



**Change
by Degrees**

**Dr Tara Shine
CEO, Change by Degrees**



**GIRO 50 Conference
2023**

What's at Risk? Sustainability & Climate Leadership



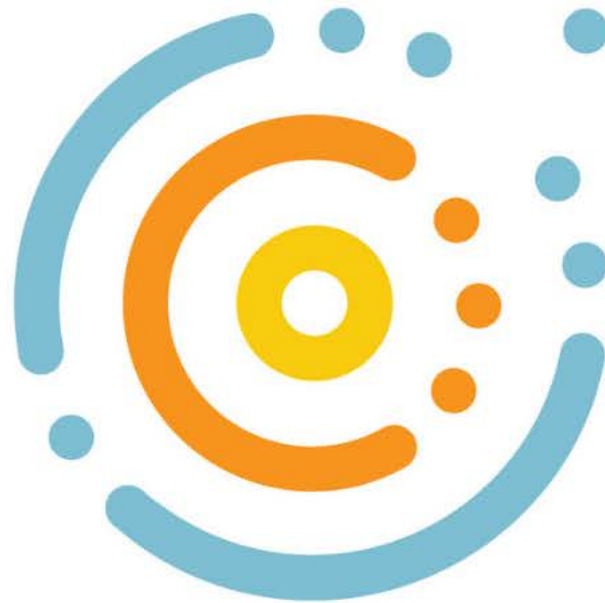


**Change
by Degrees**

colour



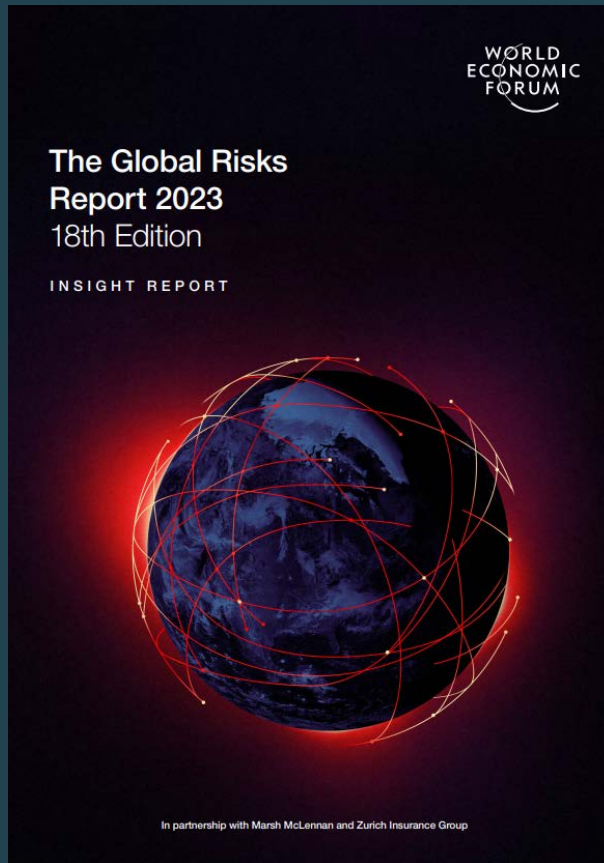
What



**is
sustainability?**

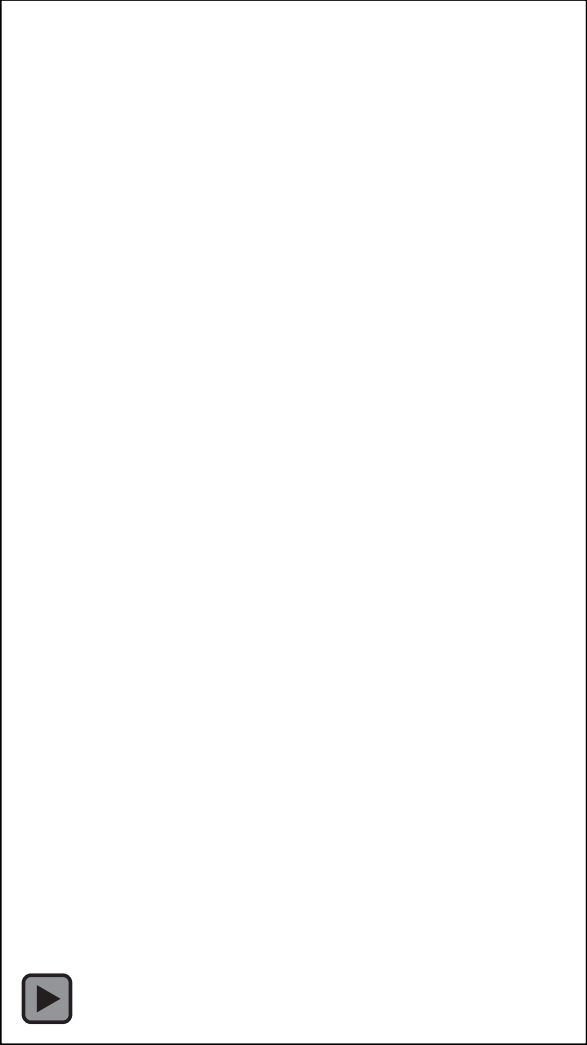
World Economic Forum:

“Climate dominates economic risk to the economy”

