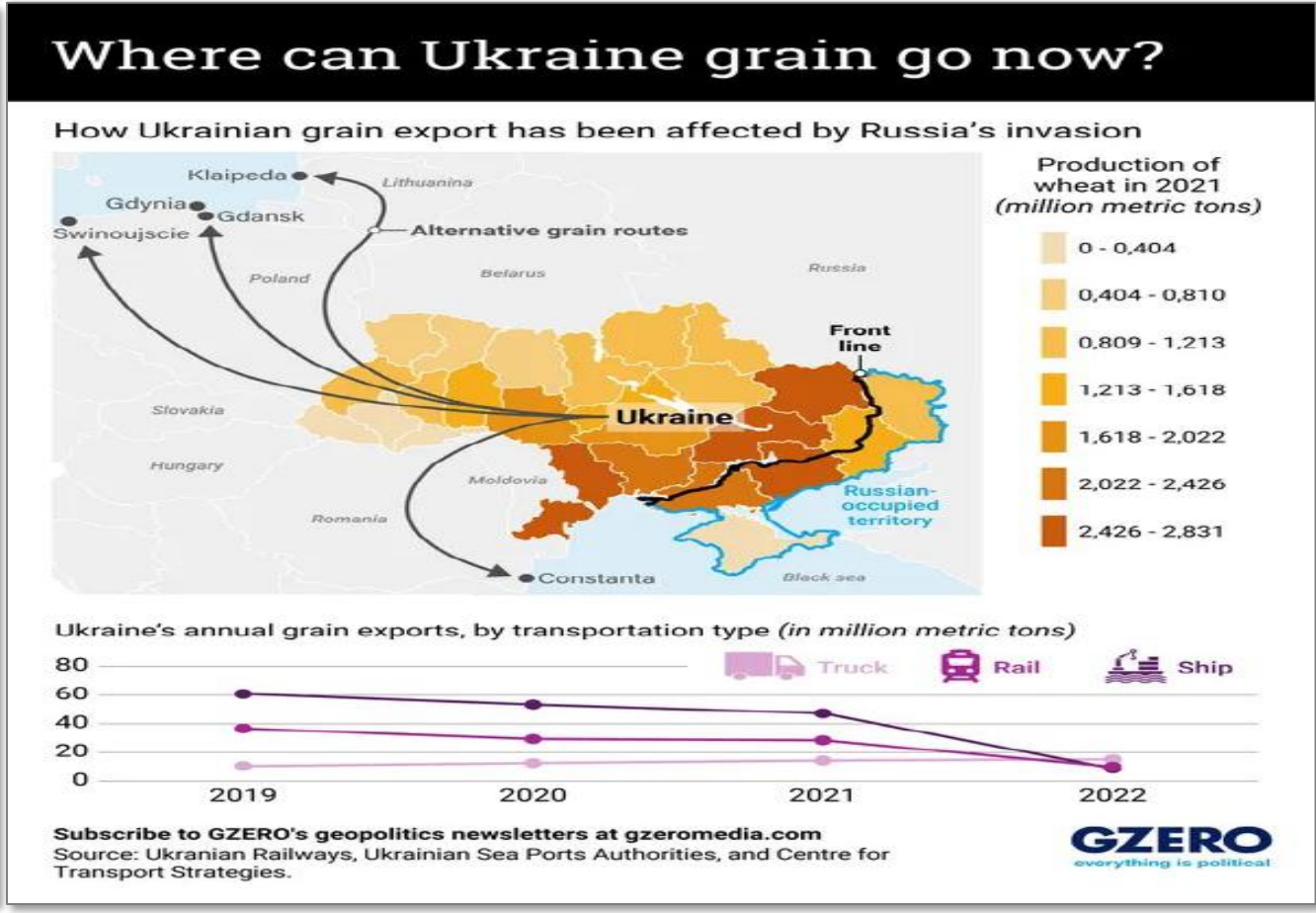
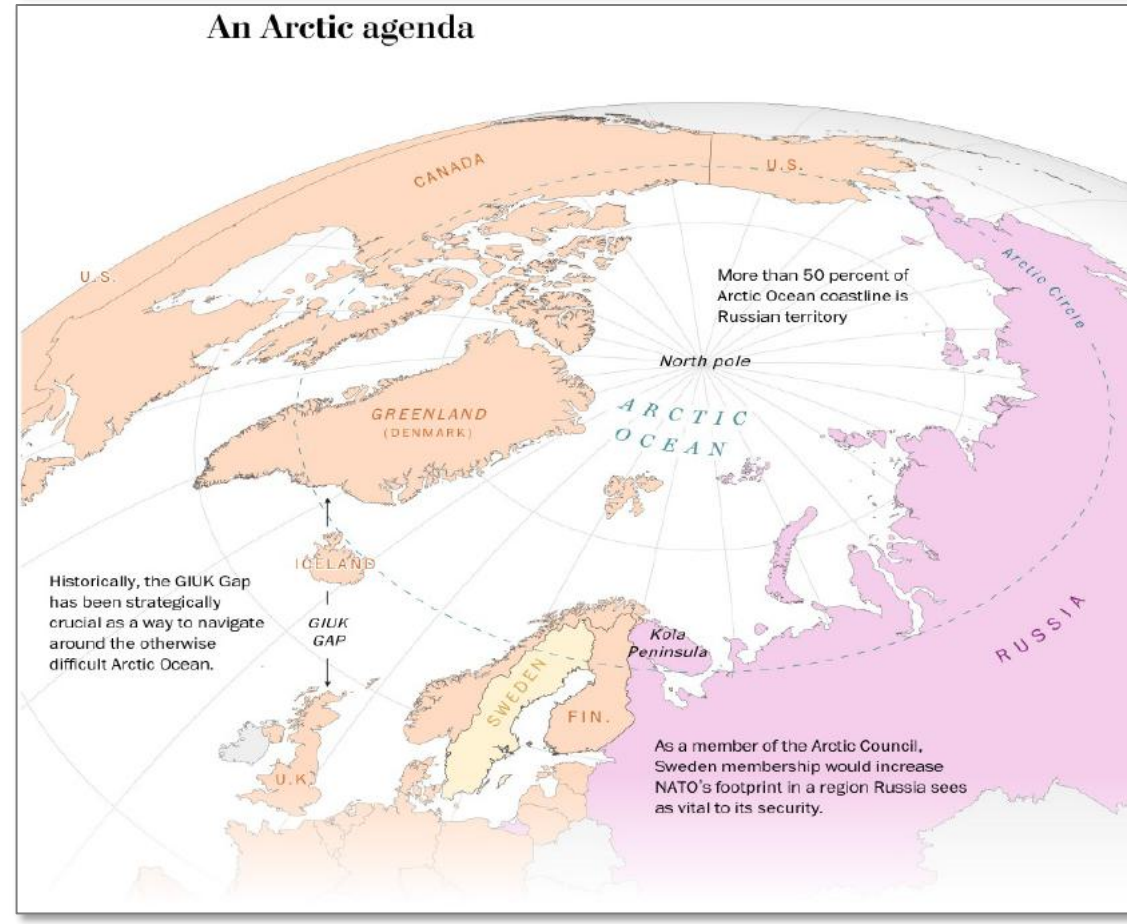
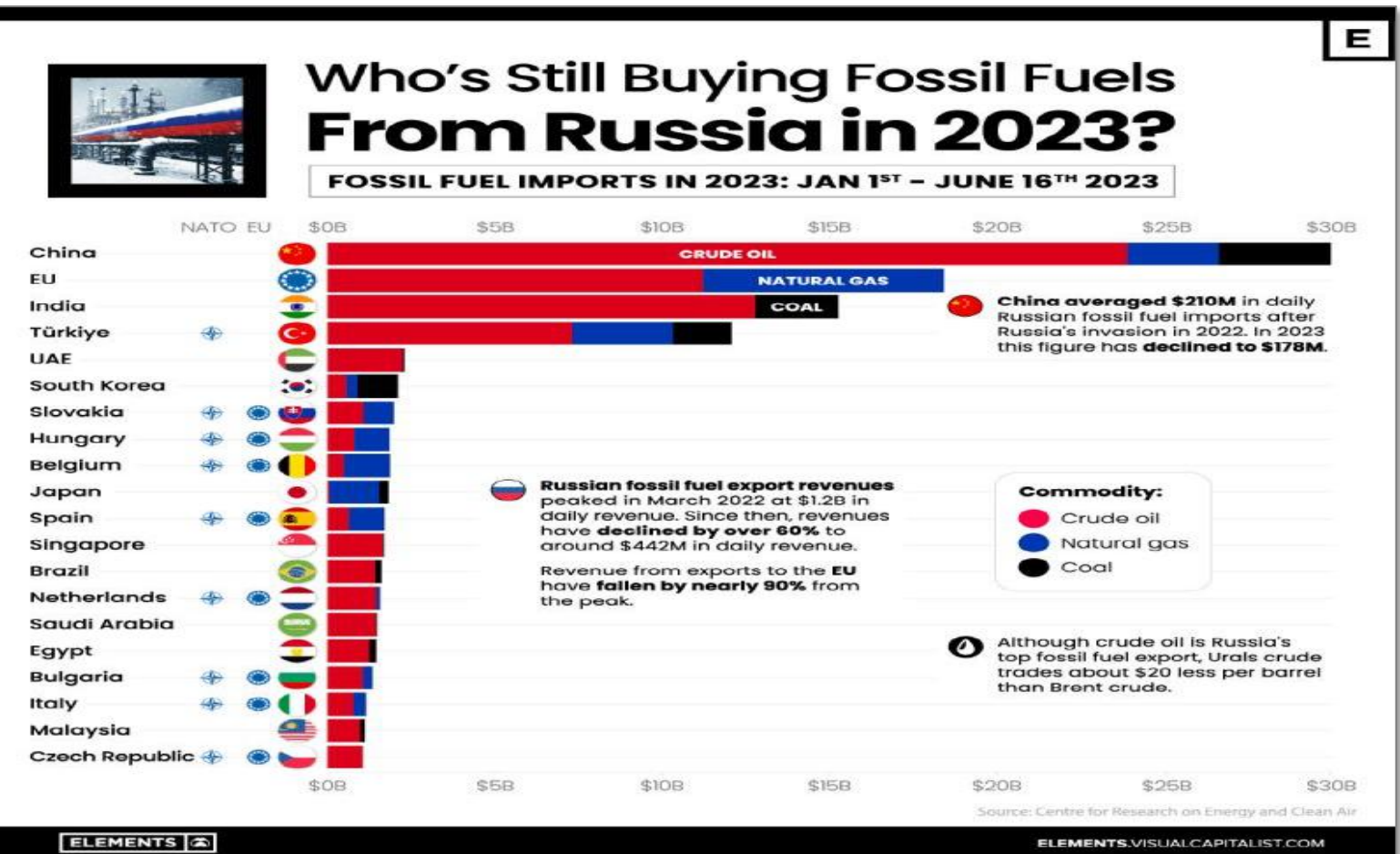
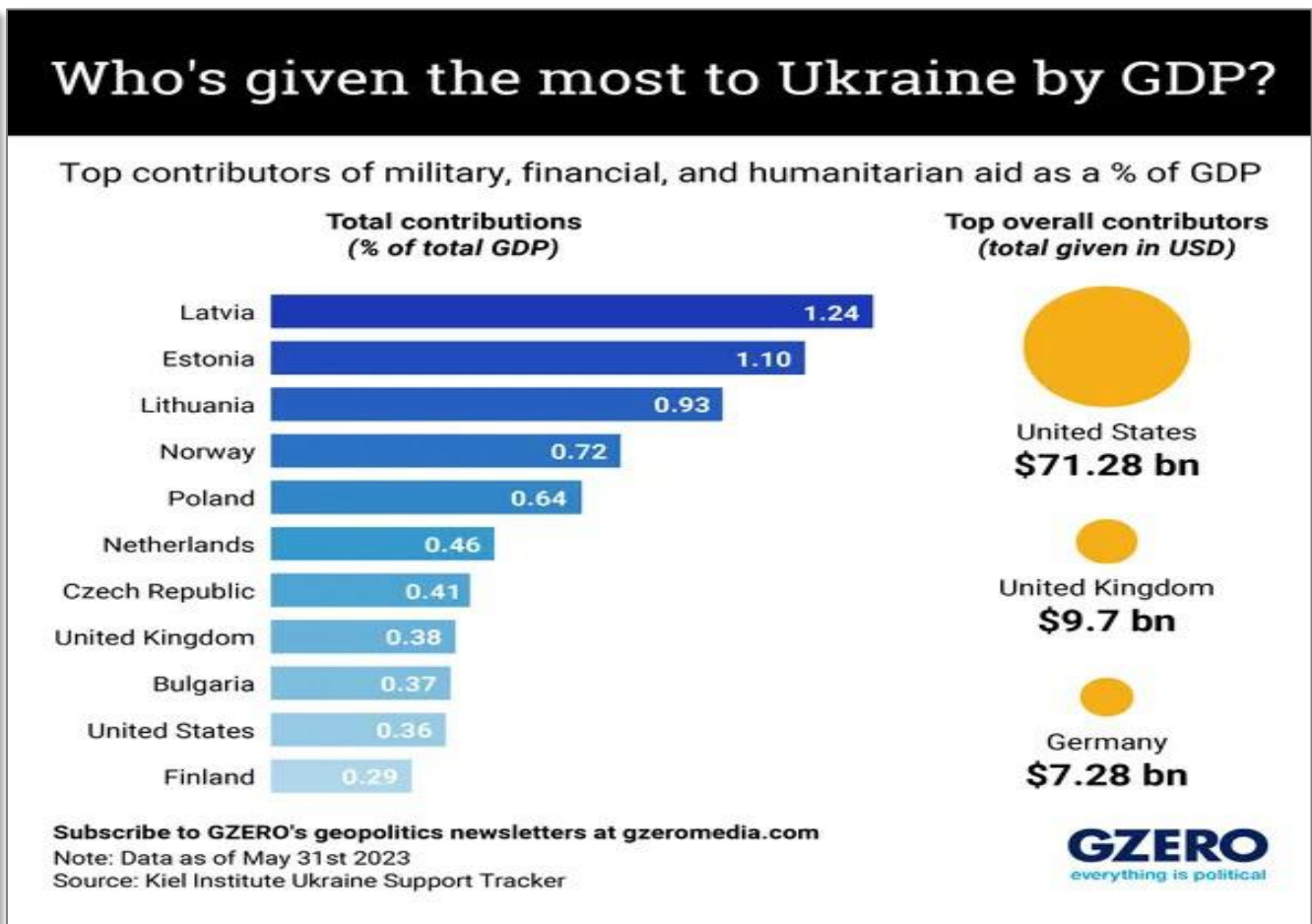
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Geopolítica - China



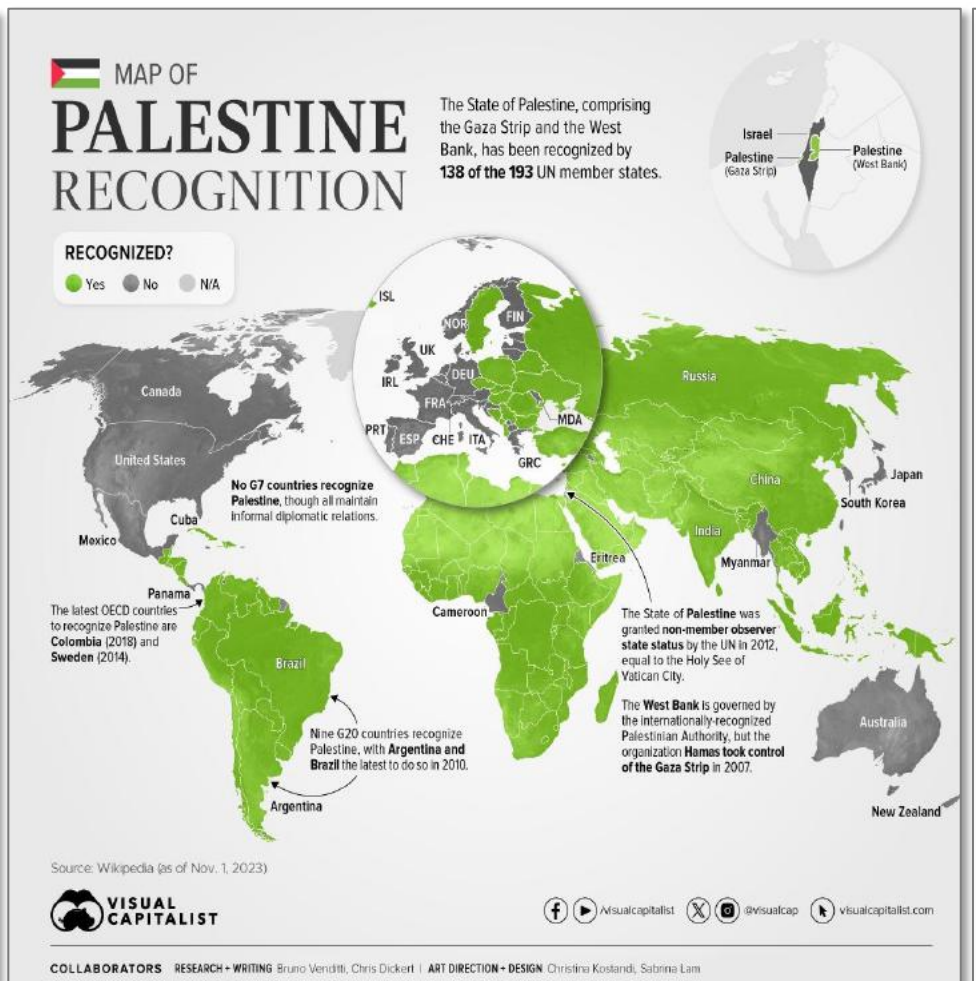
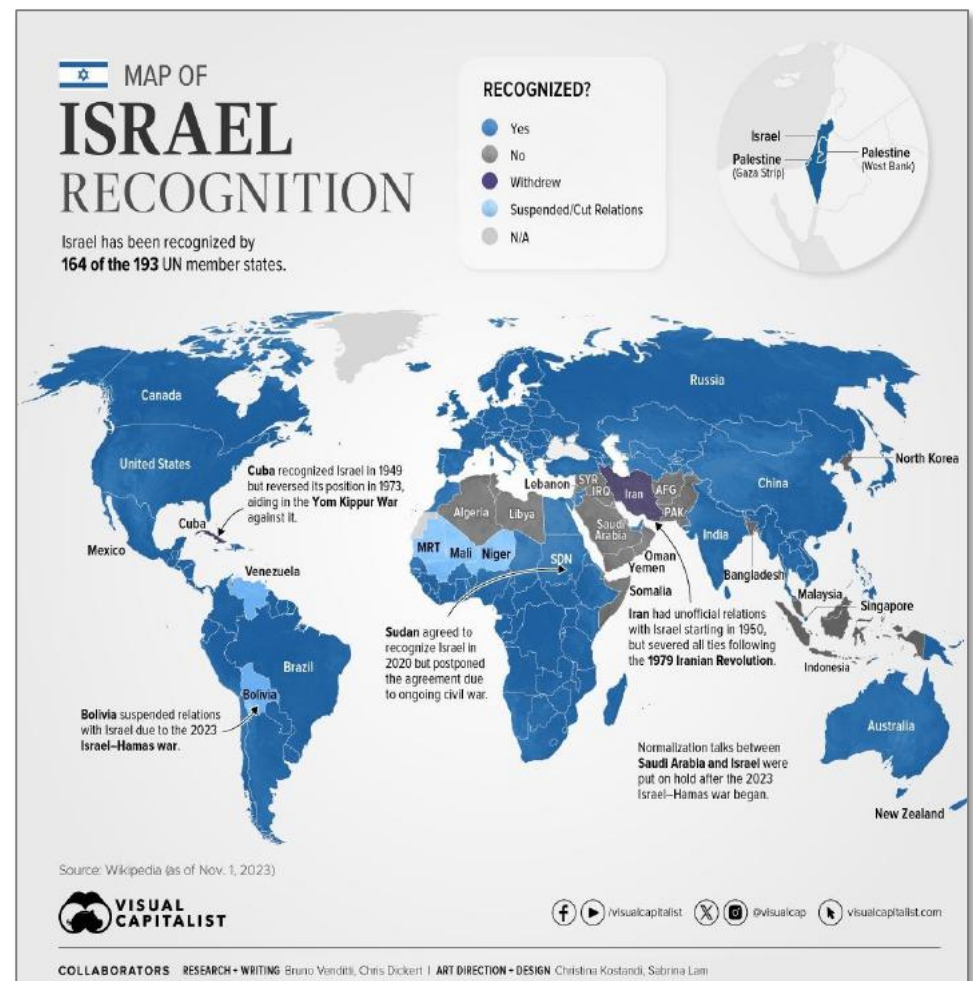
