2022-2023 Spring Term

Green transition from international and European perspective

Decarbonisation & Business

Lecture 1 | 30 March 2023

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Lecturers

MARINA OLSHANSKAYA
BRATISLAVA

- Environmental economist with 20+ years in de-carbonization in business
- Designed de-carbonization programmes in 30+ countries worth 250+ mln $ and 20 mln $tCO_{2\text{-}eq}$
- Senior Advisor to the UN, World Bank, EBRD, and European Union

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- 2[redacted]ncing [redacted] actions
- Carbon accounting and modelling decarbonization pathways for 25+ countries and all sectors
- Lead author of the IPCC awarded the Nobel Prize for Peace in 2007

Course outline

- Lecture 1. Intro to corporate decarbonisation: understanding drivers
- Lecture 2: GHG emission management: understanding corporate carbon footprpint
- Lecture 3: Science-based decarbonisation targets and roadmaps
- Lecture 4: Climate risks assessment and disclosure

Lecture 1.

Intro: why decarbonisation & business?

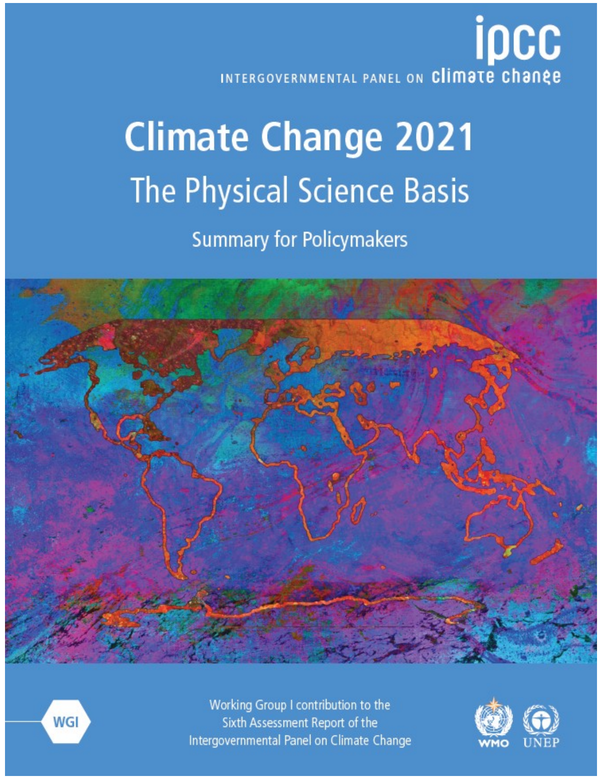
Decarbonisation: definition

- Measures leading to reduction of greenhouse (GHG) emissions of an organization
- Climate change mitigation is a bit broader term, also includes nature-based solutions (enhancement of carbon stock)
- Corporate GHG emission inventory = carbon footprint
- Improving energy efficiency and renewable energy – the most common examples of decarbonisation measures

Why decarbonisation is important for businesses?

- Meet requirements of regulators and financiers
- Access international capital markets
- Become a market leader
- Increase company’s value
- Attract climate-sensitive customers
- Boost employees’ motivation

