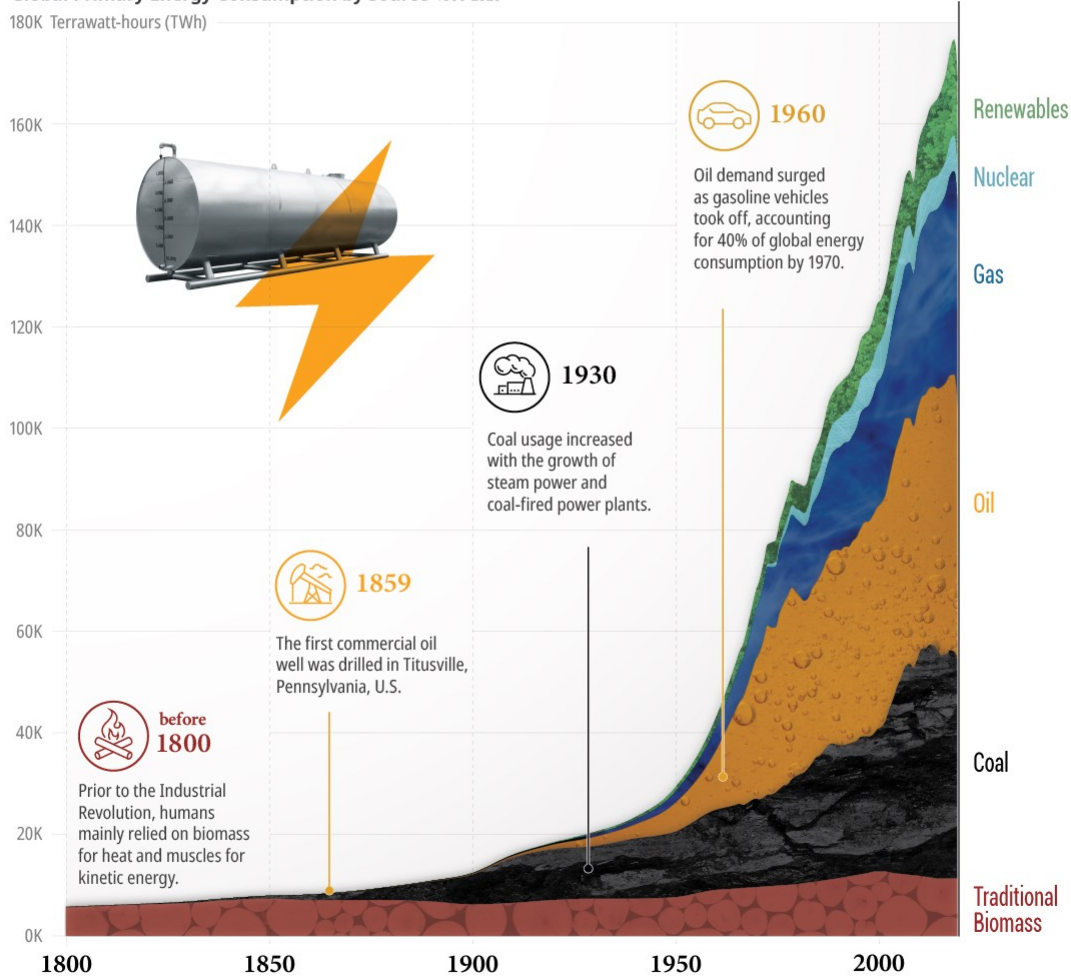# THE HISTORY OF
Energy *Transitions*

The economic and technological advances over the last 200 years have transformed how we produce and consume energy.

Here's how the global energy mix has evolved since 1800.

2020

Fossil fuels accounted for 78% of the global energy mix in 2020.

Global Primary Energy Consumption by Source 1800-2020

180K Terrawatt-hours (TWh)

1960

Oil demand surged as gasoline vehicles took off, accounting for 40% of global energy consumption by 1970.

Renewables

Nuclear

Gas

1930

Coal usage increased with the growth of steam power and coal-fired power plants.

Oil

1859

The first commercial oil well was drilled in Titusville, Pennsylvania, U.S.

Coal

before 1800

Prior to the Industrial Revolution, humans mainly relied on biomass for heat and muscles for kinetic energy.

Traditional Biomass

160K

140K

120K

100K

80K

60K

40K

20K

0K

1800   1850   1900   1950   2000

Source: Vaclav Smil (2017), BP Statistical Review of World Energy via Our World in Data