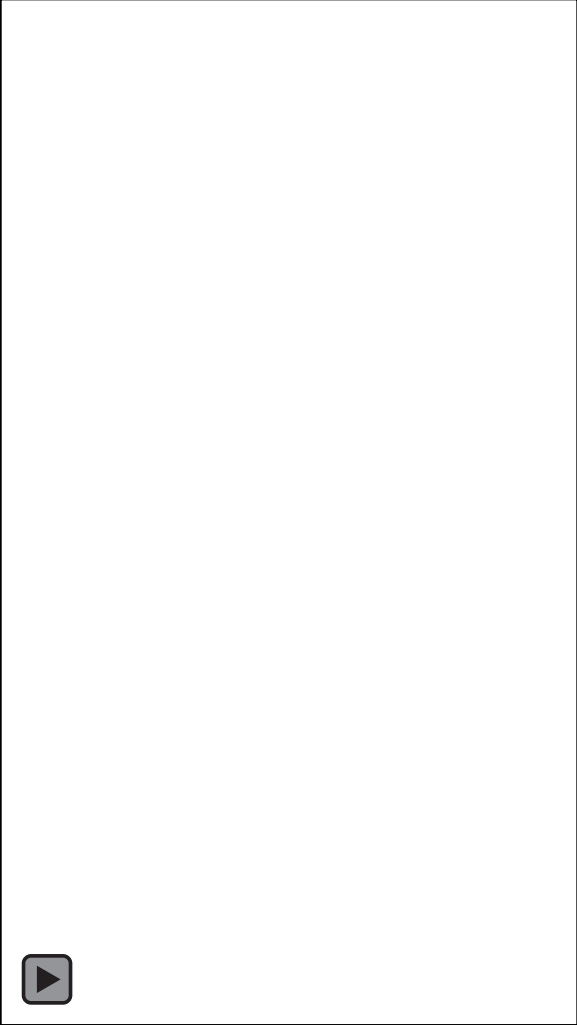


- 1 Failure to mitigate climate change
- 2 Failure of climate-change adaptation
- 3 Natural disasters and extreme weather events
- 4 Biodiversity loss and ecosystem collapse
- 5 Large-scale involuntary migration

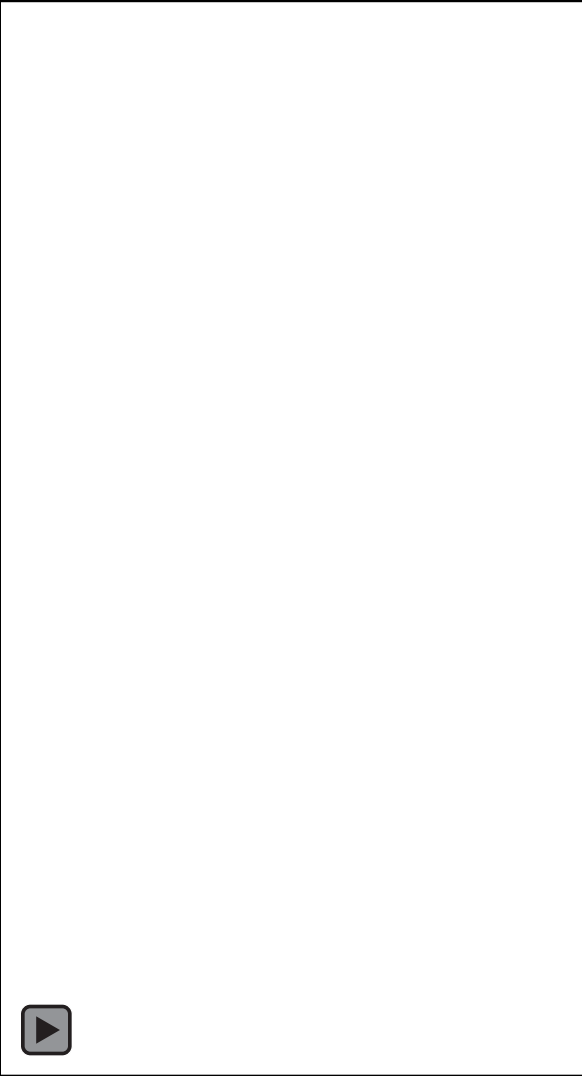
Climate Change Impacts Are Accelerating Globally