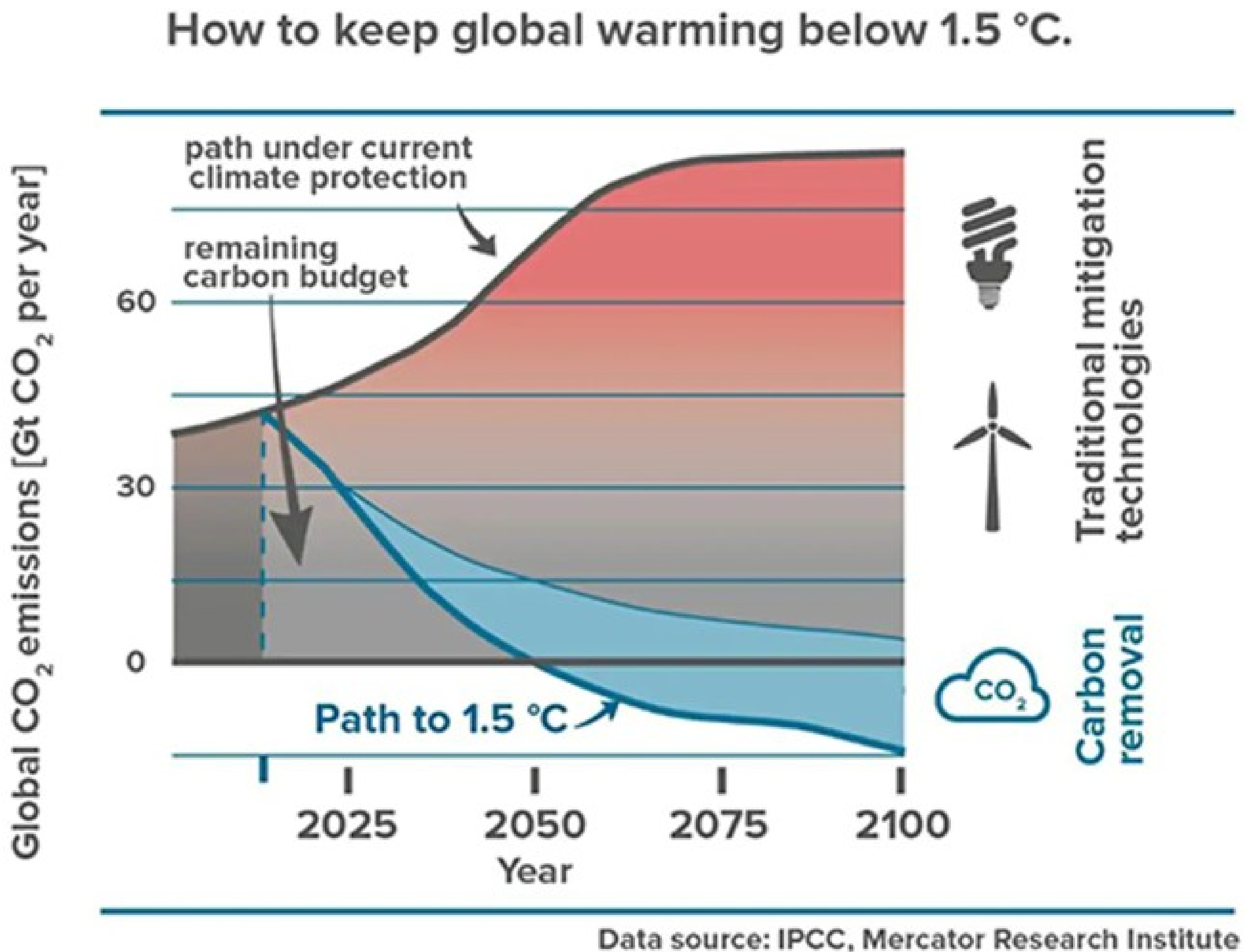
The science is clear



Achieving global **net zero carbon** is the only solution to **global climate change**:

Limiting **human-induced** global warming requires **as a minimum** reaching at least net zero CO2 emissions, i.e. the level at which **anthropogenic** CO2 emissions are balanced by removals of CO2