WHAT SCARES THE WORLD

TOP GLOBAL CONCERNS BY LIKELIHOOD, CITED BY EXPERTS, 2009–2019

MENTIONED SEVEN TIMES IN THE PAST 10 YEARS

— TOP RISK IN 2019

BIGGEST CONCERNS IN 2019

MENTIONED IN PREVIOUS YEARS

EXTREME WEATHER EVENTS

NATURAL DISASTERS

CLIMATE CHANGE

CYBER ATTACKS

DATA FRAUD

FISCAL IMBALANCES

INCOME DISPARITY

CHRONIC DISEASE

MIGRATION

ASSET PRICE COLLAPSE

GREENHOUSE GASES

WATER CRISES

UNEMPLOYMENT

SLOWING CHINESE ECONOMY

GLOBAL GOVERNANCE GAPS

INTERSTATE CONFLICT

NATIONAL GOVERNMENT FAILURES

CORRUPTION

RETRENCHMENT FROM GLOBALIZATION

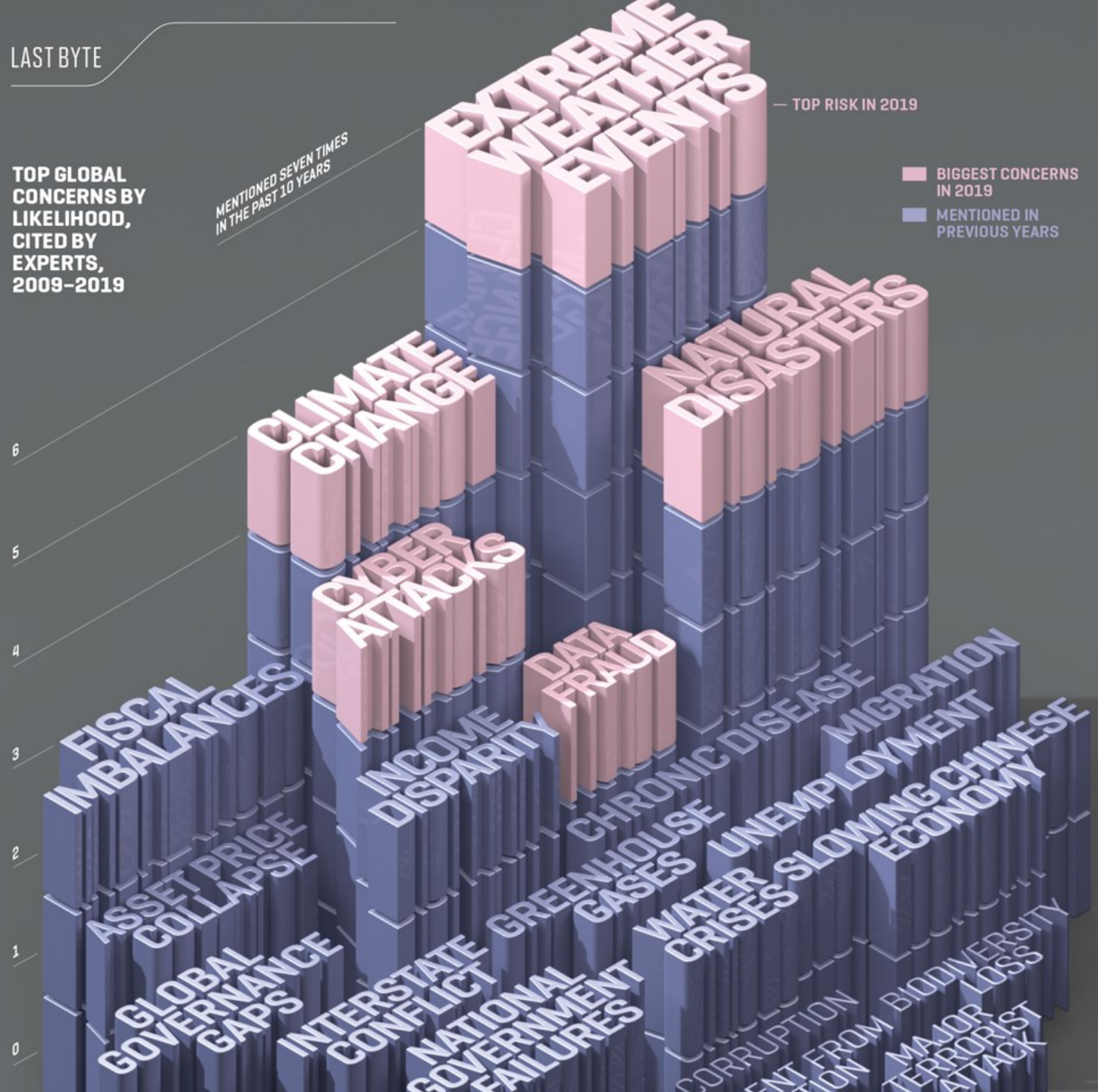BIODIVERSITY LOSS

AGING POPULATION

MAJOR TERRORIST ATTACK

EACH YEAR, THE WORLD ECONOMIC FORUM asks business leaders and other experts which major threats they believe countries are most likely to face in the coming decade. In the latest report, the top three global risks concern the environment and climate change—with destructive weather leading the pack for the third year in a row. For Americans, it seems, that threat is already here. Last year there were 14 weather disasters in the U.S. with losses topping $1 billion each—from Hurricanes Florence and Michael to the devastating California wildfires. That's more than twice the annual average from 1980 to 2018. —CLIFTON LEAF

⊙ SOURCE: **WORLD ECONOMIC FORUM**   ▲ GRAPHIC BY **NICOLAS RAPP**

Production of hard coal in the EU, 1990 - 2021

(million tonnes)