Spain

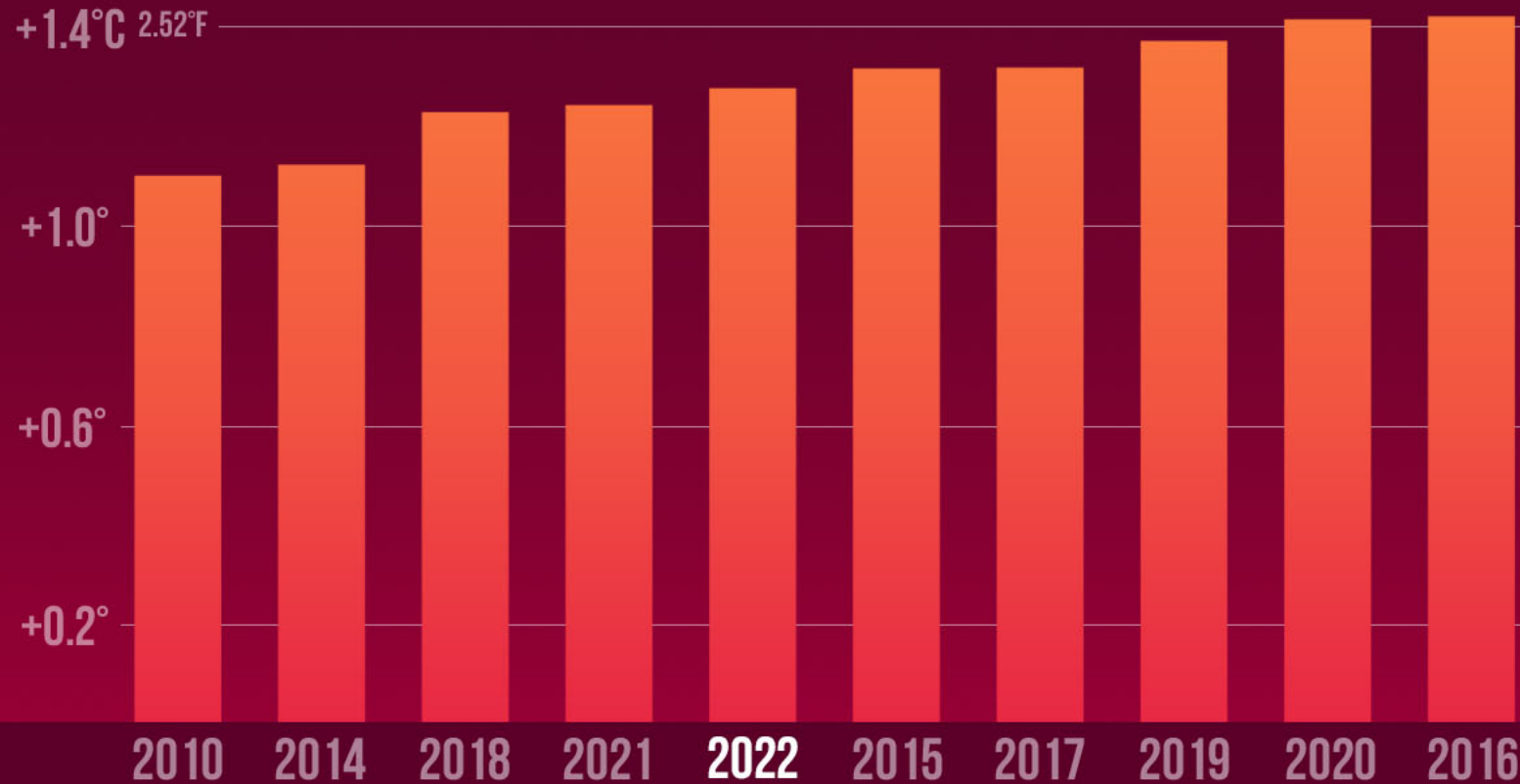


Ireland



Mexico

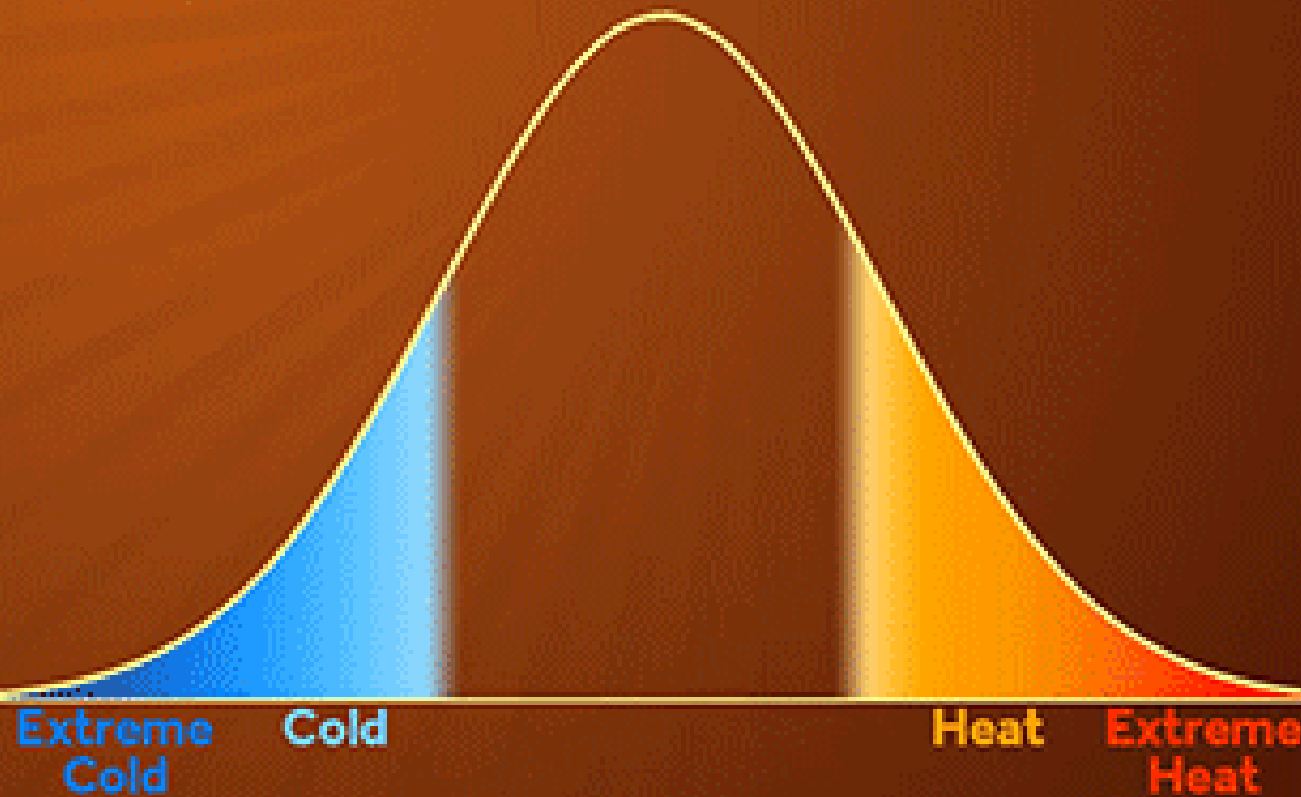
10 HOTTEST GLOBAL YEARS ON RECORD



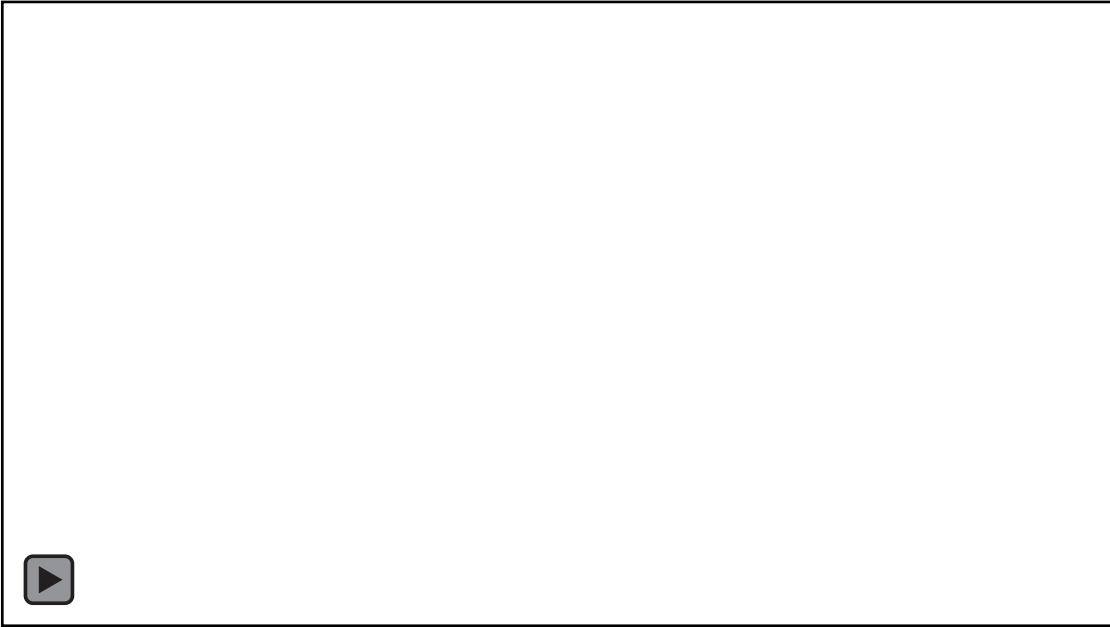
Source: NASA GISS & NOAA NCEI global temperature anomalies averaged and adjusted to early