Geopolítica - Ucrania

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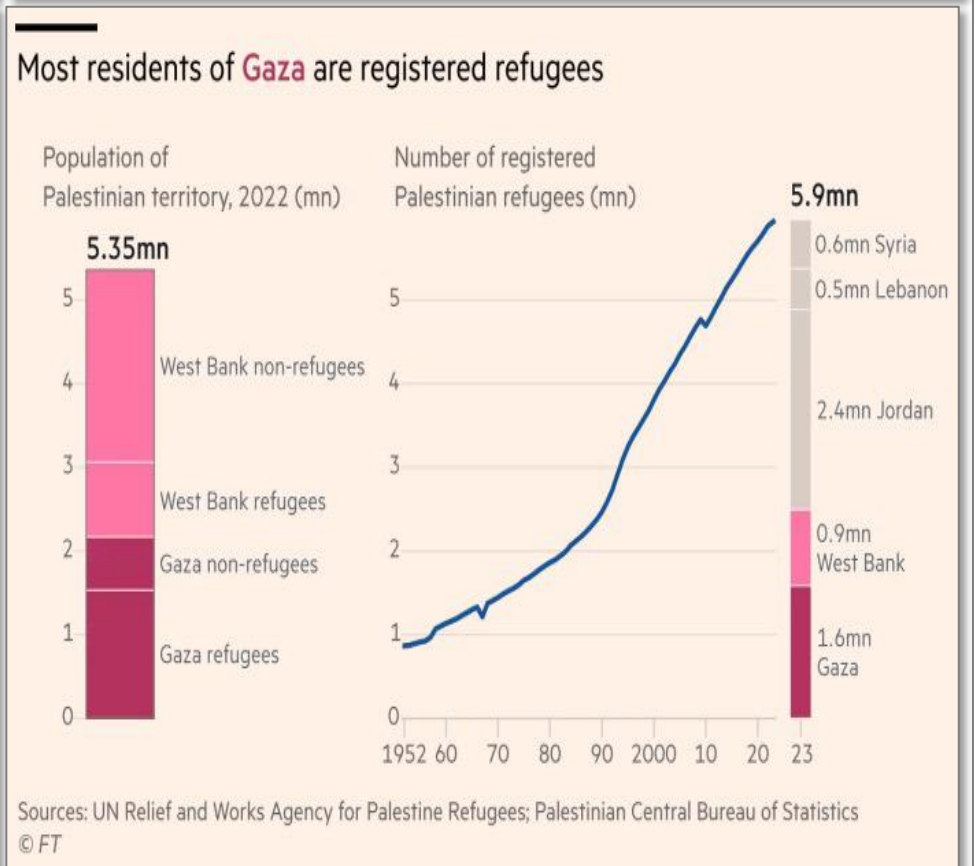
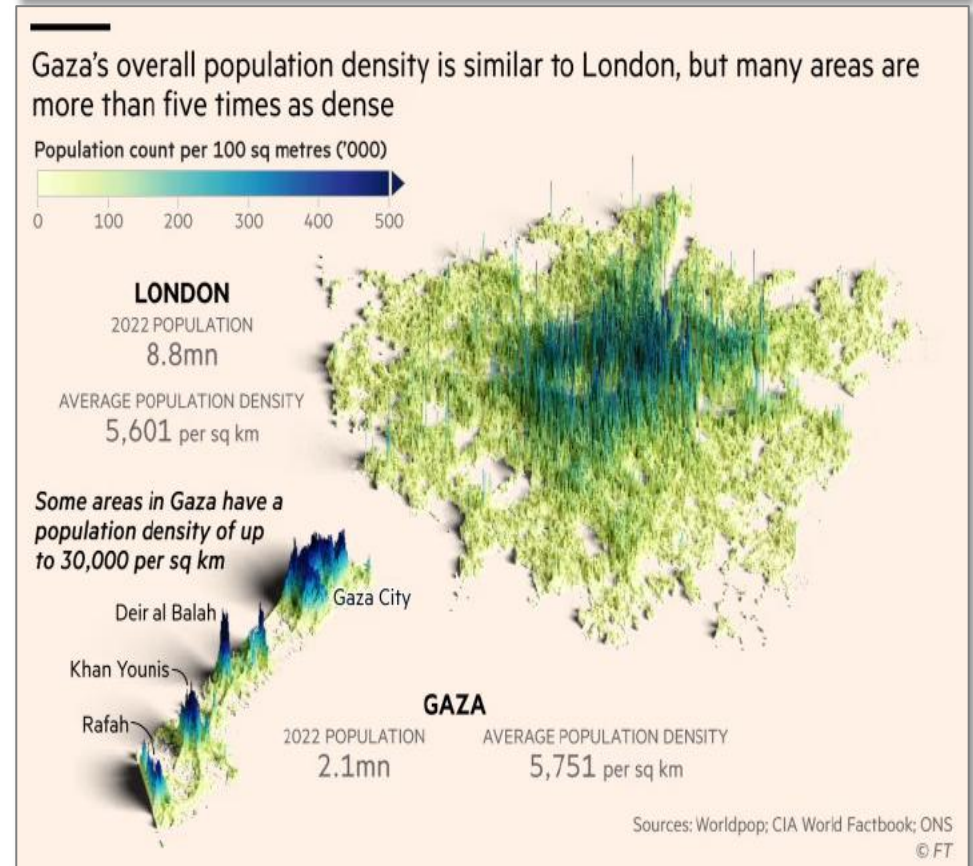
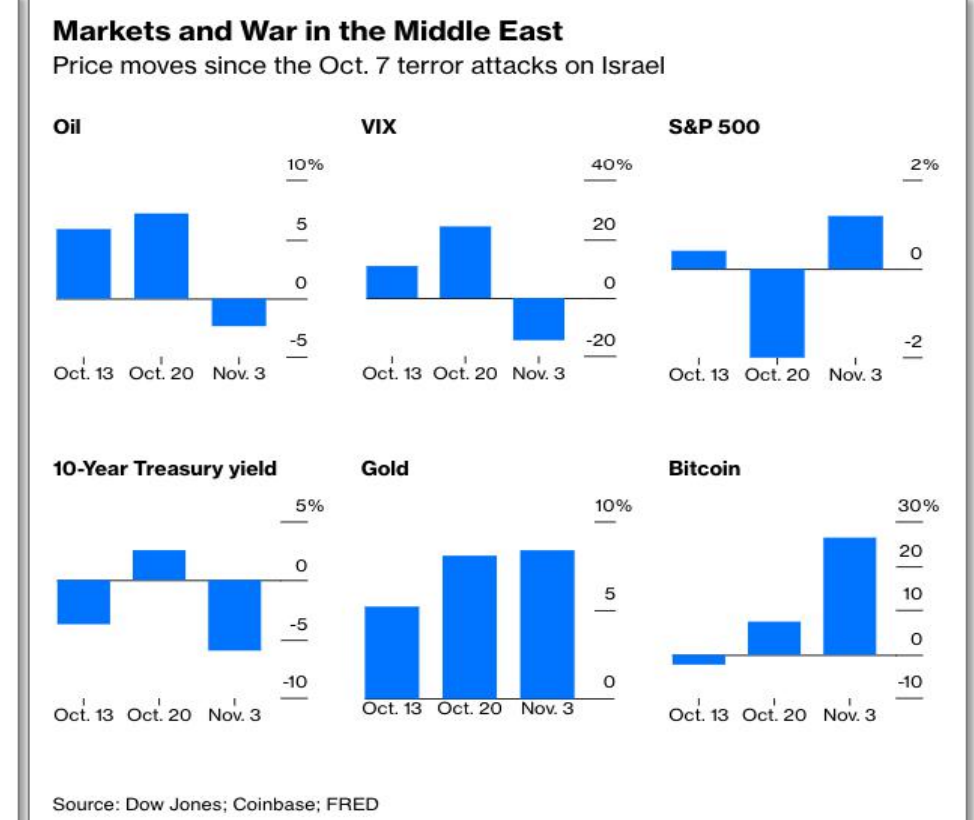
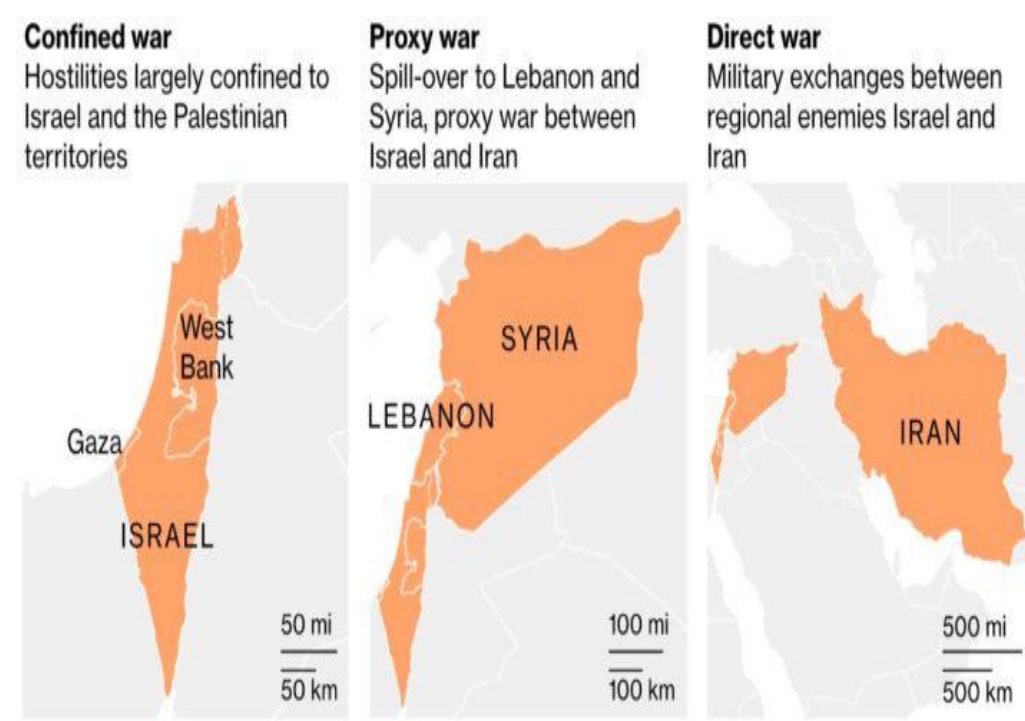
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Geopolítica - Israel