1990

4% 2%
5%
8%
53%

277.4 Mt

28%

2000

7% 2%
9%
60%

169.3 Mt

22%

2010

6%
11%
71%

107.8 Mt

13%

2021

4%
57.2 Mt
96%

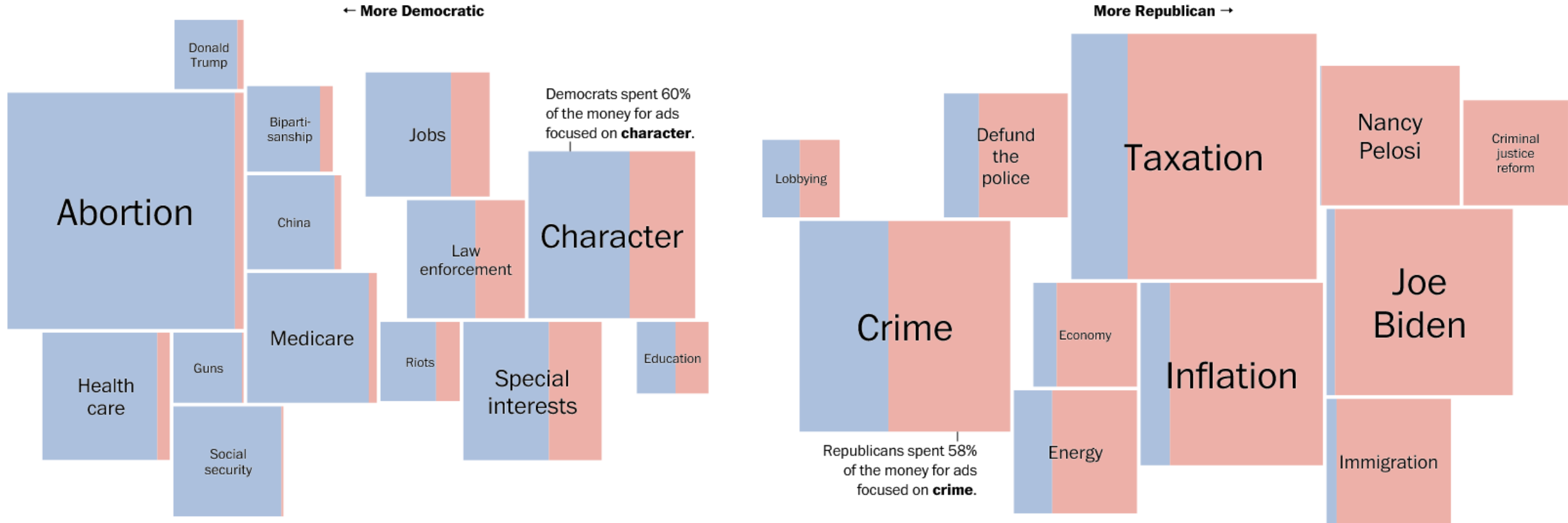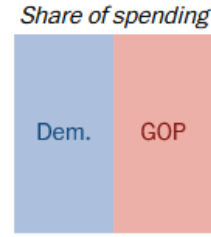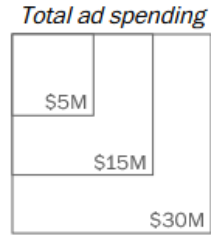● POLAND   ● GERMANY   ● CZECHIA   ● SPAIN   ● FRANCE   ● OTHER MEMBER STATES
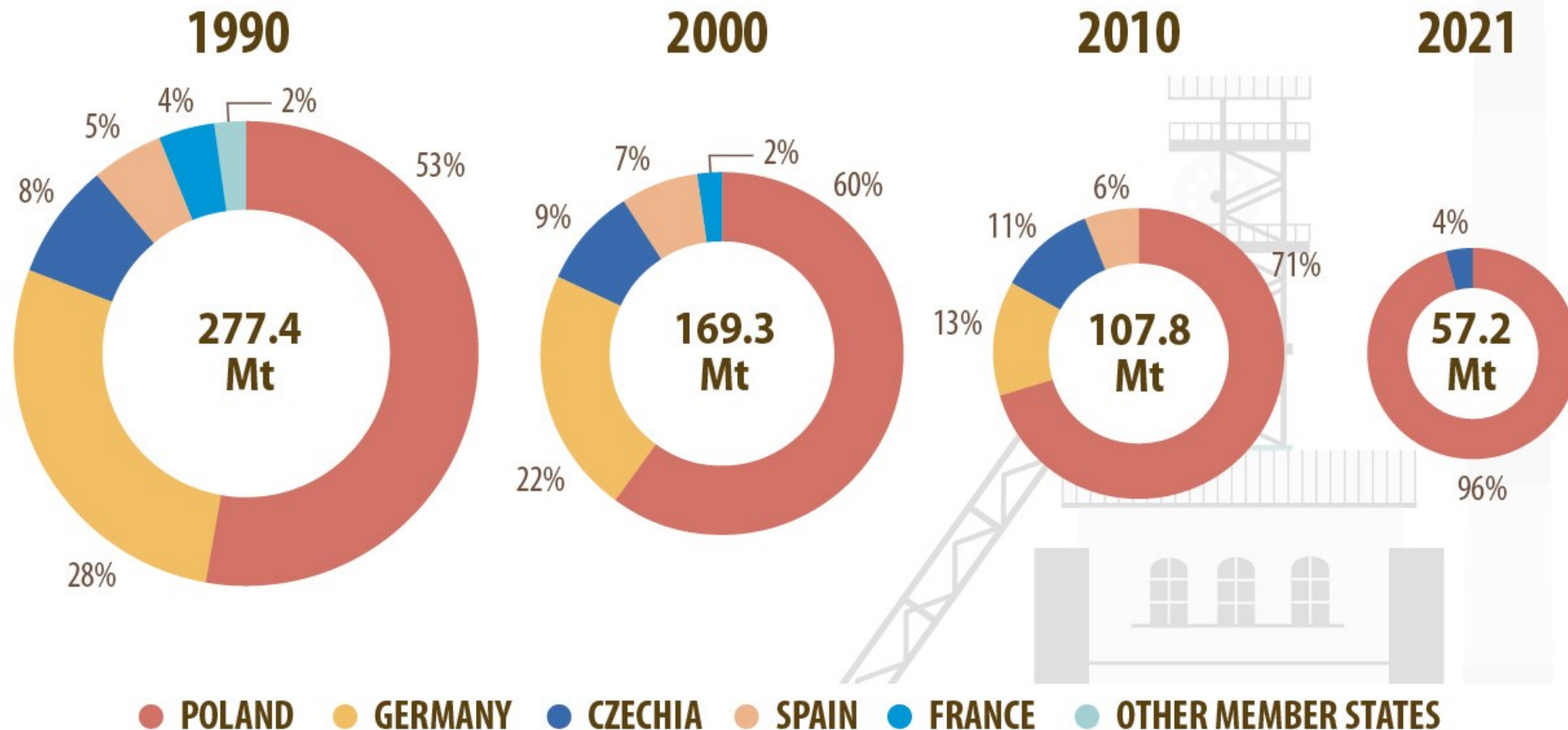
Note: data might not add up to 100% due to rounding.
The 2021 figures are based on cumulated monthly data.