industrial baseline (1881-1910). Data as of 1/12/2023.

CLIMATE  CENTRAL

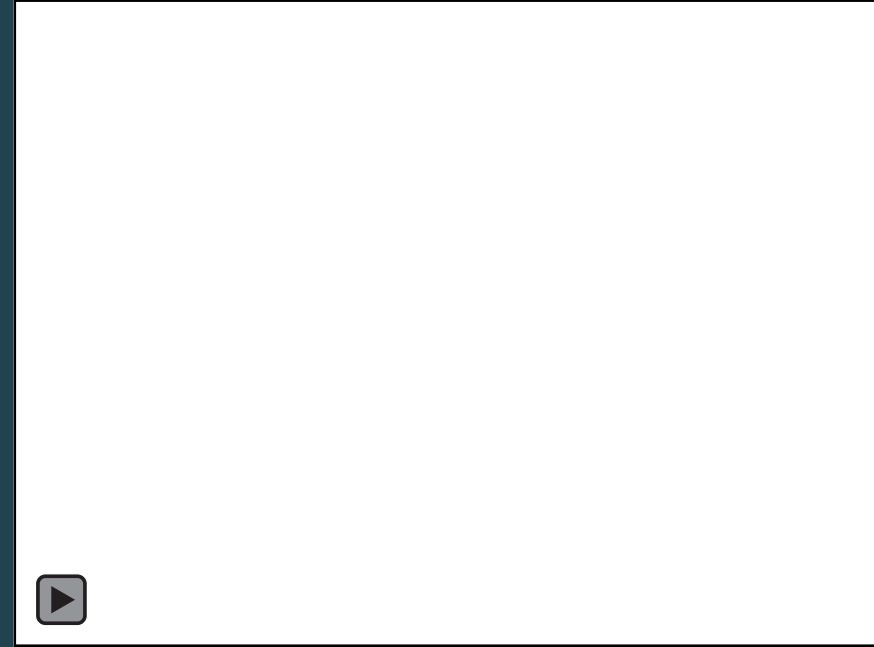
SMALL CHANGE IN AVERAGE BIG CHANGE IN EXTREMES



Greece lost a quarter of its crops in just two days and 20,000 people missing in Libya from Storm Daniel



