

# The External Dimension of the European Green Deal:



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# The European Green Deal

**Cut GHG emissions by at least 55% by 2030**

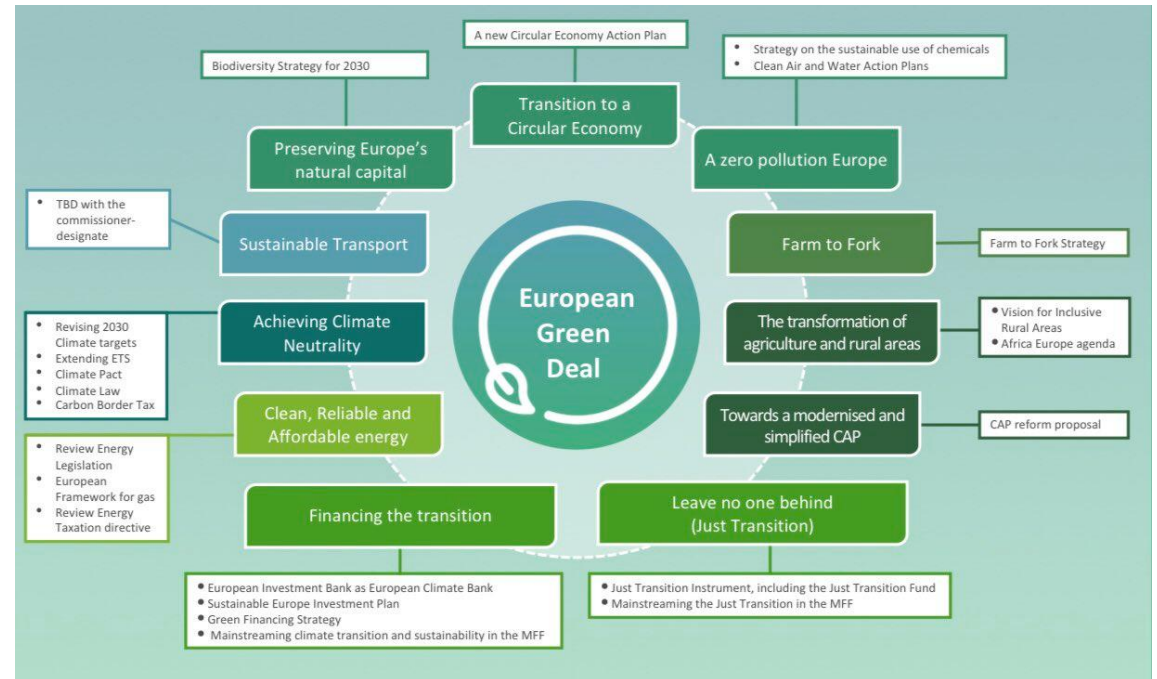
EU's pledge to be **carbon neutral by 2050**  
(codified in *European Climate Law*)

Just Transition Fund

Making EU industry leader in green economy

**Carbon border adjustment mechanism**

Use **diplomacy, trade** and **development** cooperation to advance climate action → **sustainability commitments** in trade agreements → engaging Africa, G20, neighbours on climate action