2

ec.europa.eu/**eurostat**

The issues dominating midterms ads since Labor Day

For each issue:

Total ad spending

$5M
$15M
$30M

Share of spending

Dem. | GOP

← **More Democratic**

More Republican →

Donald Trump

Biparti-sanship

Jobs

Democrats spent 60% of the money for ads focused on **character**.

Abortion

China

Law enforcement

Character

Medicare

Health care

Guns

Riots

Special interests

Education

Social security

Lobbying

Defund the police

Taxation

Nancy Pelosi

Criminal justice reform

Crime

Economy

Inflation

Joe Biden

Energy

Immigration

Republicans spent 58% of the money for ads focused on **crime**.

Note: Only top 25 issues shown. Ads that mention multiple topics are counted in multiple boxes above. Therefore, the boxes cannot be added together.
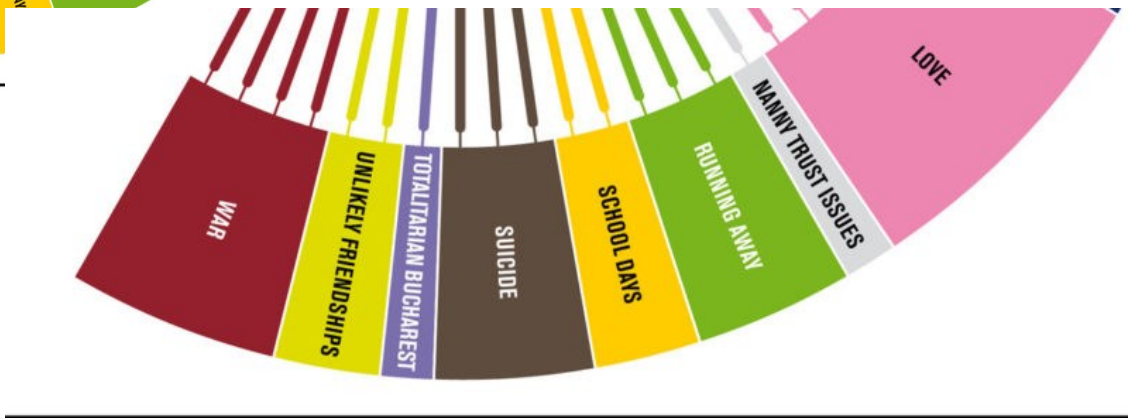
🖱 **Hover on an issue for detailed data**
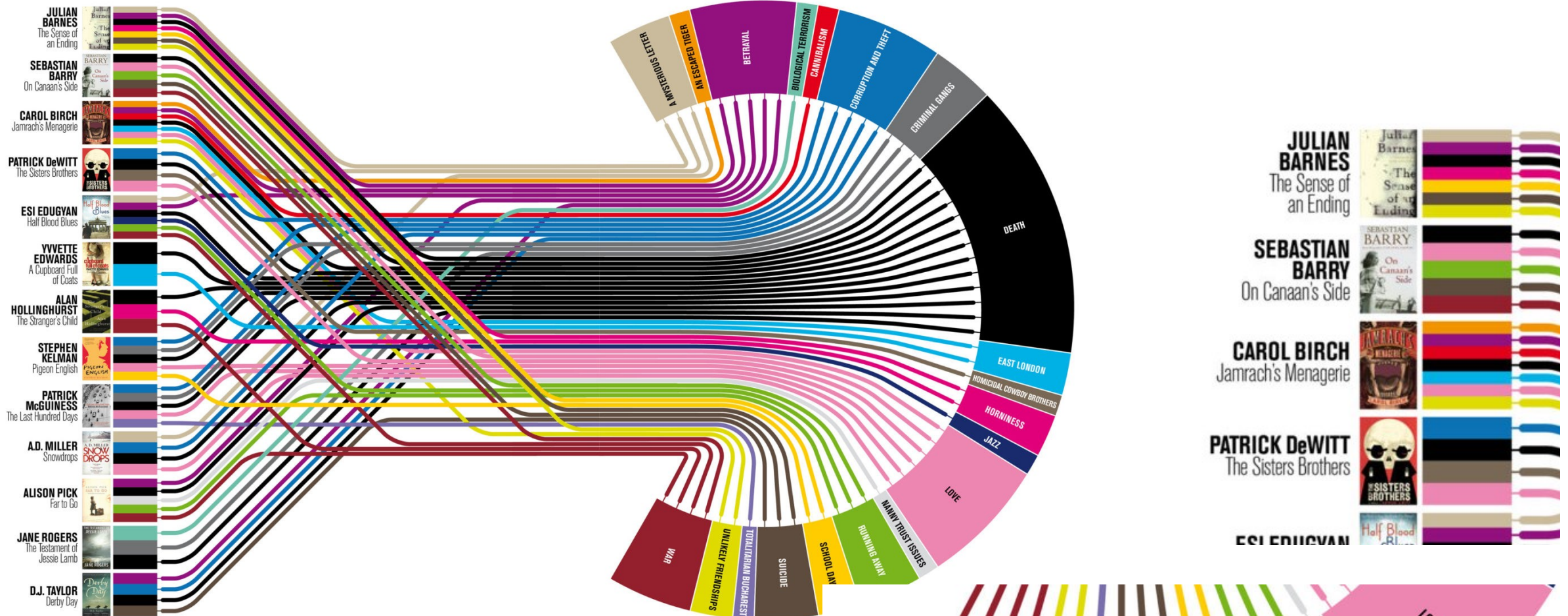
Plot lines