Greece



Libya



We Need To Prepare



1. Hot Oceans are Super Charging Storms



THE IRISH TIMES

Climate Crisis

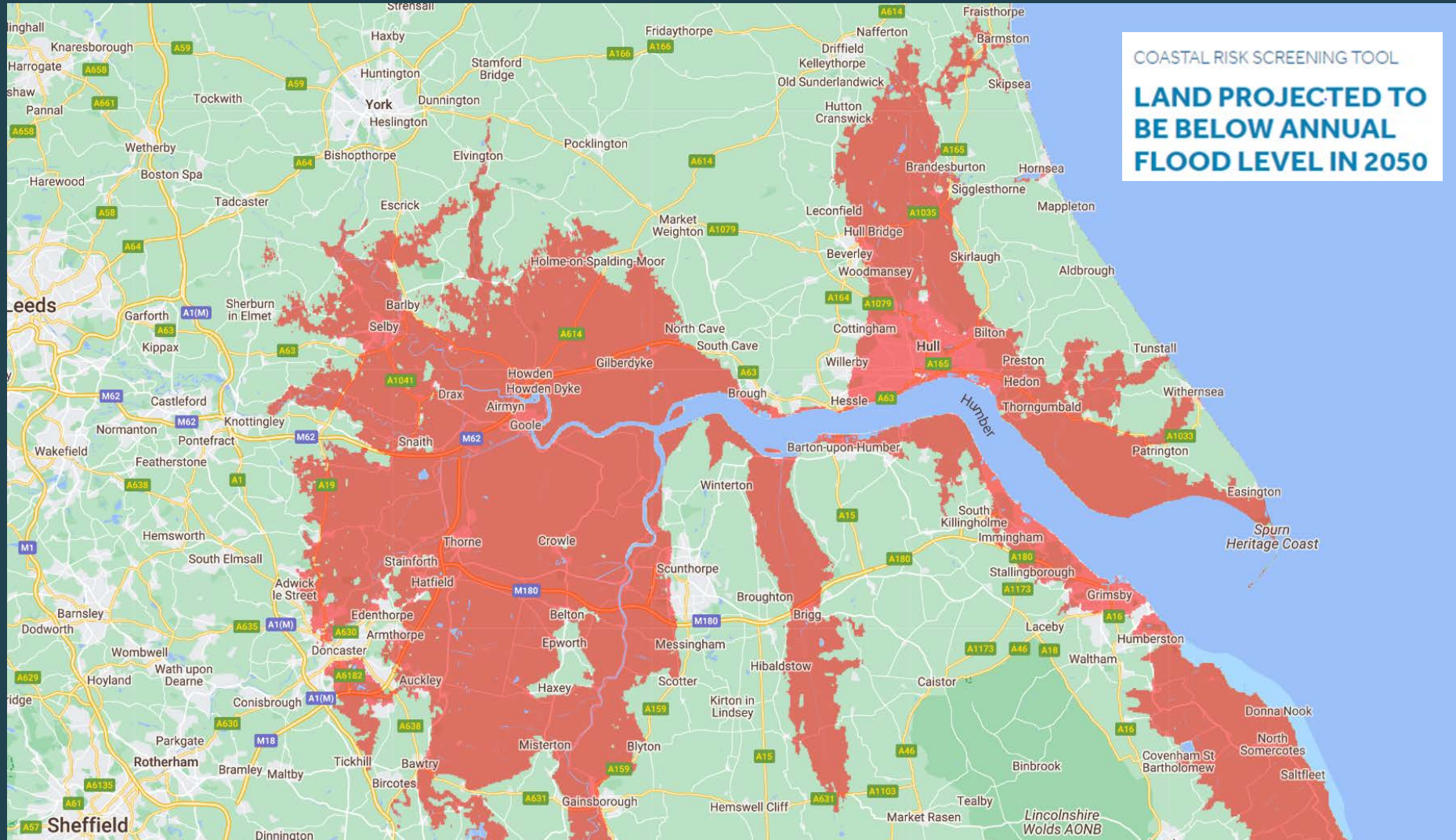
Ireland at risk of severe storms over coming months as oceans hit record temperatures

US and UK forecasts flag worsened hurricane risk in coming months as climate change warms oceans



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2. Coastal cities are at high risk of sea level rise



3. More heatwaves and more rain



June was UK's hottest on record, says Met Office

Average temperature of 15.8C almost a full degree higher than previous highs for the month



Northern Ireland and parts of England had wettest July on record

Met Office figures show UK had average 140.1mm of rain in July - the sixth highest total since records began in 1836

4. Food availability and prices will be affected

the guardian

Yes, the climate crisis is raising your grocery bills
Suzi Kerr

Recent extreme weather in Morocco and Spain is affecting availability of some of our Fruit, Vegetables and Salads. We are working hard with our M&S Select Farm growers to resolve this as quickly as possible.

M&S
- FOOD -

Sorry, due to adverse weather conditions, these products are out of stock.

We're working hard to refill our shelves.