Confined Conflict or Regional War?

Three scenarios for how the Israel-Hamas conflict could evolve

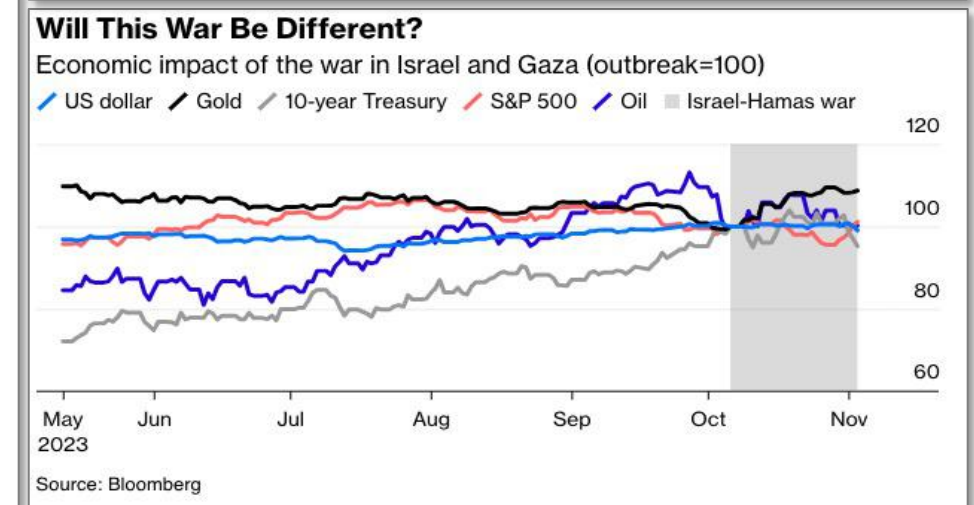
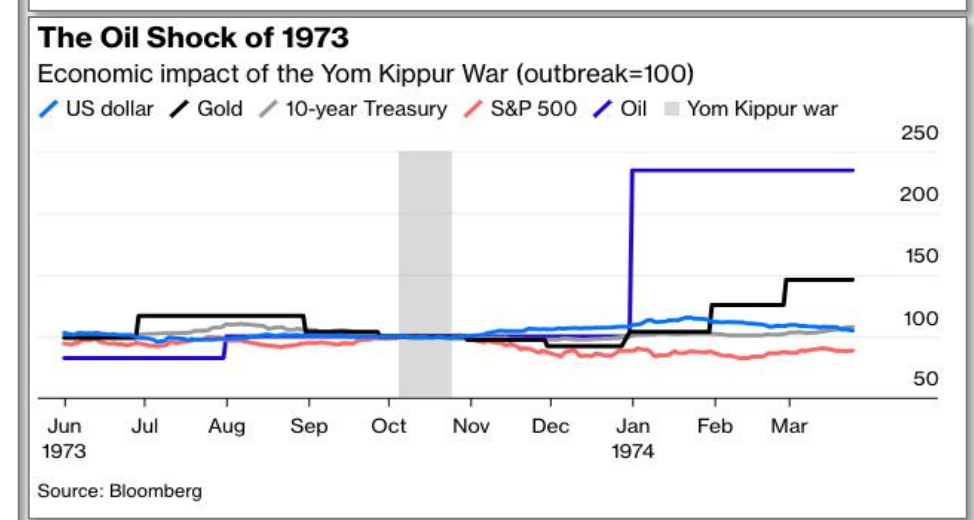


Economic Impact of War

Global growth and inflation impact of three scenarios for how the Israel-Hamas conflict could evolve