What makes a prize-winning novel? As Julian Barnes wins the Booker Prize, Delayed Gratification's Johanna Kamradt charts the themes of this year's longlisters.

Illustration: Christian Tate

Books (left side):

JULIAN BARNES — The Sense of an Ending

SEBASTIAN BARRY — On Canaan's Side

CAROL BIRCH — Jamrach's Menagerie

PATRICK DeWITT — The Sisters Brothers

ESI EDUGYAN — Half Blood Blues

YVVETTE EDWARDS — A Cupboard Full of Coats

ALAN HOLLINGHURST — The Stranger's Child

STEPHEN KELMAN — Pigeon English

PATRICK McGUINESS — The Last Hundred Days

A.D. MILLER — Snowdrops

ALISON PICK — Far to Go

JANE ROGERS — The Testament of Jessie Lamb

D.J. TAYLOR — Derby Day

Themes (right side):

A MYSTERIOUS LETTER · AN ESCAPED TIGER · BETRAYAL · BIOLOGICAL TERRORISM · CANNIBALISM · CORRUPTION AND THEFT · CRIMINAL GANGS · DEATH · EAST LONDON · HOMICIDAL COWBOY BROTHERS · HORNINESS · JAZZ · LOVE · NANNY TRUST ISSUES · RUNNING AWAY · SCHOOL DAYS · SUICIDE · TOTALITARIAN BUCHAREST · UNLIKELY FRIENDSHIPS · WAR
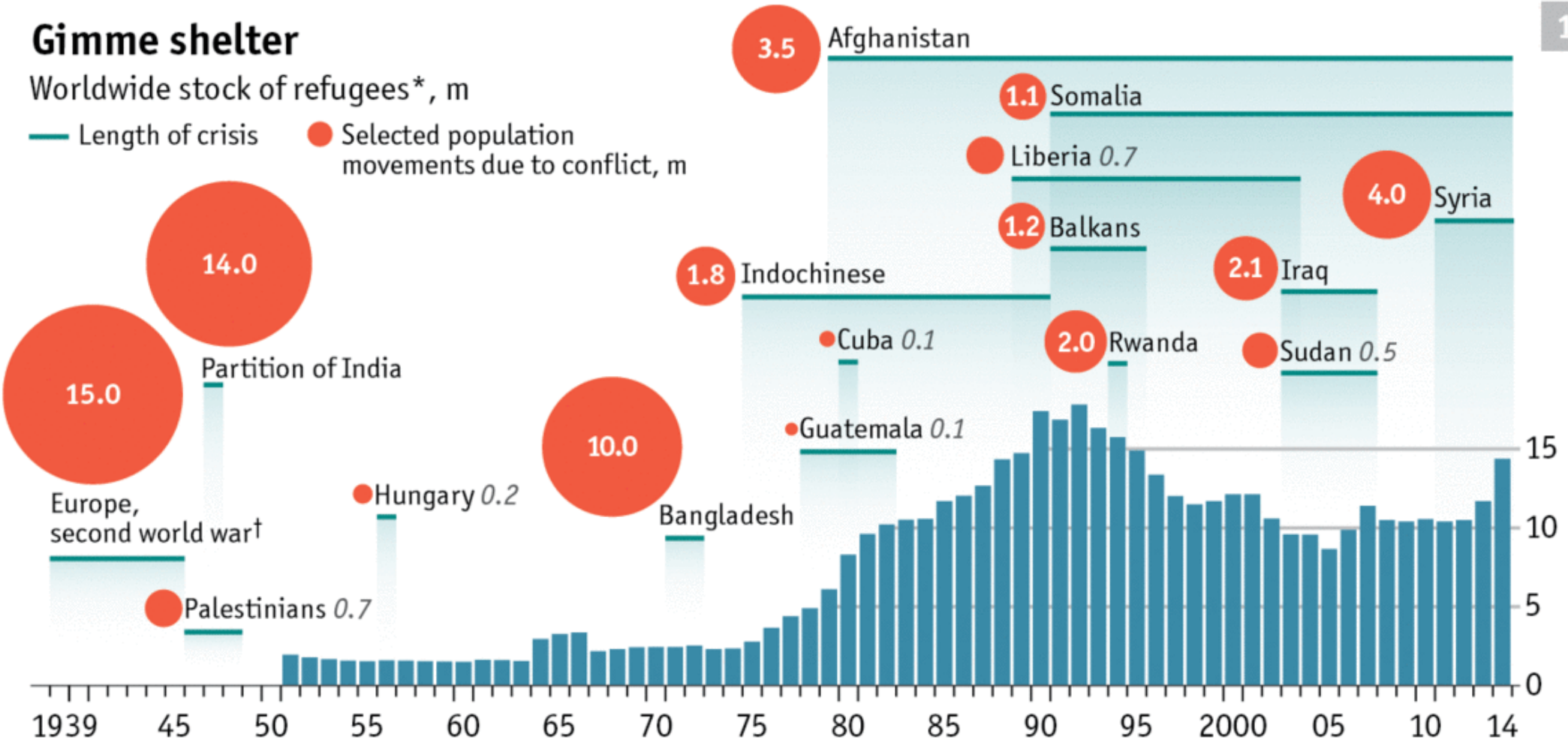
3