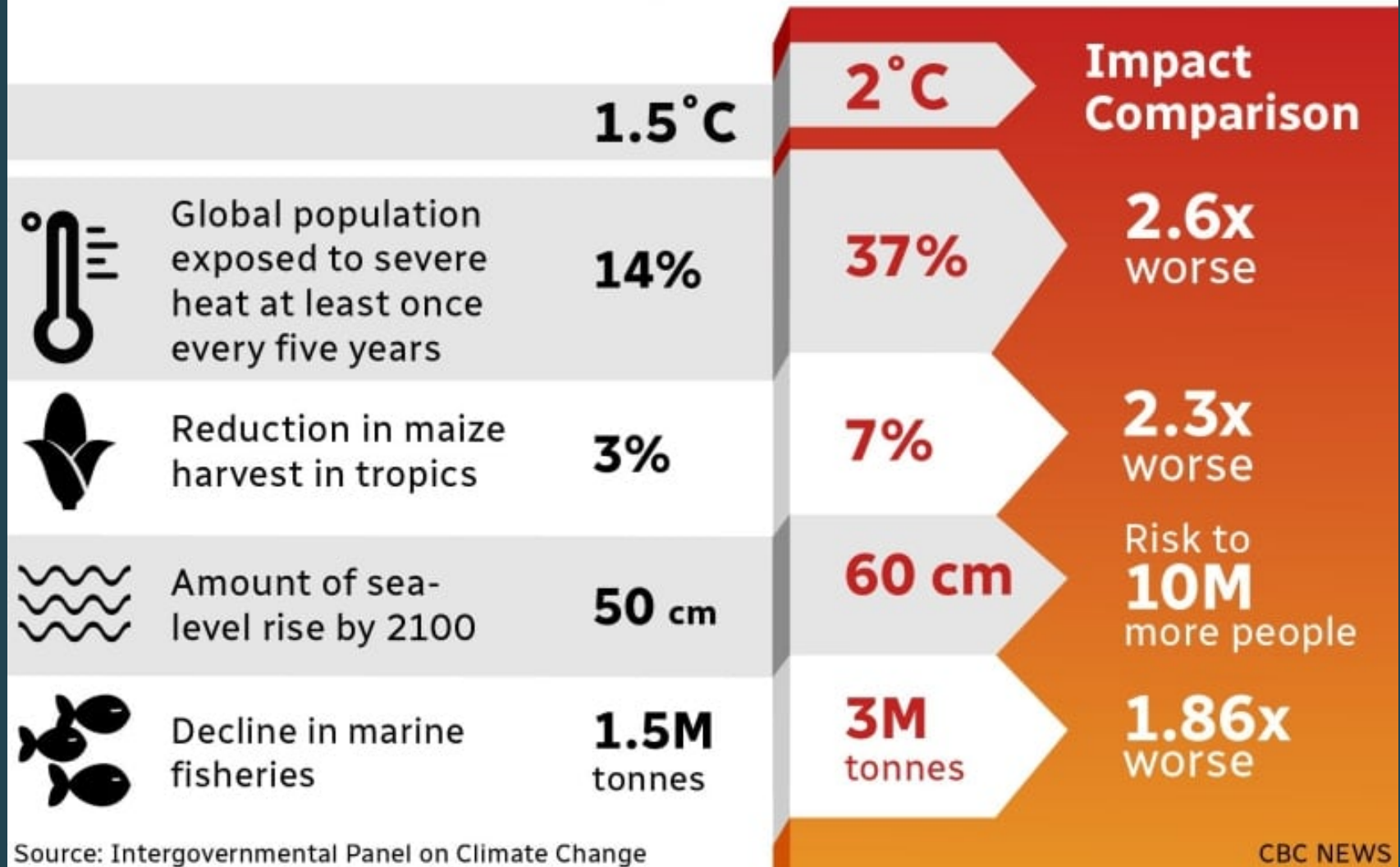
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5. Every degree of warming matters