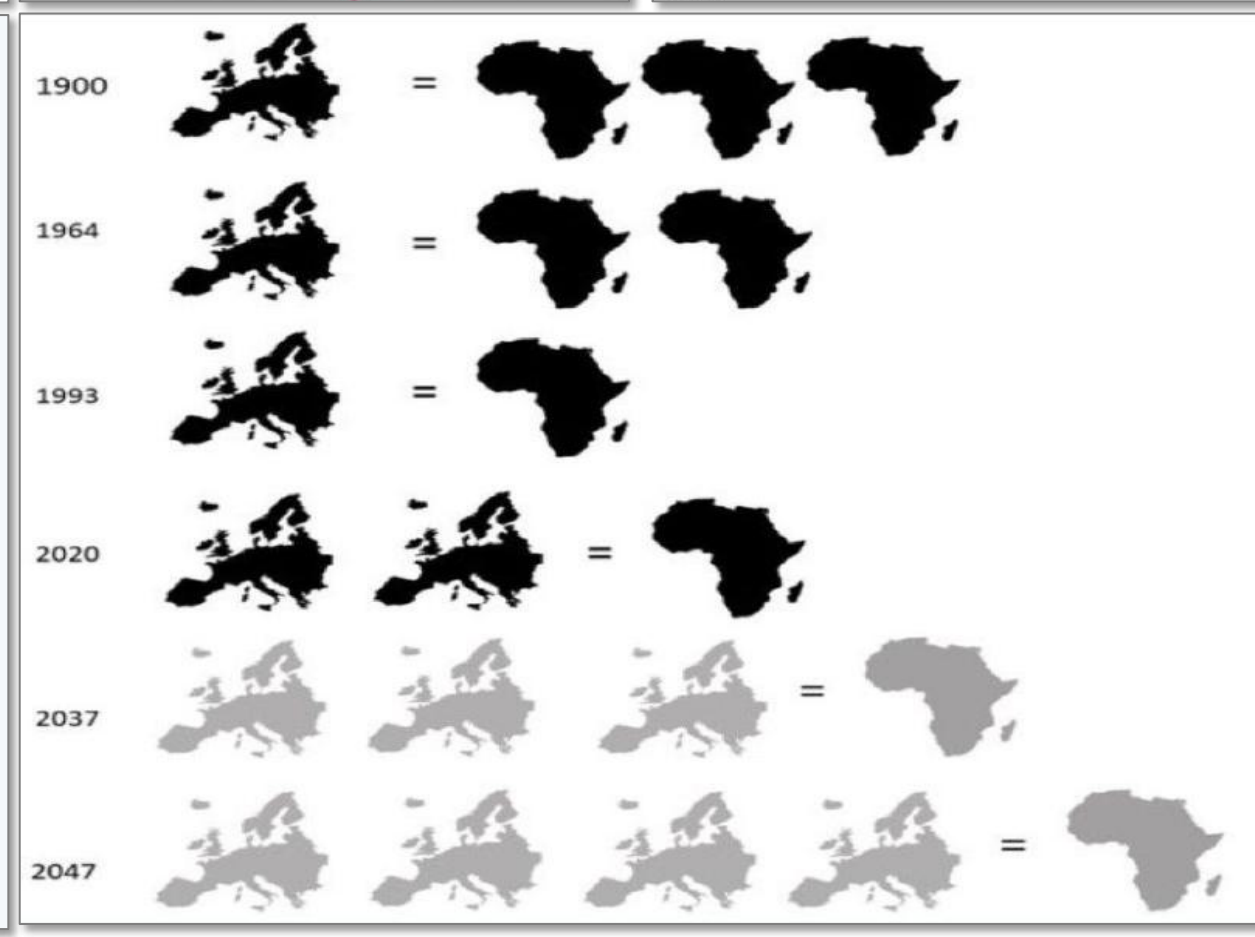
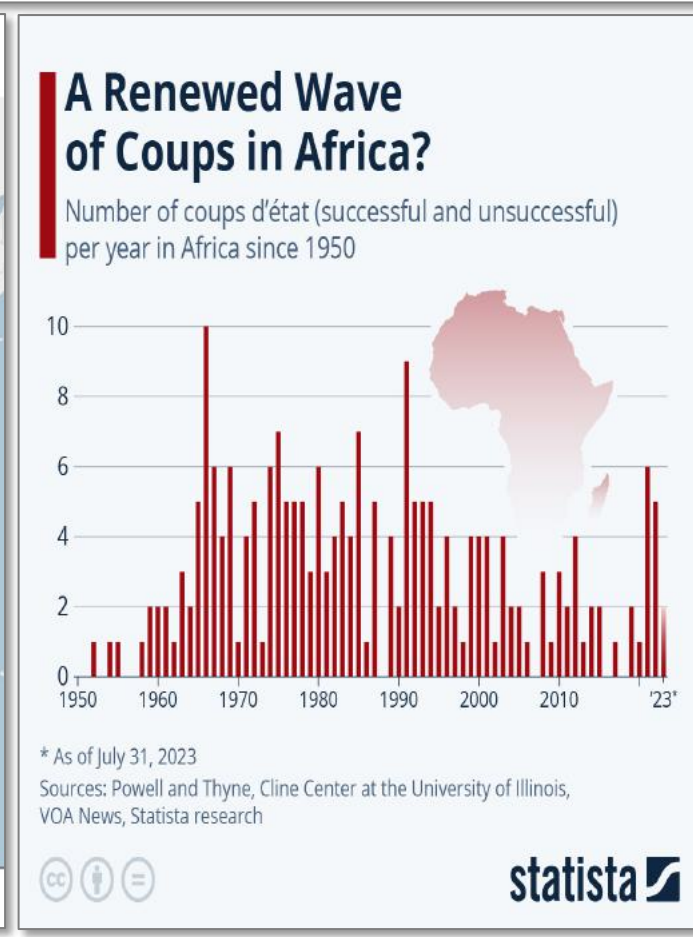
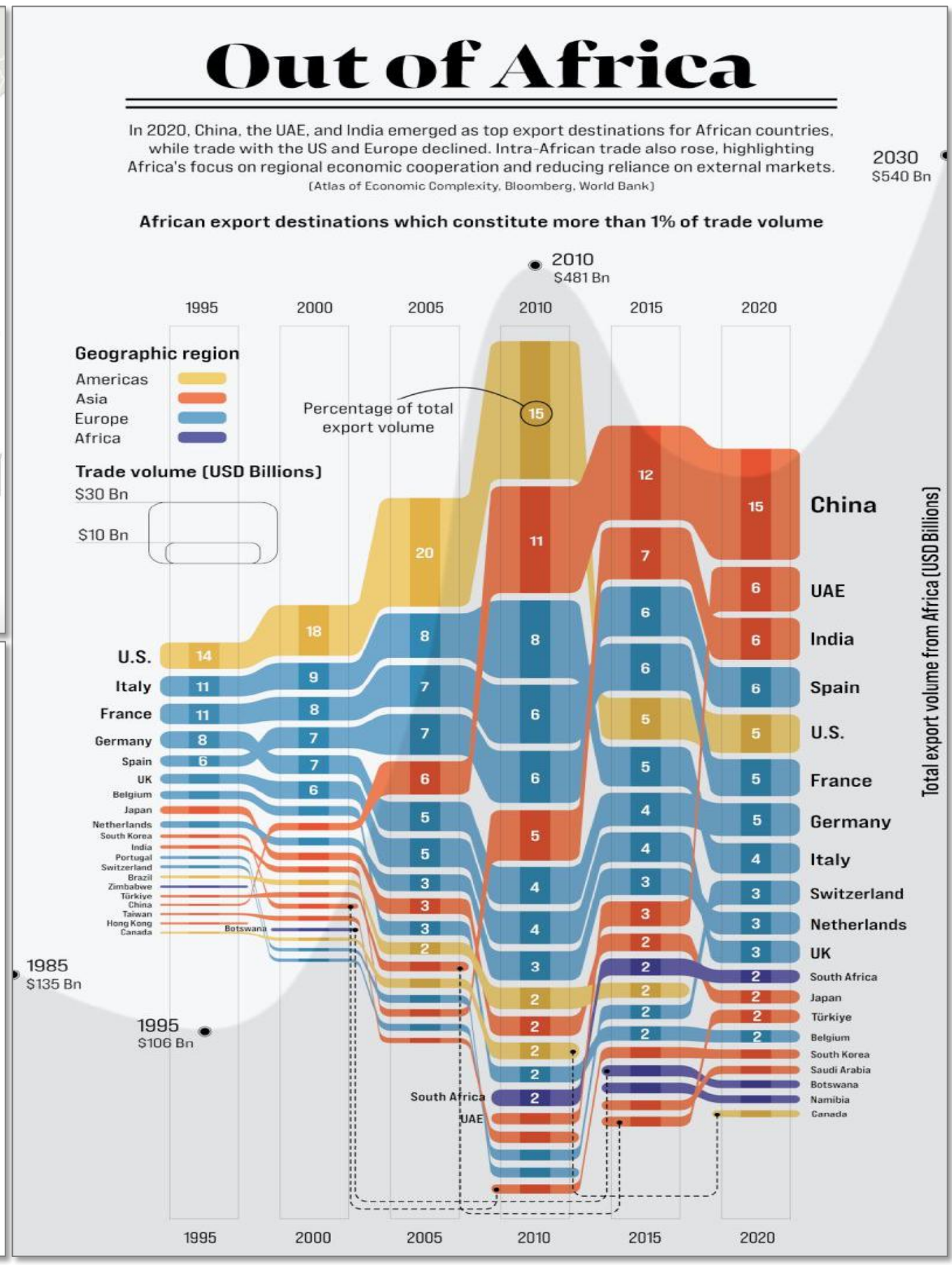
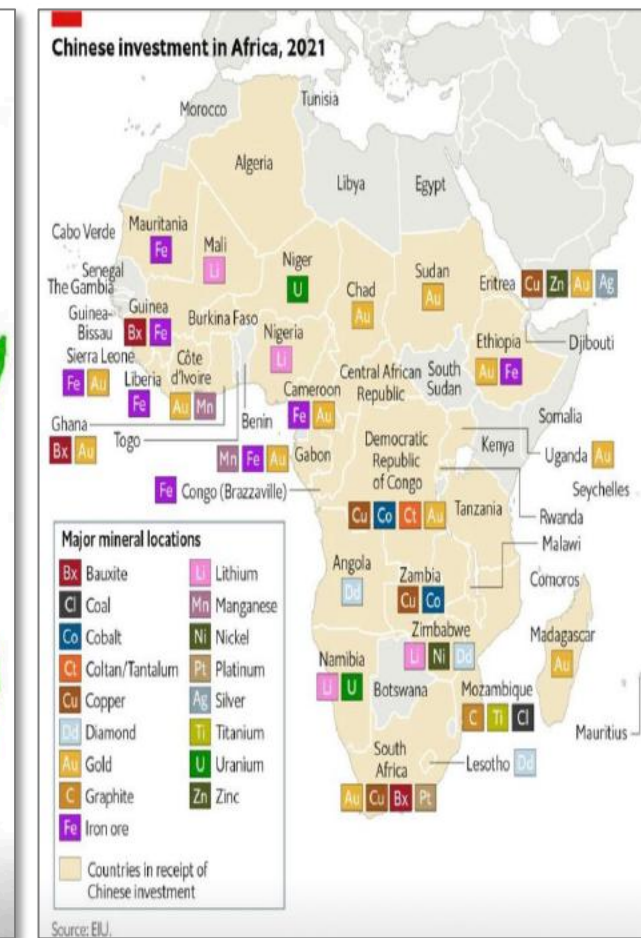
Scenario	Details	Impact on oil prices and VIX*	Impact on global GDP and inflation**