Gimme shelter

Worldwide stock of refugees*, m

— Length of crisis
● Selected population movements due to conflict, m

15.0 Europe, second world war†

14.0 Partition of India

10.0 Bangladesh

1.8 Indochinese

3.5 Afghanistan

1.1 Somalia

● Liberia 0.7

1.2 Balkans

4.0 Syria

2.1 Iraq

● Cuba 0.1

2.0 Rwanda

● Sudan 0.5

● Guatemala 0.1

● Hungary 0.2

● Palestinians 0.7

1939 45 50 55 60 65 70 75 80 85 90 95 2000 05 10 14

Sources: UNHCR; NATO; Migration Policy Institute; Refugees International; US State Department; press reports

*Data missing for some countries before 1990s
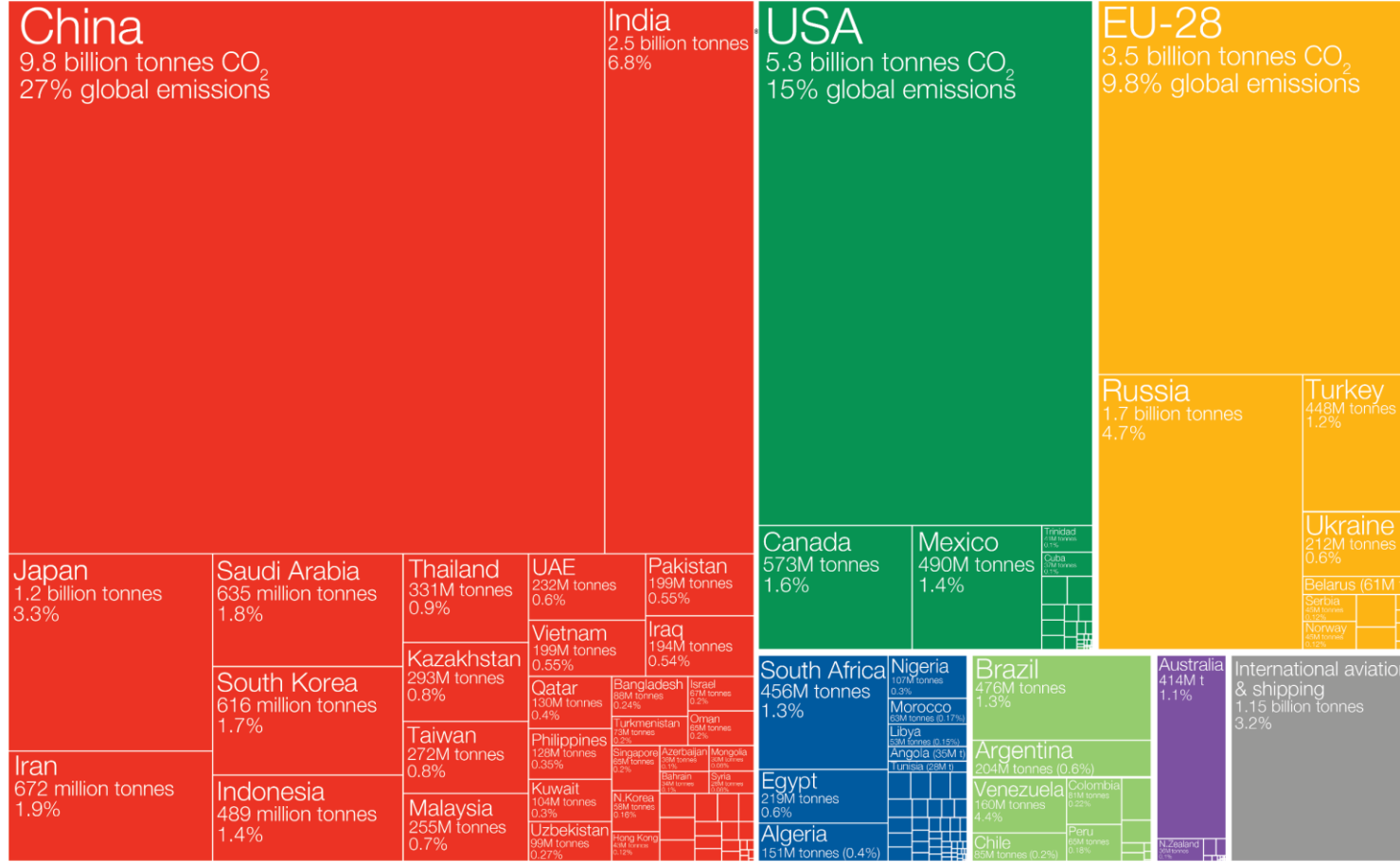†Includes internally displaced people

3

Who emits the most CO₂?

Global carbon dioxide (CO_2) emissions were 36.2 billion tonnes in 2017.