### Top 10 countries in renewable electricity generation in 2019

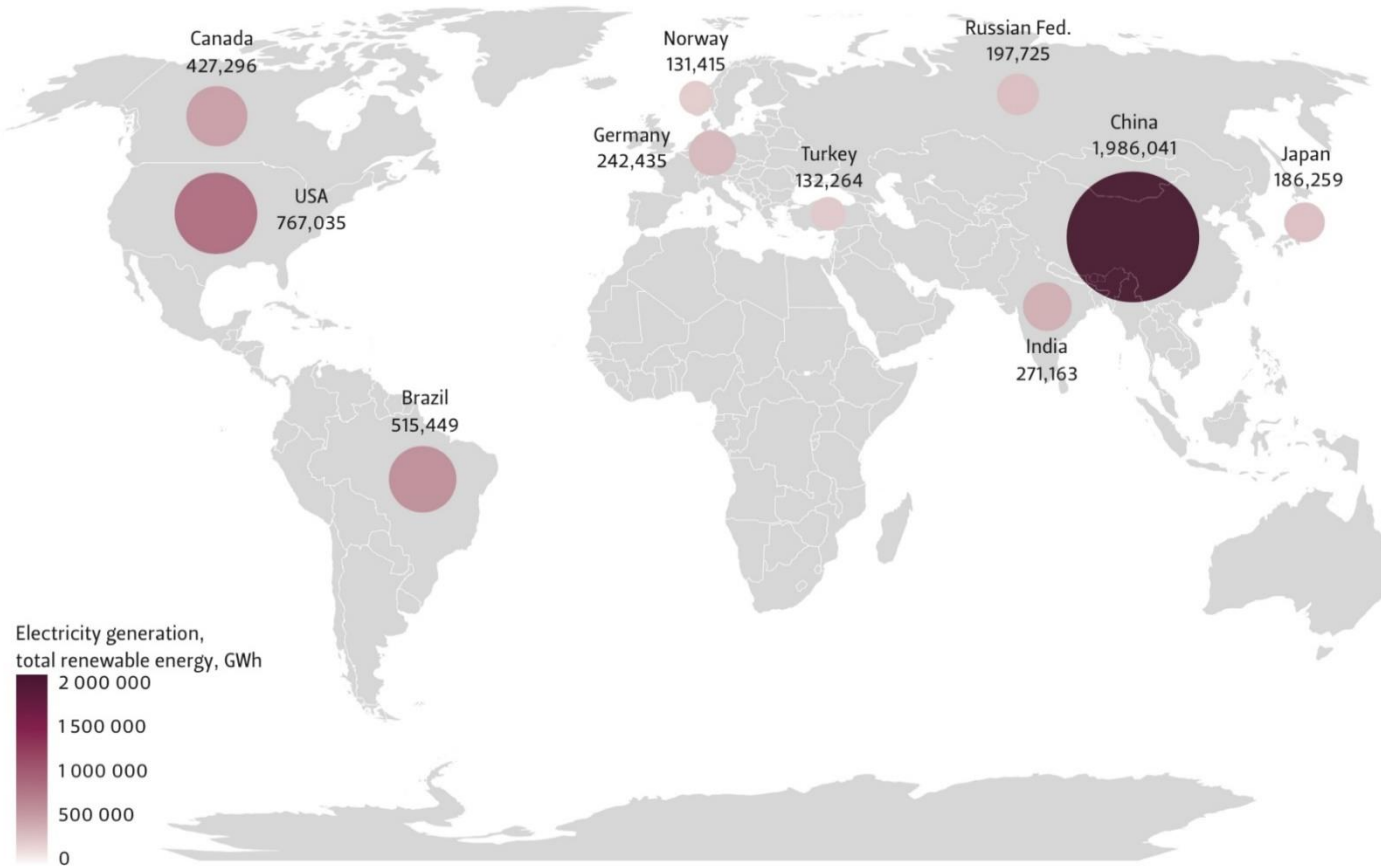


Figure 1. Top 10 countries in renewable energy generation in 2019.  
Source: International Renewable Energy Agency (IRENA), Renewable Capacity Statistics 2021; Renewable Energy Statistics 2020