Paris Accord goal: to stay within 1,5C

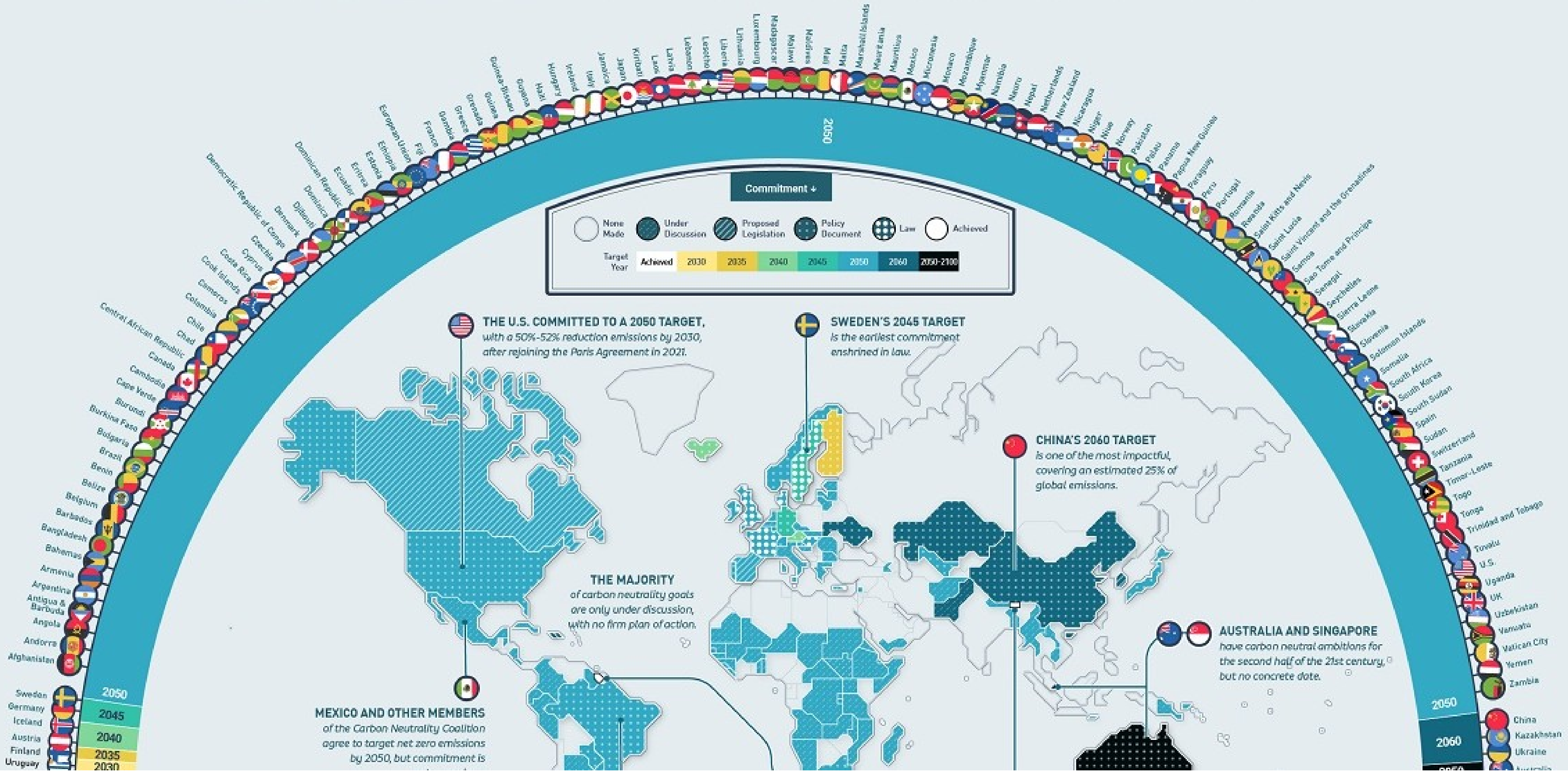


RACE TO NET ZERO

CARBON NEUTRAL GOALS BY COUNTRY

Which countries have made a carbon neutral pledge?

This map breaks down pledges by target year and level of commitment.