Asia
19 billion tonnes CO₂
53% global emissions

China
9.8 billion tonnes CO₂
27% global emissions

India
2.5 billion tonnes
6.8%

Japan
1.2 billion tonnes
3.3%

Saudi Arabia
635 million tonnes
1.8%

Thailand
331M tonnes
0.9%

UAE
232M tonnes
0.6%

Pakistan
199M tonnes
0.55%

South Korea
616 million tonnes
1.7%

Kazakhstan
293M tonnes
0.8%

Vietnam
199M tonnes
0.55%

Iraq
194M tonnes
0.54%

Taiwan
272M tonnes
0.8%

Qatar
130M tonnes
0.4%

Bangladesh
88M tonnes
0.24%

Israel
67M tonnes
0.2%

Iran
672 million tonnes
1.9%

Indonesia
489 million tonnes
1.4%

Malaysia
255M tonnes
0.7%

Philippines
128M tonnes
0.35%

Turkmenistan
73M tonnes
0.2%

Oman
69M tonnes
0.2%

Singapore 68M tonnes
Azerbaijan 38M tonnes 0.2%
Mongolia 20M tonnes 0.05%

Kuwait
104M tonnes
0.3%

Uzbekistan
99M tonnes
0.27%

N.Korea 58M tonnes 0.16%
Bahrain 34M tonnes 0.1%
Syria 28M tonnes 0.05%

Hong Kong 43M tonnes 0.12%

North America
6.5 billion tonnes CO₂
18% global emissions

USA
5.3 billion tonnes CO₂
15% global emissions

Canada
573M tonnes
1.6%

Mexico
490M tonnes
1.4%

Trinidad 31M tonnes 0.1%
Cuba 25M tonnes 0.1%

Europe
6.1 billion tonnes CO₂
17% global emissions

EU-28
3.5 billion tonnes CO₂
9.8% global emissions

Russia
1.7 billion tonnes
4.7%

Turkey
448M tonnes
1.2%

Ukraine
212M tonnes
0.6%

Belarus (61M t)
Serbia 47M tonnes 0.13%
Norway 41M tonnes 0.12%

Africa
1.3 billion tonnes CO₂
3.7% global emissions

South Africa
456M tonnes
1.3%

Nigeria
107M tonnes
0.3%

Morocco 63M tonnes (0.17%)
Libya 53M tonnes (0.15%)
Angola (35M t)
Tunisia (28M t)

Egypt
219M tonnes
0.6%

Algeria
151M tonnes (0.4%)

South America
1.1 billion tonnes CO₂
3.2% global emissions

Brazil
476M tonnes
1.3%

Argentina
204M tonnes (0.6%)

Venezuela
160M tonnes
4.4%

Colombia 81M tonnes 0.22%

Chile 85M tonnes (0.2%)
Peru 58M tonnes 0.18%

Oceania
0.5 billion tonnes CO₂
1.3% global emissions

Australia
414M t
1.1%

N.Zealand 35M tonnes

International aviation & shipping
1.15 billion tonnes
3.2%

Shown are national production-based emissions in 2017. Production-based emissions measure CO_2 produced domestically from fossil fuel combustion and cement, and do not adjust for emissions embedded in trade (i.e. consumption-based).

Figures for the 28 countries in the European Union have been grouped as the 'EU-28' since international targets and negotiations are typically set as a collaborative target between EU countries. Values may not sum to 100% due to rounding.
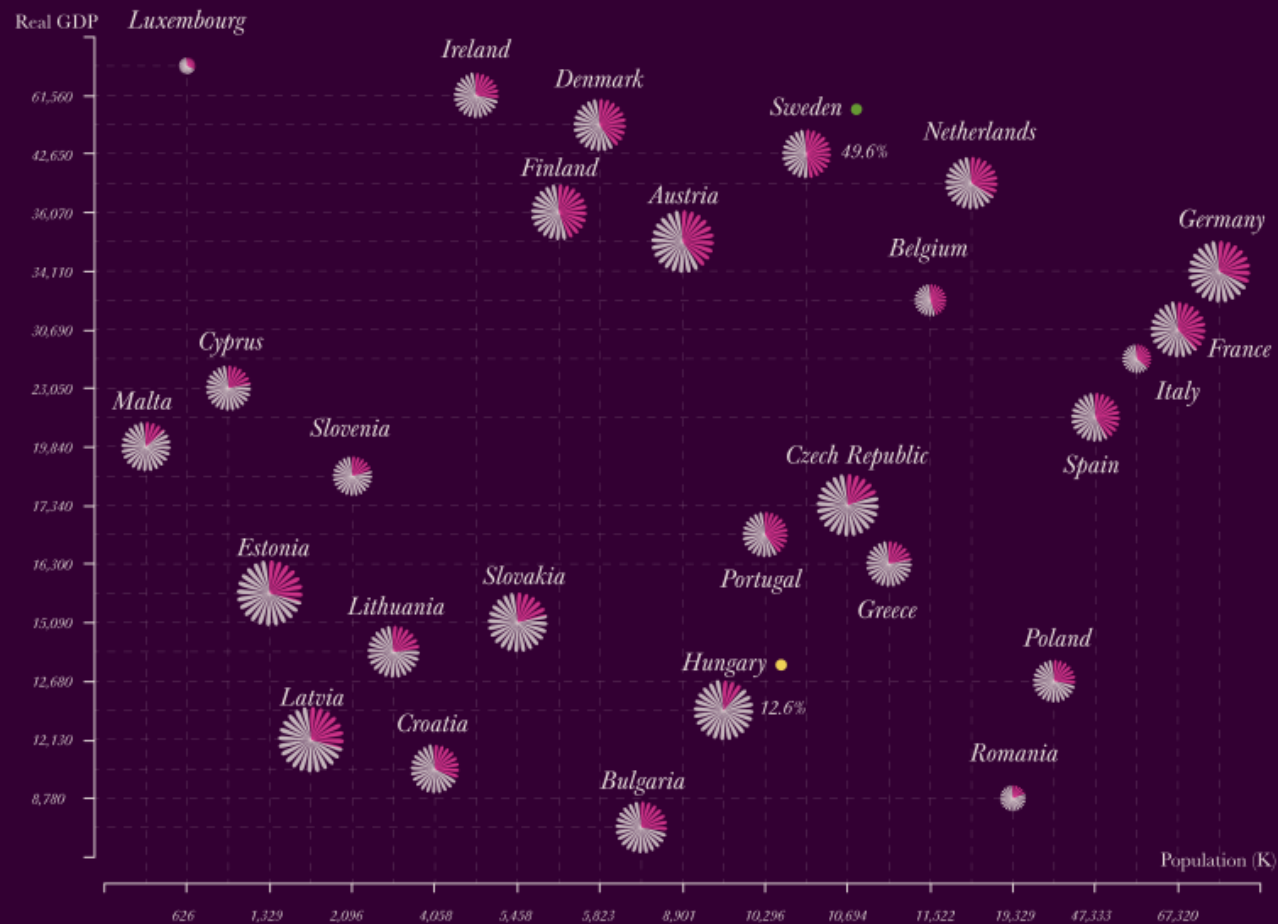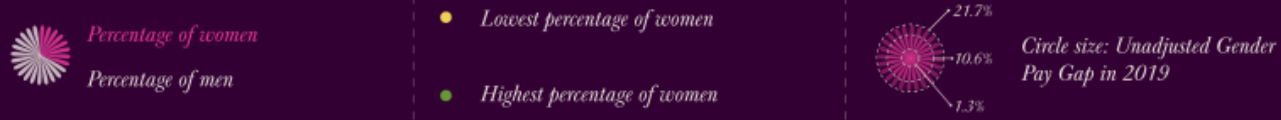
4