Human health, safety, food security impacts



Source: Intergovernmental Panel on Climate Change

CBC NEWS



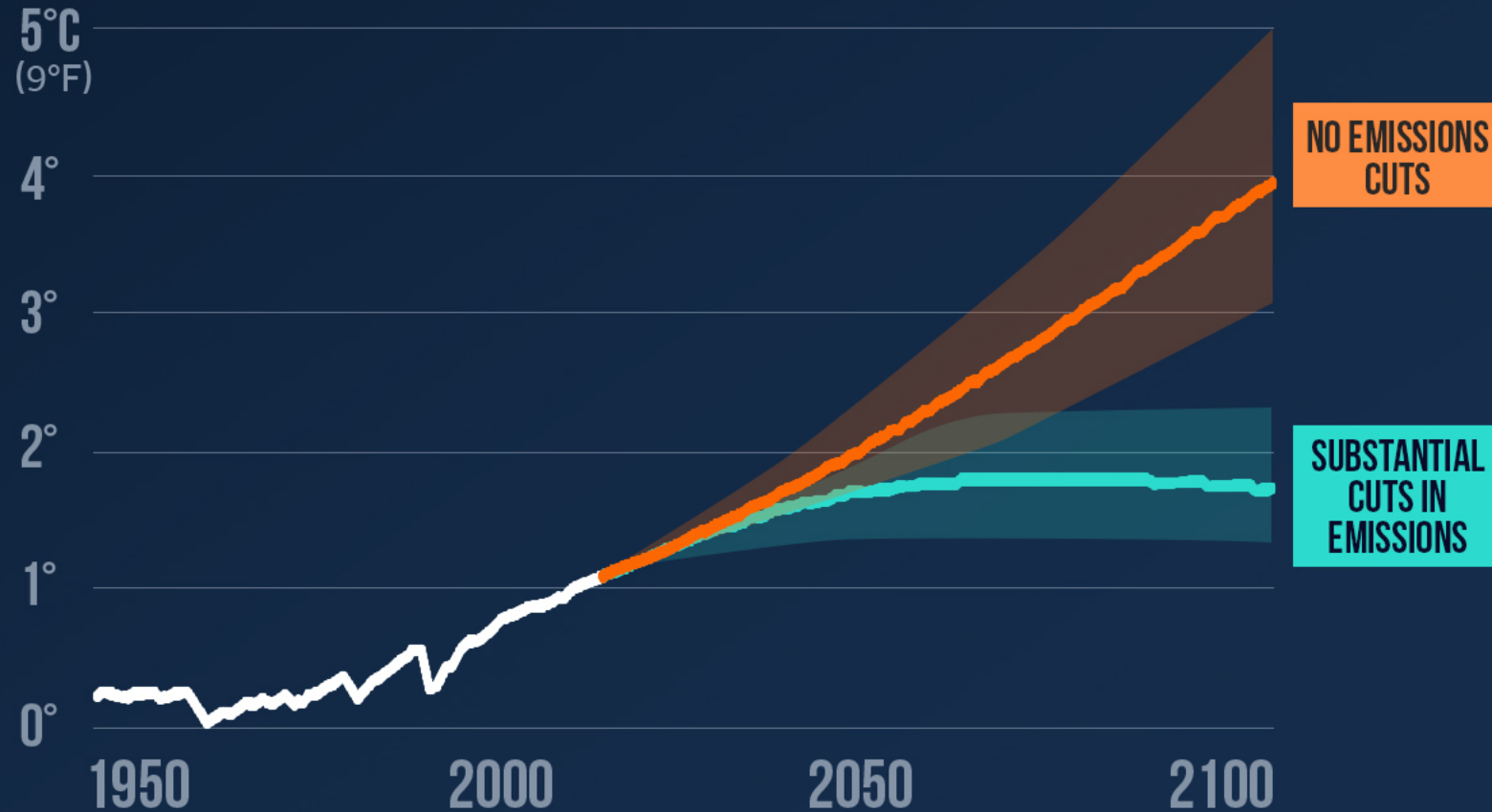
Change by Degrees

How do we
solve this
problem?



FUTURE TEMPERATURES

WARMING DEPENDS ON CHOICES TODAY



Global surface temperature (°C) anomaly relative to 1850-1900
High warming scenario: SSP3-7, Low warming scenario from SSP1-2.6.
Source: IPCC AR6 WG1

A photograph of an industrial facility, likely a refinery or power plant, with several tall smokestacks emitting thick black smoke. In the foreground, there are large white cylindrical storage tanks and a complex network of pipes and scaffolding. On the right side, a tall metal tower is actively burning, with a large plume of orange and yellow flames rising into the sky. The sky is a clear, pale blue.

Stop Making it Worse

IMF Fossil Fuel Subsidies Data: 2023 Update

Globally, fossil fuel subsidies were \$7 trillion in 2022 or 7.1 percent of GDP

The Climate Change Solutions We Need Already Exist

The top 5 ranked solutions from a list of 87 produced by Project Drawdown

RANK	SOLUTION	SECTOR	CO2e GT Reduced (2020–2050)
1	Wind Energy	Electricity	144
2	Solar Energy	Electricity	112
3	Plant-Rich Diets	Food, Agriculture, and Land Use / Land Sinks	103
4	Reduced Food Waste	Food, Agriculture, and Land Use / Land Sinks	102
5	Forest Restoration	Land Sinks	85

“Biodiversity is our strongest natural defense and ally against climate change” – United Nations



Nature Based Solutions - Eddleston Water in Scotland



NBS reduced flood peaks by 30%, saving £1 million of damage
+ benefits worth over £4 million for carbon, biodiversity, recreation and salmon fishing.

Credit: Eddleston Water Project / Colin McLean

Urban Solutions – Green Roofs in Green Cities



Knowing What Matters





the implementation of
promoting
effective
regulatory, supervisory
and other financial sector
policies

the implementation of
promoting
effective
regulatory, supervisory
and other financial sector
policies
at the international



FSB
Mark Carney

theguardian

Half world's fossil fuel assets could become worthless by 2036 in net zero transition



Core Elements of Recommended Climate-Related Financial Disclosures



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential climate-related risks and opportunities, and financial impacts, over the short, medium, and long term

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

1,300 companies in the UK

Aim of TCFD = disclosures to promote the management of climate-related financial risk and opportunities across the economy and financial system

Our economic system is completely dependent on nature

TNFD provides companies with a means to reverse biodiversity loss



**50,000
companies**

European Commission
Commission européenne

Commission européenne
European Commission

STATE OF
EUROPEAN

RAISING CLIMATE

#SOTEU
#EUGreenDeal



#SOTEU
#EUGreenDeal
#GreenRecovery

PROTECTING
CLEAN ENERGY



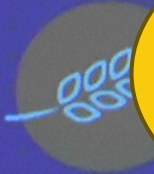
MORE SUSTAINABLE
TRANSPORT

PROTECTING
NATURE



STRIVING FOR
GREENER INDUSTRY

FROM FARM
TO FORK



ELIMINATING
POLLUTION

GOING THE GREEN
WAL



ENSURING A JUST
TRANSITION FOR ALL

MAKING HOMES
ENERGY EFFICIENT



FINANCING
GREEN PROJECTS

al
ery

CSRD Topical Standards in detail

Cross-cutting standards	Topical standards		
	Environment	Social	Governance
ESRS 1 – General requirements	ESRS E1 – Climate change	ESRS S1 – Own workforce	ESRS G1 – Business conduct
ESRS 2 – General disclosures	ESRS E2 - Pollution	ESRS S2 – Workers in the value chain	
	ESRS E3 – Water and marine resources	ESRS S3 – Affected communities	
	ESRS E4 – Biodiversity and ecosystems	ESRS S4 – Consumers and end-users	
	ESRS E5 – Resource use and circular economy		

FINANCIAL MATERIALITY

To the extent necessary for an understanding of the company's development, performance and position...