PARIS ACCORD: NET ZERO CARBON EMISSIONS BY 2050 GLOBALLY

Nation and sub-national net-zero carbon objectives and policies

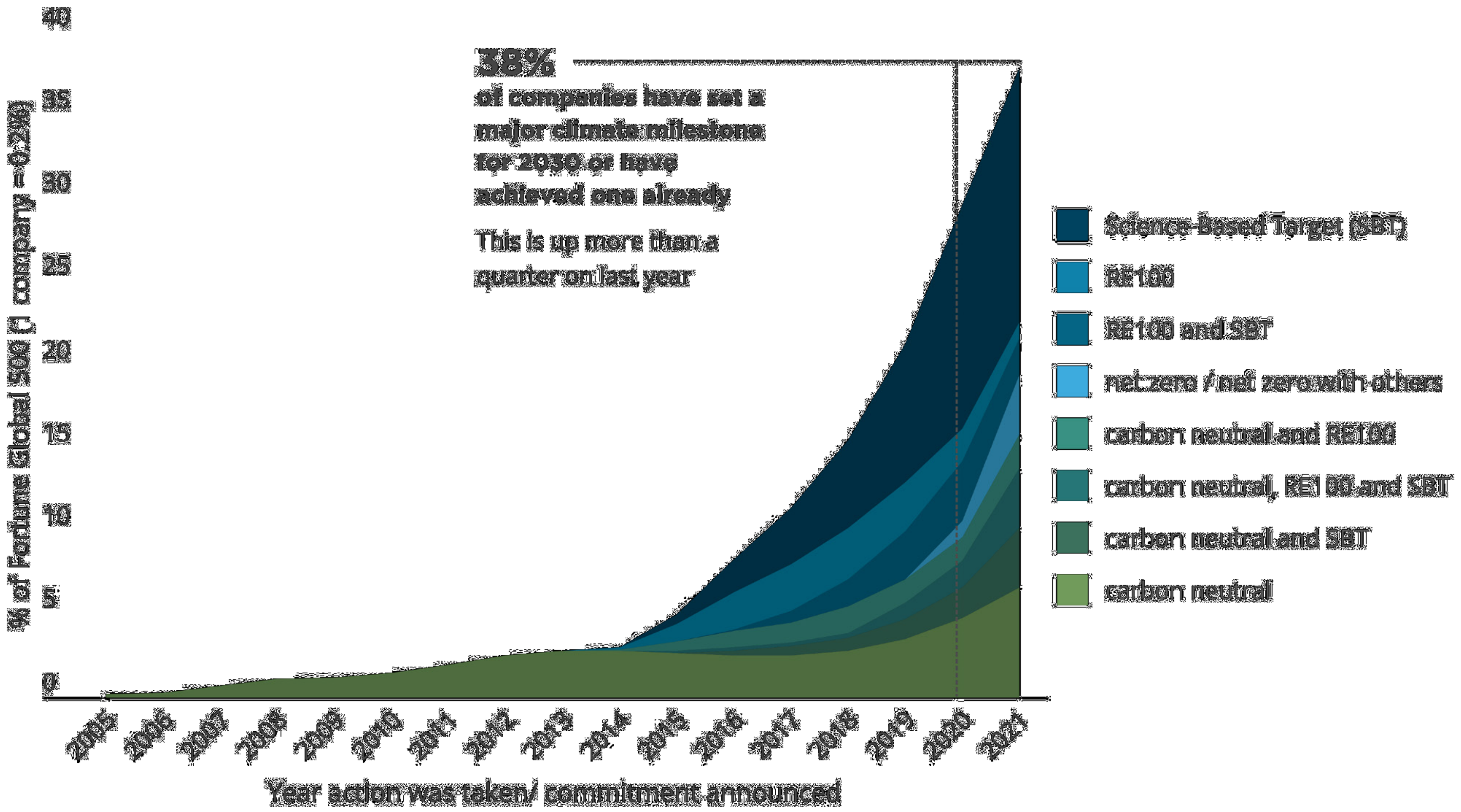
Corporate net-zero carbon commitments

PARIS ACCORD: NET ZERO CARBON EMISSIONS BY 2050 GLOBALLY

EVERY BUSINESS will have to learn how to manage its carbon footprint and create value from climate actions

Global leaders are already doing this

Net zero carbon commitments by 200 Fortune Global companies push net zero obligations along their entire value chain – like a snowball



Source: https://www.naturalcapitalpartners.com

ENVIRONMENT

Amid climate crisis, investors are starting to put their money towards a sustainable future

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- Climate change was a key theme in Davos 2020
- Central Banks have been called on to contribute to fighting climate change
- Wall Street is incorporating a new risk metric when evaluating companies: climate resiliency
- At Amazon, more than 8,700 workers have signed an open letter to CEO Jeff Bezos demanding development of a plan to get to zero emissions

Financial Market and Investors require

Since 2017, more than 370 investors with over $35 trillion in assets collectively under management are engaging companies to:

- Implement a strong governance framework: board's accountability and oversight of climate change risks and opportunities;
- Take action to reduce GHG emissions across the value chain, consistent with the Paris Agreement's goal;
- Provide enhanced corporate climate disclosure