Seats held by women in national parliaments and governments in 2020 (%)
Source: European Institute for Gender Equality (EIGE), Eurostat.

NATO vs RUSSIA

Keeping traditions alive, the world's two largest military superpowers have again locked horns again in 2022.

On the one hand we have NATO led by the US while on the other side we have Russia. The victim this time is Ukraine and the battleground in Europe.

Here is a comparison of the military might of both the sides.

PERSONNEL

5.41M	1.35M

👤 x 10,000

ARMOURED UNITS

144K	60K

🚜 x 1,000

AIR FORCE

20,723	4,173

✈ x 200

NAVAL FORCES

2,049	605

🚢 x 50
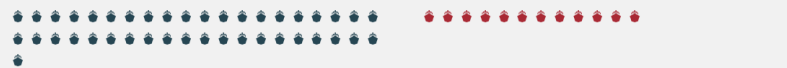
NUCLEAR WEAPONS

6065	6255

🚀 x 200

5

THE 2019 🇪🇺 EUROPEAN ELECTION RESULTS BY

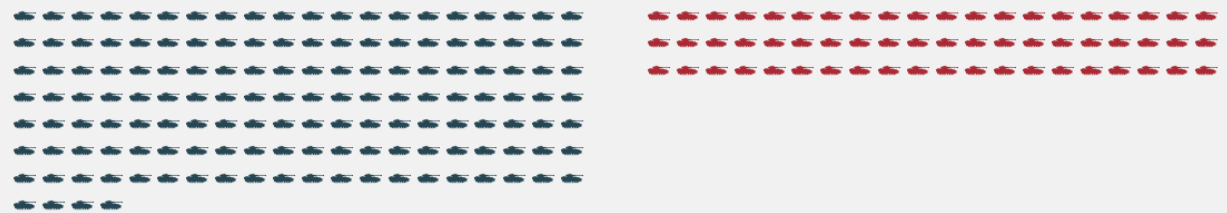# DEGREE OF URBANISATION

How people voted in big cities, small towns and the countryside

The **Degree of Urbanisation**, a three-way classification of administrative units, using a population grid. The numbers on the left side of the charts represent the following categories:

1. Cities (or "densely populated areas") where at least 50% of population lives in urban centers
2. Towns & suburbs (or "intermediate density areas") where at least 50% live in urban clusters but less than 50% live in urban centers, *as well as*
3. Rural areas (or "thinly populated areas"), where at least 50% of people live in rural grid cells

A fourth category exists in this visualisation:

0. Undifferentiated, where election data was unavailable in detail, and the country is taken as a single unit.

European Union

The **colors** stand for the ideological groups in the European Parliament that the parties joined after the elections, arranged according to their share of the vote. They are, from left to right:

GUE/NGL - the Far-Left group
S&D - the Center-Left
G/EFA - the Greens and Regionalists
RE - the Liberals and Centrists
EPP - the Christian-Democrats
ECR - the National-Conservatives
ID - the Far-Right group *and*
NI - all unaffiliated MEPs and parties

White stands for parties that didn't get enough votes to enter the European Parliament.

Made for the *#30DayMapChallenge* by @Arnold Platon
Day 16 - Theme: **Urban/rural**
Version 2.0 - 27 Nov. 2021