Confined war	- Ground invasion of Gaza - Limited broader regional conflict - Lower Iranian crude output	Oil: +\$4/barrel VIX: No impact	GDP: -0.1 ppts. Inflation: +0.1 ppts.
Proxy war	- Multifront war in Gaza, West Bank, Lebanon, Syria - Unrest in wider Middle East	Oil: +\$8/barrel VIX: +8 points	GDP: -0.3 ppts. Inflation: +0.2 ppts.
Direct war	- Israel and Iran in direct conflict - Unrest in wider Middle East	Oil: +\$64/barrel VIX: +16 points	GDP: -1.0 ppts. Inflation: +1.2 ppts.

Source: Bloomberg Economics
*Impact calibrated based on 2014 Gaza War, 2006 Israel-Lebanon War, and 1990-1991 Gulf War.
**Impact on year on year change in global GDP and inflation for 2024, estimated using Bayesian Global VAR



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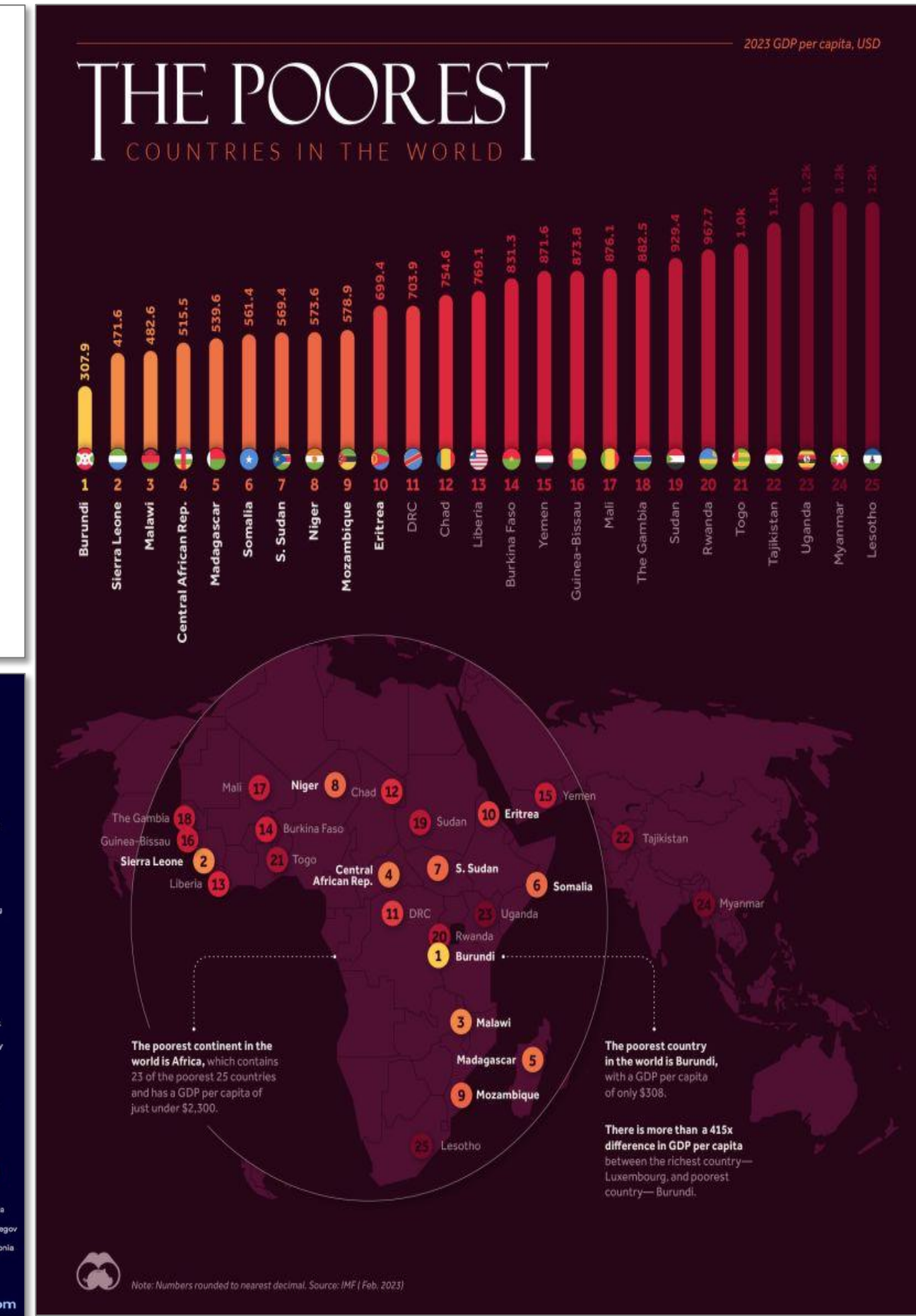
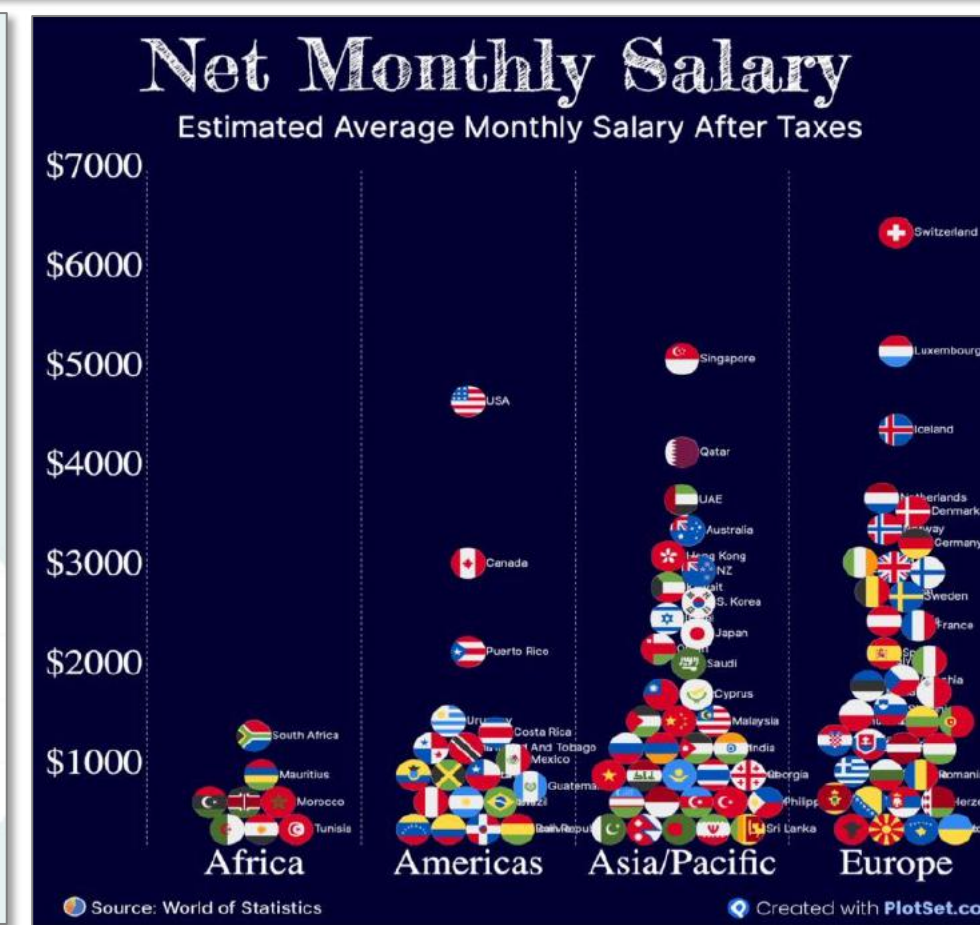
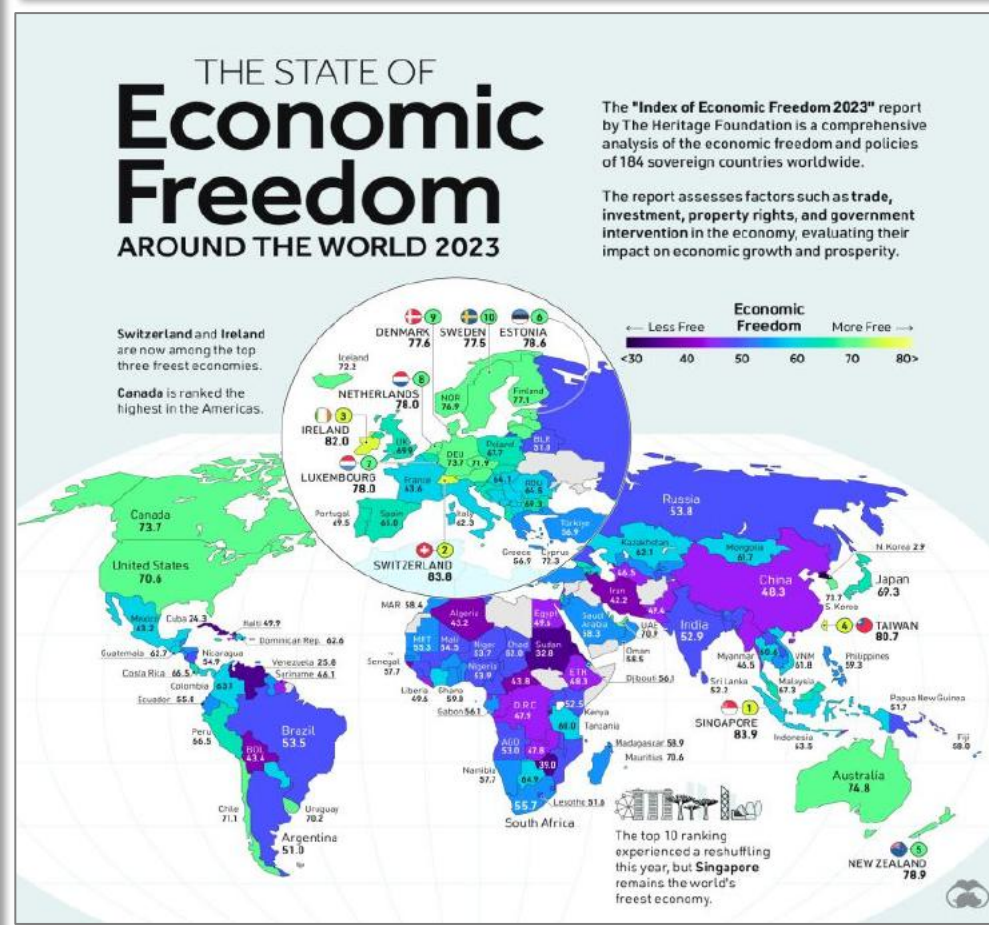
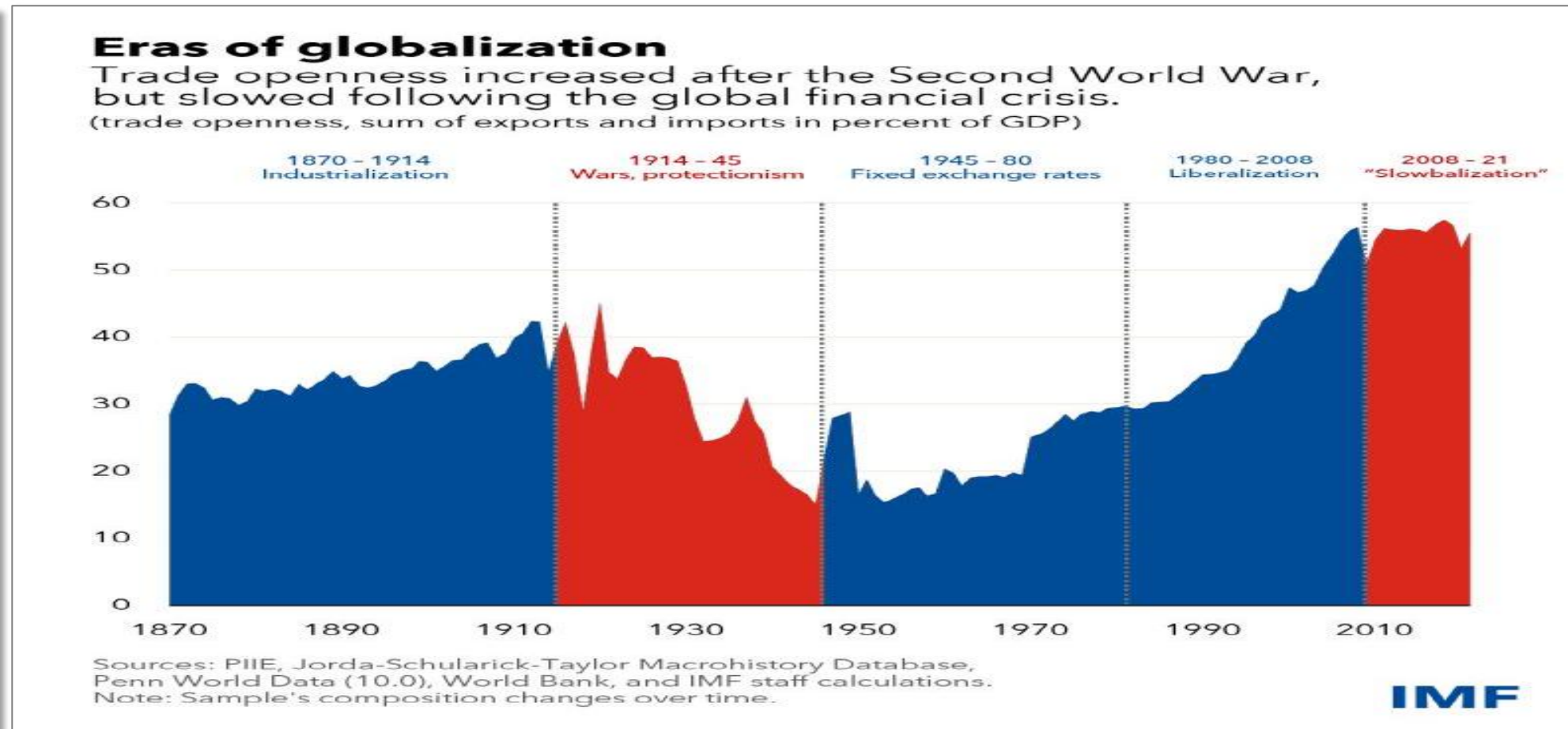