Climate Action 100+
Global Investors Driving Business Transition

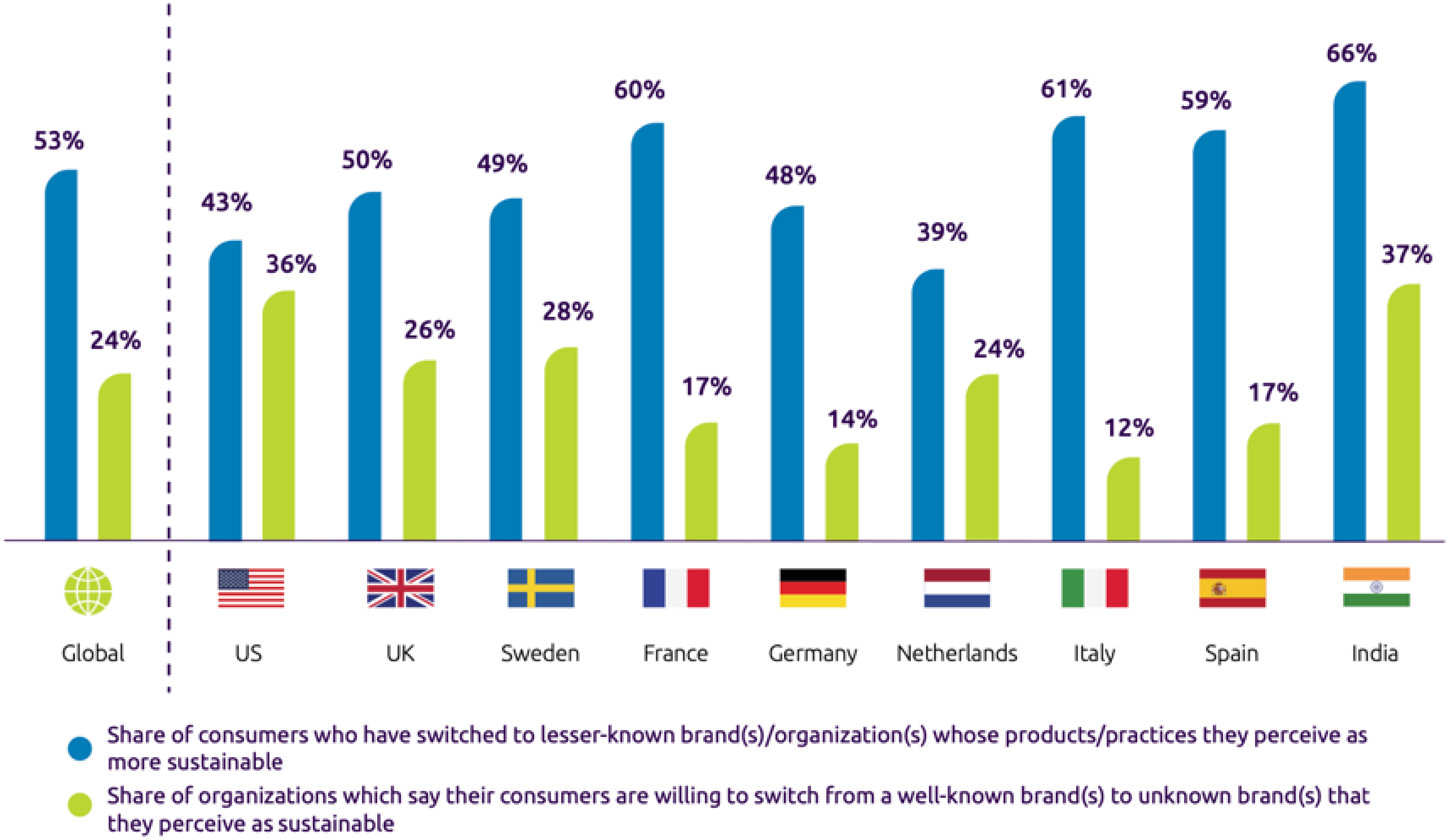
Singapore Stock Exchange

- Minimal climate reporting for all issuers from 2022
- Full climate reporting and decarbonisation plan for issuers from financial, agricultural and food sectors from 2023 and for issuers from transport, construction and industrial sectors from 2024

Consumers want to be able to make a difference in saving the planet

72% are personally concerned about their environmental footprint.

66% choose to purchase products or services based on their “environmental friendliness.”



Source: Capgemini Research Institute, Sustainability in Consumer Products and Retail Survey, March 2020, N=7,520 consumers

Impact of EU Climate Regulations on Business

2021 EU Climate Law

- Achieve carbon neutrality by 2050
- Intermediate target: at least 55% net reduction in GHG emission by 2030
- EU countries are legally obliged to reach both the 2030 and 2050 climate goals
- Focus on:
  - **Green finance standards**
  - **EU emission trading system**
  - Climate-friendly innovation
  - Fairness and cost-effectiveness

EU Emission Trading System

- ETS is a cornerstone of the EU's climate policy and its key tool for reducing GHG emissions cost-effectively

- It is the world's first major carbon market and the biggest one

- Limits emissions from around **10,000 installations** in the power sector and manufacturing industry, as well as airlines operating between these countries