**Patents filed for renewable energy technologies in 2018**

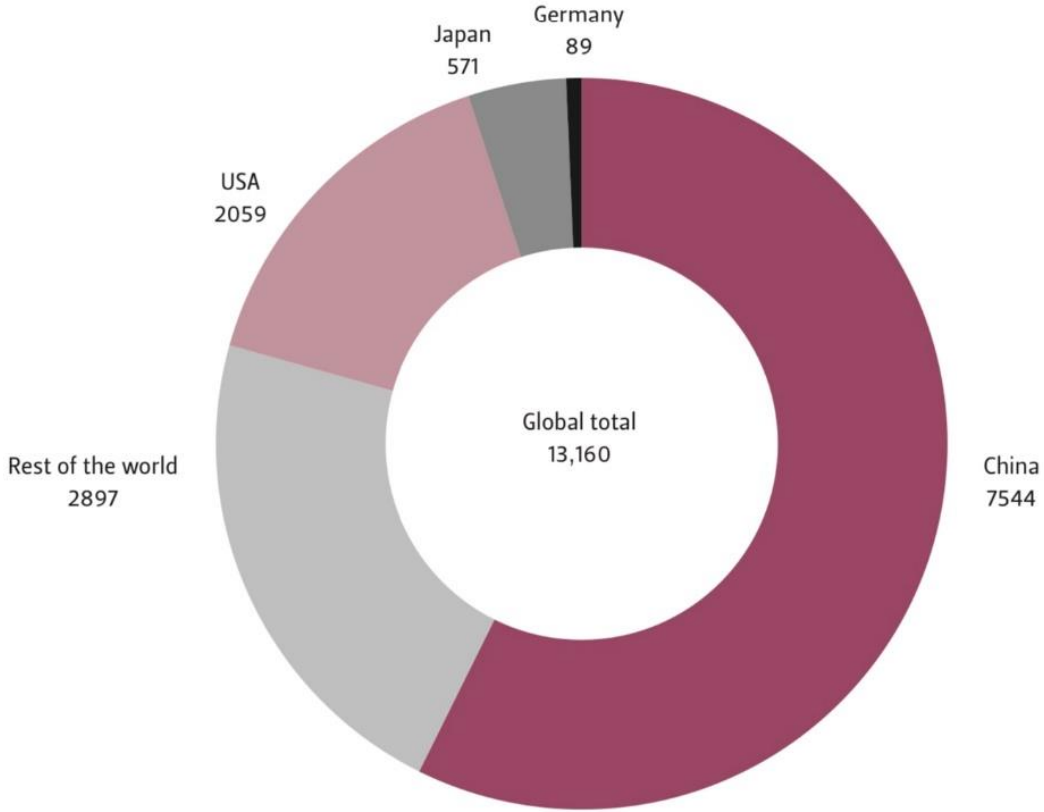


Figure 2. Patents filed for renewable energy technologies in 2018.  
Source: International Renewable Energy Agency (IRENA)

# The external dimension of the EGD: challenges

- Rethink long-term relationship with fossil fuel suppliers
- Pave the way for new types of green cooperation/alliances
- Mainstream the green agenda, i.e. in new trade deals
- Ensure ‘internationally just’ transitions
- Address effects of EGD on other countries  
→ offshoring production/pollution

## nature

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COMMENT | 26 October 2020 | Correction 12 November 2020 |  
Correction 21 December 2020 | Correction 03 March 2021

### Europe’s Green Deal offshores environmental damage to other nations

Importing millions of tonnes of crops and meat each year undercuts farming standards in the European Union and destroys tropical forests.