Primary audience:
INVESTORS

ENVIRONMENTAL & SOCIAL MATERIALITY

...and impact of its activities



Primary audience:
CONSUMERS, CIVIL SOCIETY, EMPLOYEES, INVESTORS

Financial Materiality: Flooding

THE IRISH TIMES

Ireland

Catastrophic storm surge in Dublin
'inevitable' over coming decades

Prof Peter Thorne said Ireland had been lucky to "dodge a bullet"



Environmental & Social Materiality: Airline Travel

Ryanair tops table as EU's most polluting airline



Low Materiality



KLM 
@KLM





We're taking steps to reduce our environmental impact on flights within Europe by recycling coffee cans and pads. Our coffee grounds are being processed in a digester, generating green energy. And that's not all! At the end of the process, we're left with nutrient-rich compost. With these small steps, we are working towards a more sustainable future for the aviation industry.   #KLM #greenenergy #coffee #compost

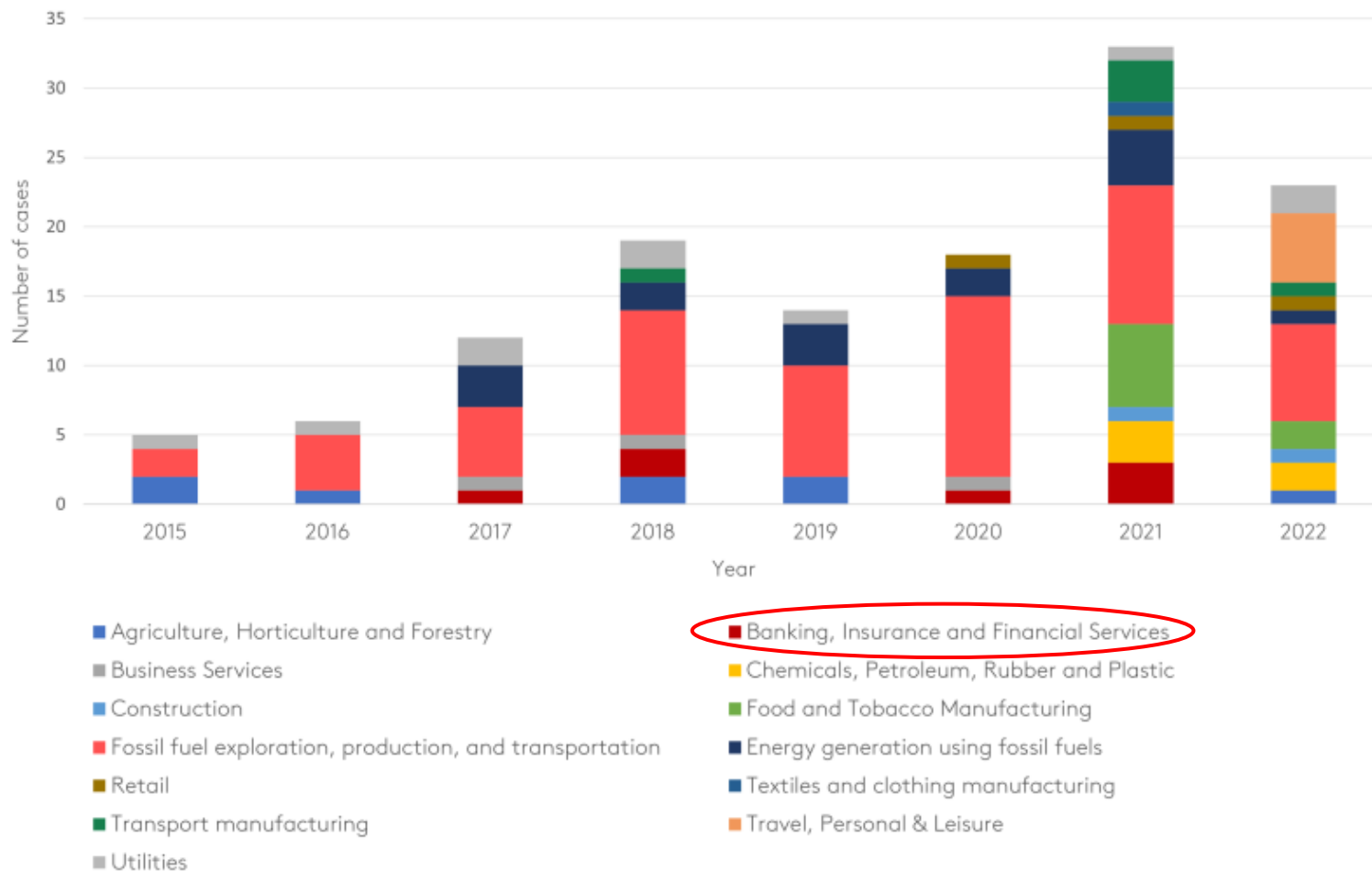


Photo: Joyce van Beek

12:39 PM · Apr 14, 2023 · 1.1M Views

Climate Litigation

Figure 1.5. Number of cases against corporations by sector type, including US and Global cases (2015–2022)





United Nations
Climate Change

COP27
SHARM EL-SHEIKH
EGYPT 2022



World leaders at COP27

A new model of leadership

OX



Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

Climate Action NOW!

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Thank you