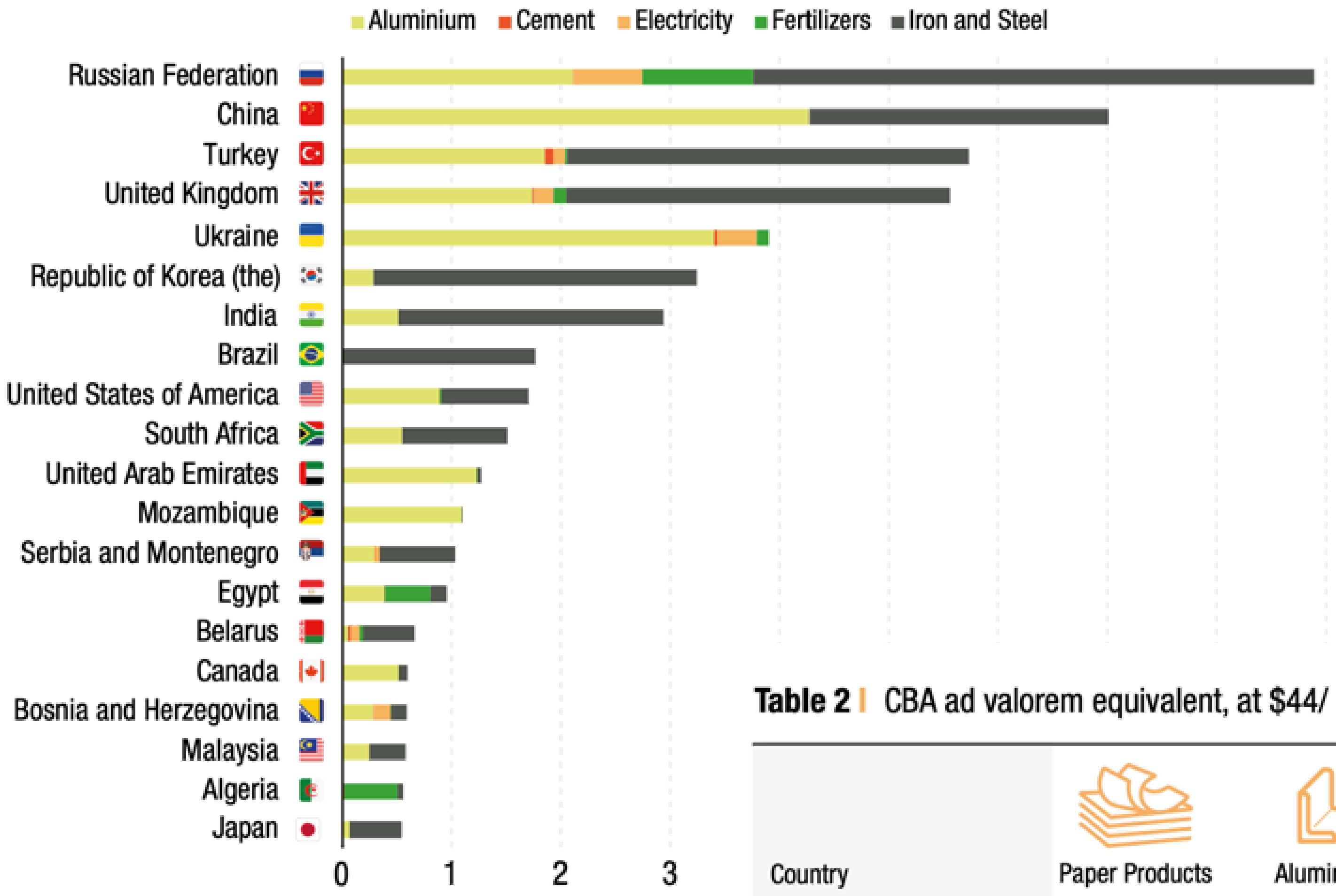
- Covers around **40% of the EU's total** GHG emissions.

EU CBAM

- EU Cross Border Adjustment Mechanism (CBAM) is designed to function **in parallel with the ETS** to expand its functioning on imported goods
- All exporters have to report on carbon footprint of their product from 2023
- Covered sectors: electricity, cement, steel, aluminium, oil refinery, paper, glass, chemical and fertilisers. These sectors represent 94 per cent of industrial CO2 emissions of the European Union
- From 2025, EU importers will have to buy carbon certificates corresponding to the carbon price that would have been paid if same goods have been produced in EU

EU CBAM: implications for exporters

Figure 2 | Exports to the European Union 2019 in selected sectors likely to be considered in the CBAM.
20 most exposed countries in terms of aggregated value of exports (billion $)



Source: UNCTAD based on UN COMTRADE. The list does not participate in, or are linked to, the ETS. Therefore, it is likely that th

Table 2 | CBA ad valorem equivalent, at $44/ CO_2 tonne, by region.

Country	Paper Products	Aluminium	Steel, ferrous metals	Petroleum, Coal Prod.	Cement, Glass	Chemicals, Fertilizers
Rest of Central Asia	4.6	2.3	3.8	2.0	10.2	14.4

EU climate finance commitments

- At least 20% of EU 2014-2020 budget to climate actions
  - The European Structural and Investment Funds (ESIF) represent over half of the EU budget.
- In 2014, the EC adopted an approach based on the Rio Markers to identify the climate-relevant share of the ESIF 2014-2020 disbursement
  - Climate mitigation can either be a “principal”, “significant” or “untargeted” objective of a policy action. Accordingly, the spending will be accounted for as 100%, 40% or 0% climate-relevant.
- At least 30% of EU 2021-2027 budget to climate actions based on EU Taxonomy

Evolution of green/climate finance rules: from minimal disclosure to mandatory climate portfolio targets

EU Green Finance Regulation - background

- In 2016, High-level expert group on sustainable finance (HLEC)
- In 2018, Action Plan on Sustainable Finance