Richard Fuchs [✉](#), Calum Brown & Mark Rounsevell

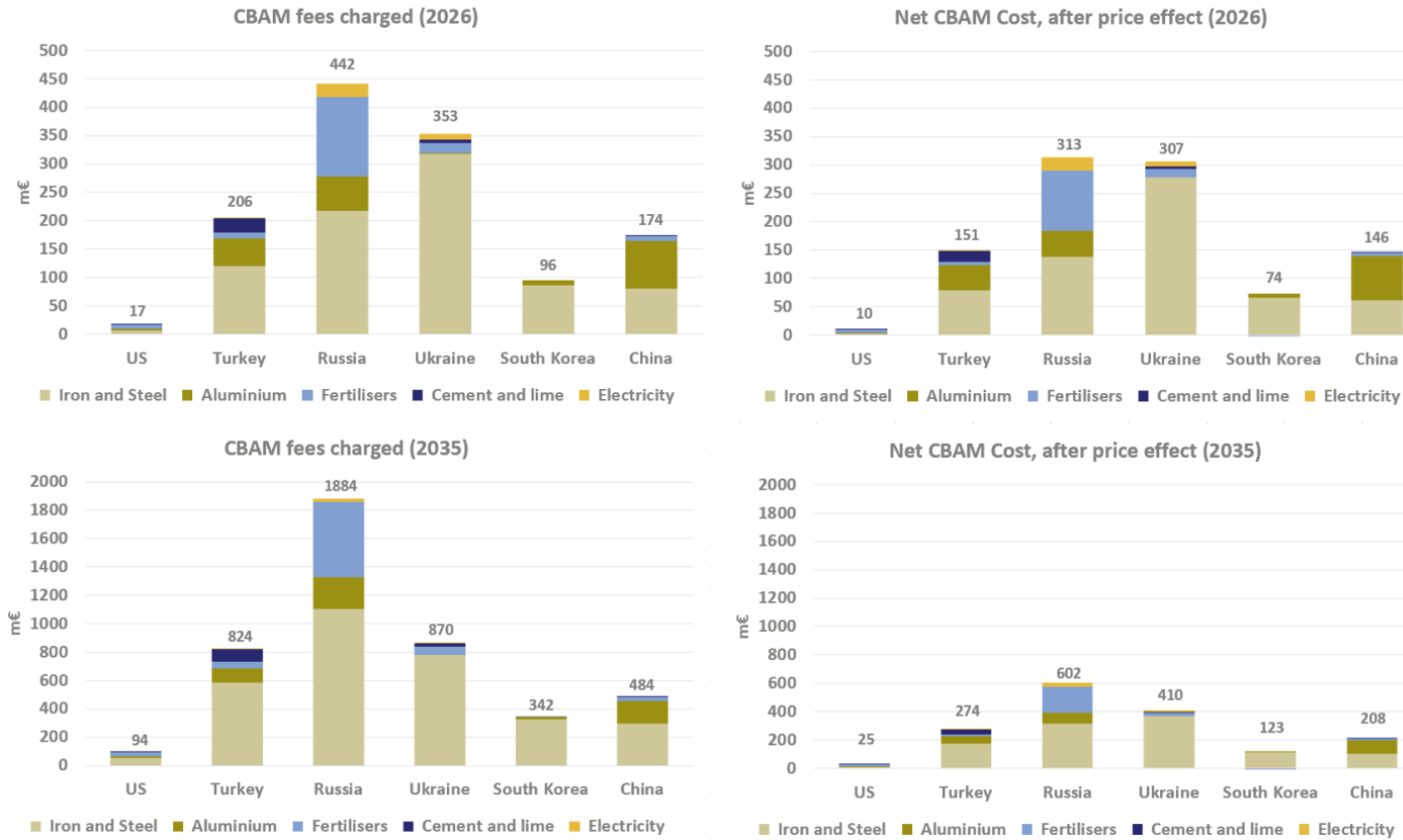


# The Carbon Border Adjustment Mechanism (CBAM)

- A carbon tax imposed at the EU's borders to factor in the carbon content of certain goods – iron, steel, cement, fertilizers, aluminum and electricity – imported from third countries
  - Goal: prevent 'carbon leakage'
  - Criticism from numerous trade partners
  - Key issue: compatibility with WTO law
- Some trade partners threatened to take it to the WTO

# CBAM: effects on trade partners

*Estimated 2026 & 2035 CBAM fees vs. Net cost to importers from European Trade Partners*



Source: E3G. "A Storm in a Teacup" (2021)

# The EGD and the geopolitics of the energy transition

Important factors: access to **technology**/ patents, **power lines**, **rare earth** materials, **storage** and dispatch (Paltsev 2016)

More **decentralized** energy production (wind, solar power) → this will increase self-sufficiency, *reduce import needs* and related geopolitical tensions (compare to pipelines!)

Intermittent production → storage and distribution (*power grids*) essential

‘**Smart grids**’ using digital tech to quickly react to local changes in usage will be essential