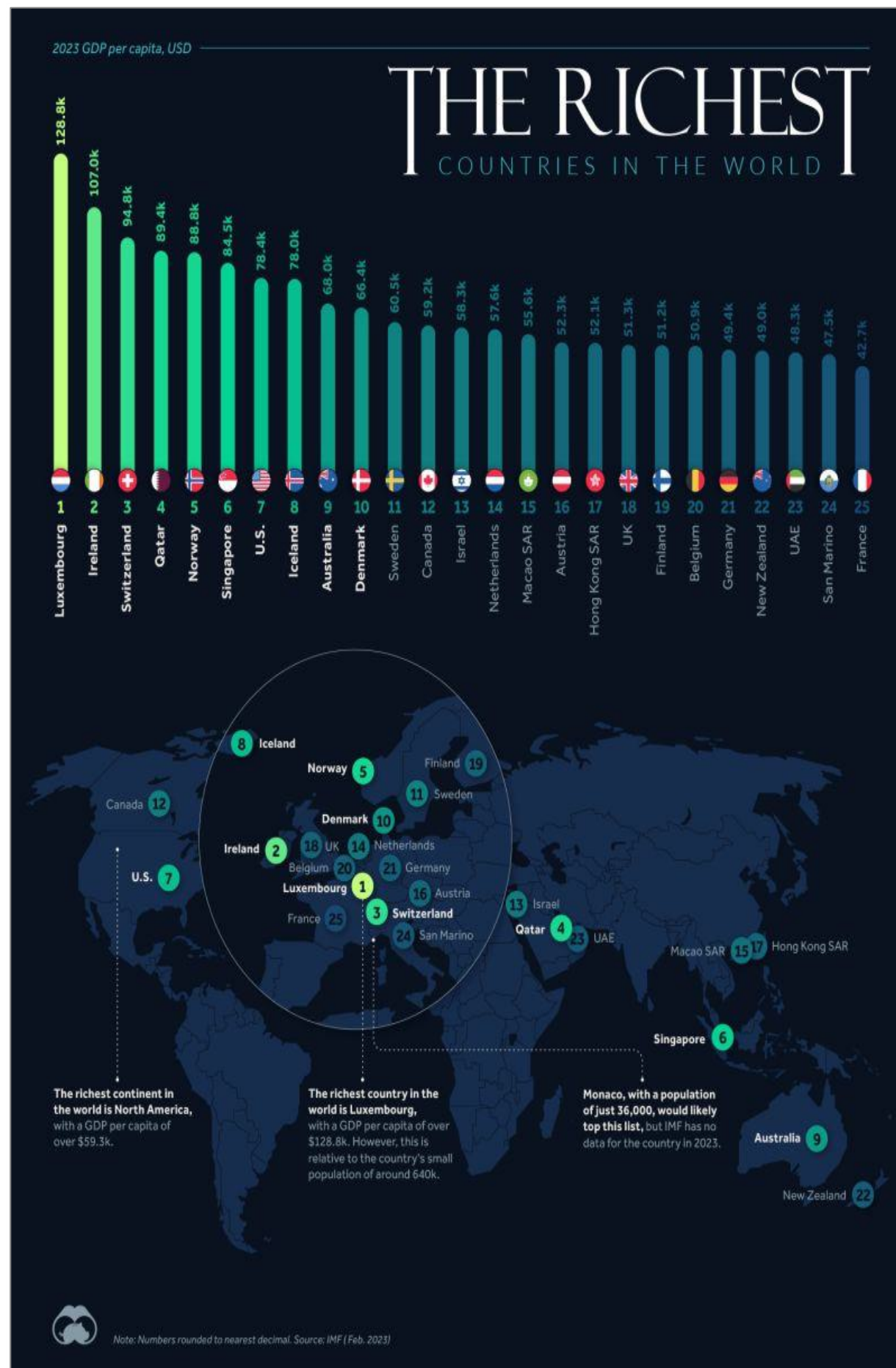
Geopolítica - Africa



Source: BBC, Statista, EIU, Visual Capitalist, Global Post

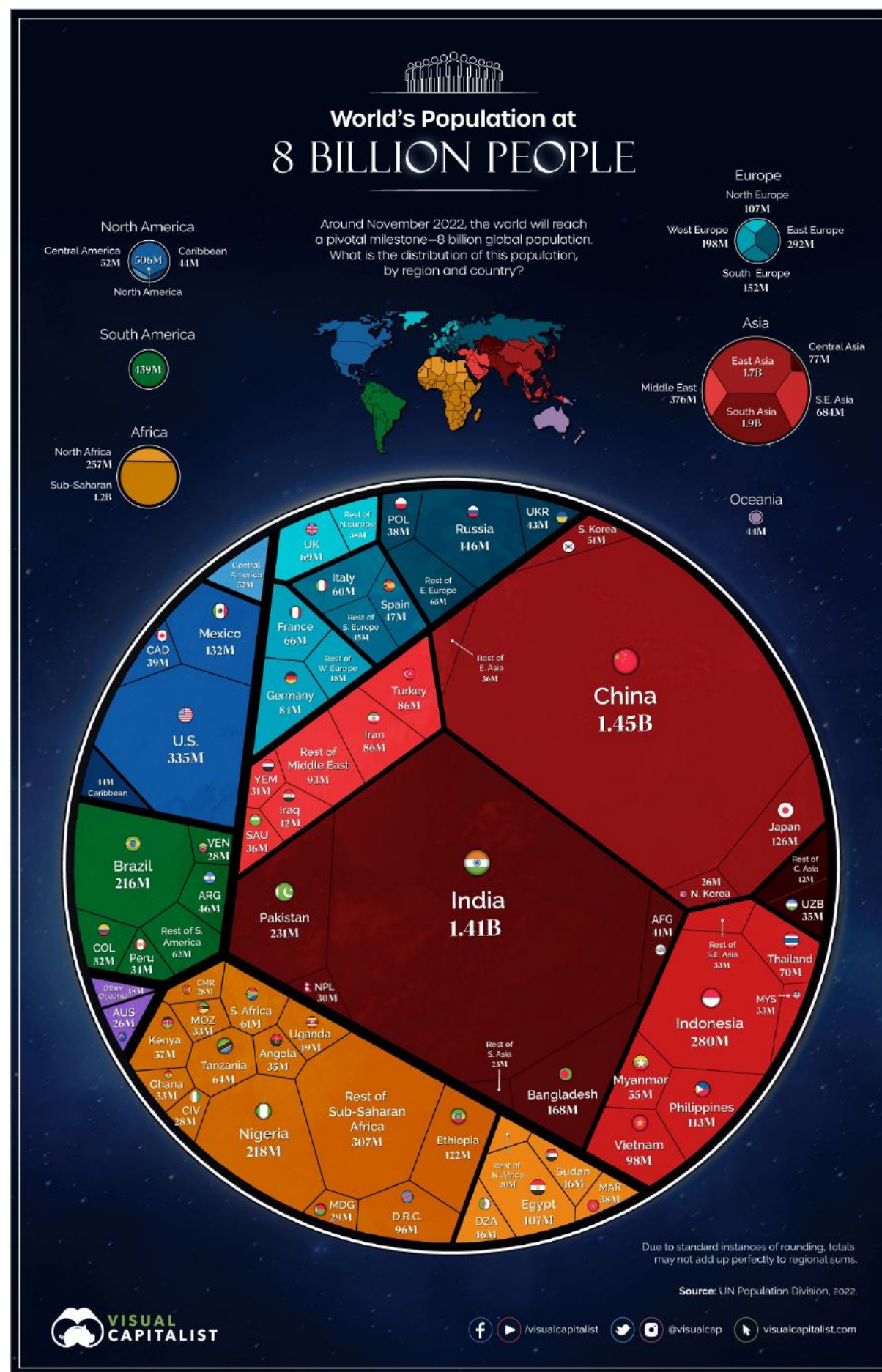
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Siglo XXI





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