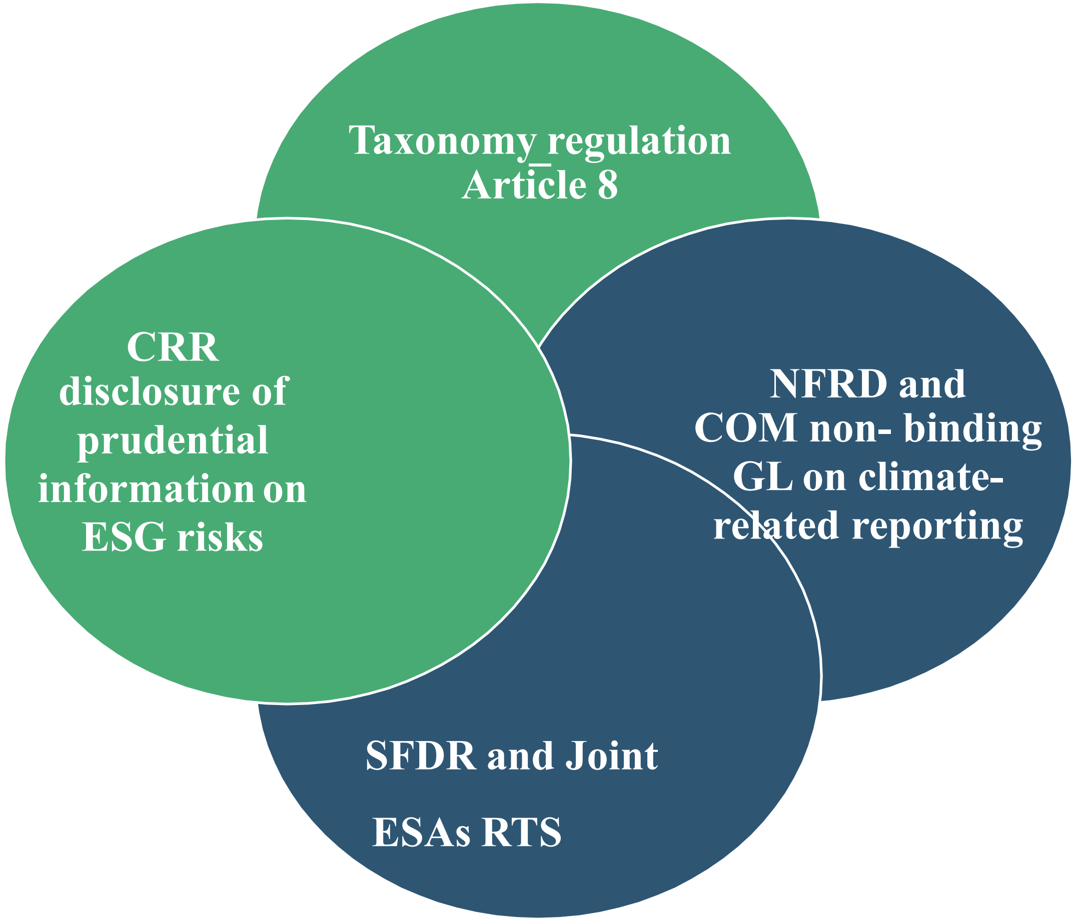
Key challenges		Actions
No common definition of 'sustainable investment'	→	EU classification (taxonomy) for sustainable activities
Risk of 'greenwashing' of investment products	→	Standards and labels for 'green' financial products give investors certainties
Banks and insurers often give insufficient consideration to climate and environmental risks	→	Capital requirements should reflect exposure to climate change and environmental risks
Investors often disregard sustainability factors or underestimate their impact'	→	Clarify institutional investor duties to consider sustainable finance when allocating assets
Too little information on corporate sustainability-related activities	→	Enhancing non-financial information disclosure

Source: EC factsheet on Sustainable Finance EU

EU Green Finance Regulation Landscape

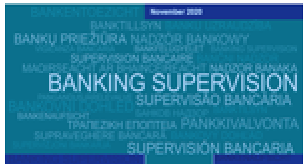
The Commission's action plan on sustainable finance has triggered several legislative initiatives on **mandatory climate and ESG practices** for financial institutions and large companies in the EU:

- **Non-financial Reporting Directive (NFRD) / Corporate Sustainability Reporting Directive**
- **Sustainable Finance Reporting Directive (SFRD)**
- **Capital Requirements Regulation (CRR)**
- **EU Taxonomy Regulation**



EU climate disclosure and reporting regulations

- **Corporate Sustainability Reporting Directive (CSRD)**
  - 50,000 large companies, including all financial institutions, must disclose climate information, Paris-alligned carbon emission reduction targets and actions
- **EU Taxonomy Regulation**
  - Mandates all financial institutions to disclose how and to what extent their activities are associated with environmentally sustainable economic activities
- **European Banking Authority**
  - Pillar 3 requires financial institutions to disclose quantitative information and KPIs on climate change mitigating measures



Key regulations: CSRD

EU Corporate Sustainability Reporting Directive (CSRD):

- publicly listed companies, large non-listed companies, financial institutions and even larger SMEs (from 2025) have to disclose climate information, decarbonisation targets and actions to reduce carbon emissions **in line with objectives of Paris Accord**
- 50,000+ EU and non-EU entities with 150 mln EUR+ turnover in EU
- Adopted by EU Parliament in November 2022