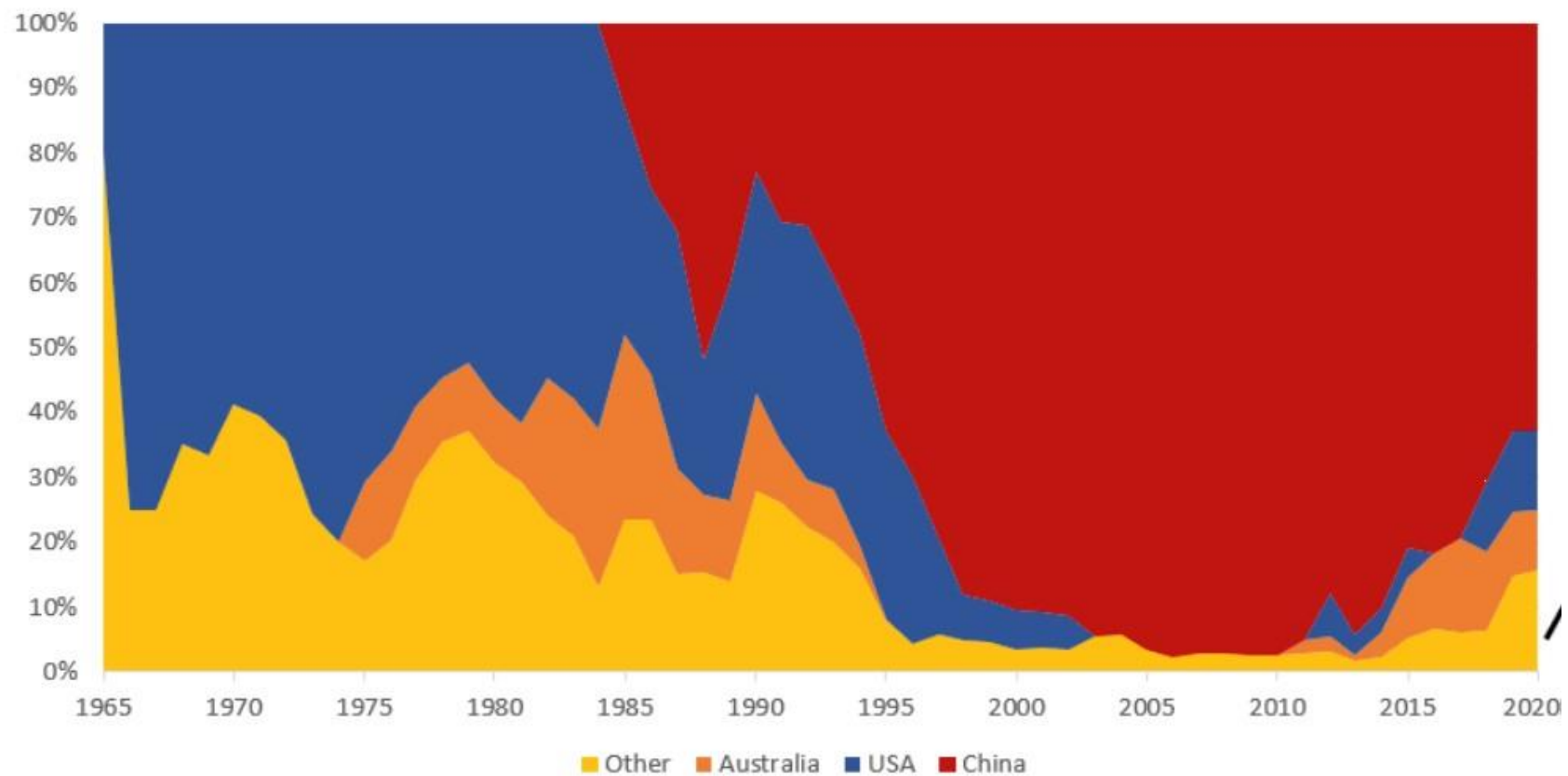
Critical materials for clean-energy technologies.

	Solar power	Wind power	Electric vehicles, storage
Bauxite & aluminium	x	x	x
Cadmium	x		
Chromium		x	
Cobalt		x	
Copper	x	x	x
Gallium	x		
Germanium	x		
Graphite			x
Indium	x		
Iron	x	x	x
Lead	x	x	x
Lithium			x
Manganese		x	x
Molybdenum		x	
Nickel	x		x
Rare earths		x	x
Selenium	x		
Silicon	x		x
Silver	x		
Tellurium	x		
Tin	x		
Titanium			x
Zinc	x	x	

Source of data: IISD [178], IRENA [76].



# Rare earths: global production



# The EU and the Energy Transition

- **European Battery Alliance (2017)**
  - Industry, Member States and the European Investment Bank
  - secure access to raw materials for batteries from countries outside the EU and boost production within the Union
- **EU Critical Raw Materials Action Plan (2020)**
- **EU Hydrogen Strategy (2020)**
  - phased increase in green hydrogen production, so that it is deployed at a large scale across hard-to-decarbonise sectors after 2030
- Investment in post-Covid-19 recovery plans
- Partnerships with Canada, US...



# The War in Ukraine and the Green Agenda: REPowerEU

- **RePowerEU**: Commission Communication ‘Joint Action for more affordable, secure and sustainable energy’ (8 March 2022)
- **Accelerating the energy transition...**
  - Focus on energy efficiency and saving
  - ..Or **new investments in fossil fuels?**
  - New LNG terminals, new supply contracts with Qatar, doubling the Southern Gas Corridor (TAP) pipeline.. A return to coal??