EU taxonomy regulations

❖ EU Taxonomy of environmentally sustainable economic activities

- ➢ Based on NACE statistical framework of economic activities
- ➢ A list of economic activities with performance criteria (emission intensities and/or energy use) for their contribution to 6 environmental objectives*
- ➢ Currently focused on *substantial contribution* to climate mitigation

Barrier: No common definition of 'sustainable investment'

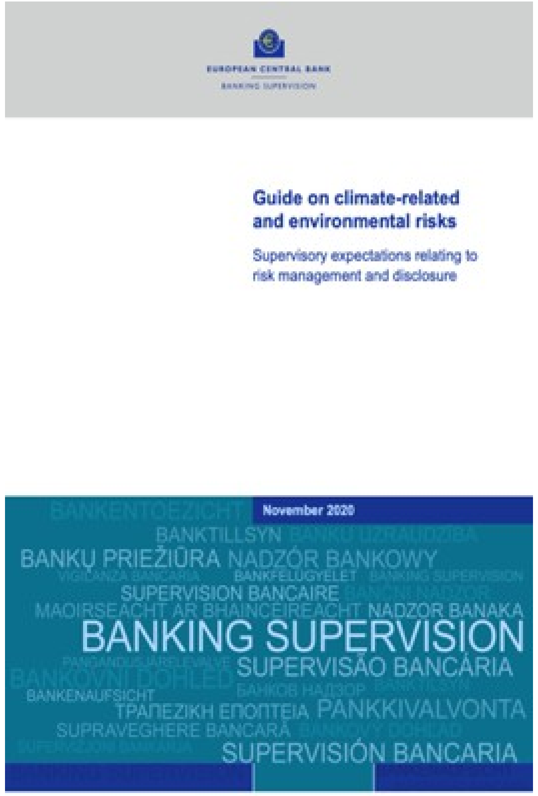
Taxonomy Technical report (414 pp)

- ➢ Full methodology
- ➢ Use cases and case studies
- ➢ 67 economic activities assessed across the sectors agriculture, forestry, manufacturing, energy, transportation, water andwaste, ICT and buildings

- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy, waste prevention and recycling
- Pollution prevention and control
- Protection of healthy

Key regulations: European Banking Authority

- **European Banking Authority (ITS Pillar 3 Disclosures)** require banks to
    - disclose and show how climate change exacerbate other risks within institutions’ balance sheets and how institutions are mitigating those risks
    - disclose the extent of their **alignment** with the green taxonomy, financed carbon emissions, exposure to fossil fuel companies excluded from sustainable climate benchmarks, and **progress towards net zero goals**
    - Establish **Green Asset Ratio (GAR)** and **Book Taxonomy Alignment Ratio (BTAR)** targets



Initiatives in the financial sector

- **Net Zero Banking Alliance** : 90 banks with US$ 66 trillion in assets committed to align their investment and lending operations with net zero emissions by 2050

- 1,069 financial institutions with assets of $194 trillion implements recommendations of the **Task Force for Climate-Related Financial Disclosures (TCFD)** established by the Financial Stability Board – Standard for Discloser/ Reporting

GFANZ
Glasgow Financial Alliance for Net Zero

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

From an Investment - to a Climate-bank
European Investment Bank (EIB)

EIB Board of Directors approved an ambitious new **Strategy for Climate Action and Environmental Sustainability**

- Support **€1 trillion worth of investments** in climate action and environmental sustainability from 2021 to 2030;
- Increase the share of the EIB's financing dedicated to climate action and environmental sustainability to **50% by 2025;**
- Ensure Paris-alignment of all investment in energy and industrial sectors

EBRD has also committed to:

- Make more than half of its investments green by 2025
- Verify alliance of its operations with the goals of the Paris Agreement for both climate mitigation and adaptation, in order to ultimately:
- **Ensure that all EBRD-financed projects are fully aligned with the goals of the Paris Agreement by 2023**

Why EU Green Finance Regulation important outside EU?

- EU is an important source of finance for the EU neighborhood countries

- EU financiers increasingly require from its partners within and outside EU compliance with high standards of corporate climate governance:

  - Assessment of GHG emissions , direct and indirect
  - Establishment of climate-related KPIs for portfolio and projects
  - Demonstrating alignment of financed activities with Green Taxonomy
  - Climate risk management: physical and transition
  - Establishment of corporate climate governance policies

Key take aways

- Global climate change goal – net zero carbon emission by 2050
- Every business will be affected by requirements to achieve net zero: regulators, clients, financiers, shareholders, or general public
- Successful businesses must learn how to make value from climate actions