REPOWER EU TRACK	FOCUS	FFSS AMBITION BY 2030	REPOWEREU MEASURE	REPLACED BY THE END OF 2022 (BCM equivalent) estimate	ADDITIONAL TO FFSS BY 2030 (BCM equivalent) estimate
GAS DIVERSIFICATION	NON-RU NATURAL GAS	-	LNG diversification	50*	50
		-	Pipeline import diversification	10	10
	MORE RENEWABLE GAS	17 bcm of biomethane production, saving 17 bcm	Boost biomethane production to 35bcm by 2030	3.5	18
		5.6 million tonnes of renewable hydrogen, saving 9-18.5 bcm	Boost hydrogen production and imports to 20mt by 2030	-	25-50
ELECTRIFY EUROPE	HOMES	Energy efficiency measures, saving 38 bcm	EU-wide energy saving, e.g. by turning down the thermostat for buildings' heating by 1°C, saving 10bcm	14	10
		Counted under overall RES figures below	Solar rooftops front loading – up to 15 TWh within a year	2.5	frontloaded
		30 million newly installed heat pumps installed in 2030, saving 35 bcm in 2030	Heat pump roll out front loading by doubling deployment resulting in a cumulative 10 million units over the next 5 years	1.5	frontloaded
	POWER SECTOR	Deploy 480 GW of wind capacities and 420 GW of solar capacities, saving 170bcm (and producing 5.6 Mt of Green Hydrogen)	Wind and solar front loading, increasing average deployment rate by 20%, saving 3bcm of gas, and additional capacities of 80GW by 2030 to accommodate for higher production of renewable hydrogen.	20	Gas savings from higher ambition counted under green hydrogen, the rest is frontloaded
TRANSFORM INDUSTRY	ENERGY-INTENSIVE INDUSTRIES	Front load electrification and renewable hydrogen uptake	Front load Innovation Fund and extend the scope to carbon contracts for difference	Gas savings counted under the renewable hydrogen and renewables targets	

# Conclusion: science and the global / multilateral context

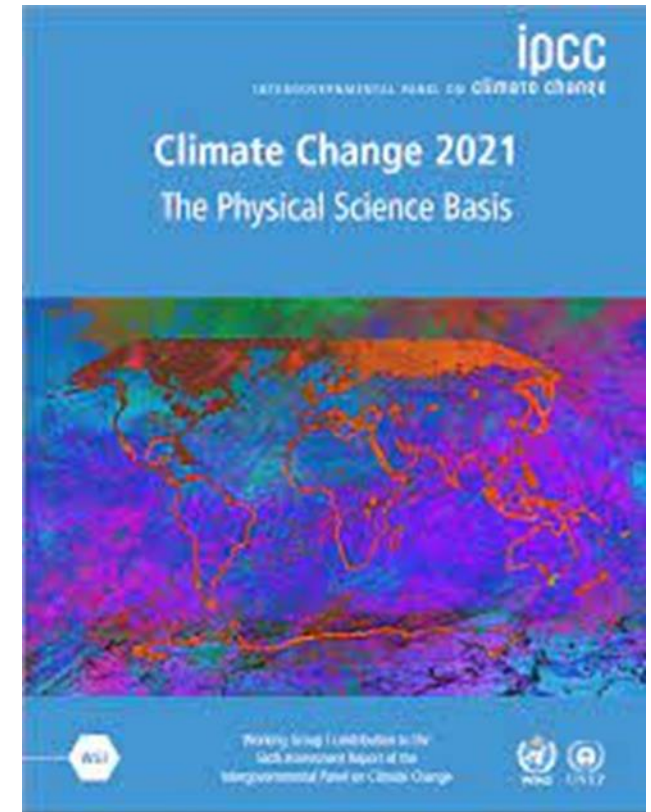
Observed increases in GHG concentrations since around 1750 are unequivocally caused by human activities

Global surface **temperature** in 2011-2020 was **1.09C higher** than in 1850-1900, with larger increases on land (1.59C) than over the ocean (0.88C)

**Global retreat of glaciers** since the 1990s, the **decrease in Arctic Sea ice** between 1980s and 2010s (-40% in September 2021), decrease in *spring snow cover* in northern hemisphere, the melting of the Greenland Ice Sheet and of the permafrost (Cryosphere)

Global upper *ocean* (0-700 m) has warmed since 1970s; human-caused CO2 emissions caused surface *acidification*; **global mean sea level increase** by 0.2m since 1901

Climate zones have shifted poleward in both hemispheres.



## References / Further reading

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