

# Climate change is real: “Real” Leadership needed from US and the world

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# Climate change is real



- Cannot happen at worst time in human history
- We are seeing impacts today; the poor are most vulnerable – heat shock, extreme rain events (leading to floods, droughts and locust attacks) variable weather; dust storms...increased intensity of tropical cyclones
- There is no question that the **future is here**

# State of global climate 2020



- UN secretary general says
- “The data in this report show that the global mean temperature for 2020 was around 1.2 °C warmer than pre-industrial times, meaning that time is fast running out to meet the goals of the Paris Agreement. We need to do more, and faster, now. “
- Scale of transition is huge
- “That means reducing global greenhouse gas emissions by 45 per cent from 2010 levels by 2030 and reaching net zero emissions by 2050. “
- Much bigger if you factor in the fact that large numbers of people still do not have right to development. **Inconvenient but the truth**

# Highlights

Concentrations of the major greenhouse gases, CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, continued to increase despite the temporary reduction in emissions in 2020 related to measures taken in response to COVID-19.



2020 was one of the three warmest years on record. The past six years, including 2020, have been the six warmest years on record. Temperatures reached 38.0 °C at Verkhoyansk, Russian Federation on 20 June, the highest recorded temperature anywhere north of the Arctic Circle.



The trend in sea-level rise is accelerating. In addition, ocean heat storage and acidification are increasing, diminishing the ocean's capacity to moderate climate change.



The Arctic minimum sea-ice extent in September 2020 was the second lowest on record. The sea-ice retreat in the Laptev Sea was the earliest observed in the satellite era.



The Antarctic mass loss trend accelerated around 2005, and currently, Antarctica loses approximately 175 to 225 Gt of ice per year.



The 2020 North Atlantic hurricane season was exceptionally active. Hurricanes, extreme heatwaves, severe droughts and wildfires led to tens of billions of US dollars in economic losses and many deaths.



Some 9.8 million displacements, largely due to hydrometeorological hazards and disasters, were recorded during the first half of 2020.



Disruptions to the agriculture sector by COVID-19 exacerbated weather impacts along the entire food supply chain, elevating levels of food insecurity.



# Double whammy: mismanagement adds to climate impacts



- Poor are our victims
- We understand the impacts of climate change – may not use the word but people facing the extreme weather **know**
- **But also important not to blame everything on climate impacts;**
- **Floods and recent dam burst in Himalaya is result of mismanagement of fragile ecology; exacerbated by climate change**
- **Same for other disasters –**
- **not natural but **manmade** (bad management+climate)**

Real and devastating  
Will get worse

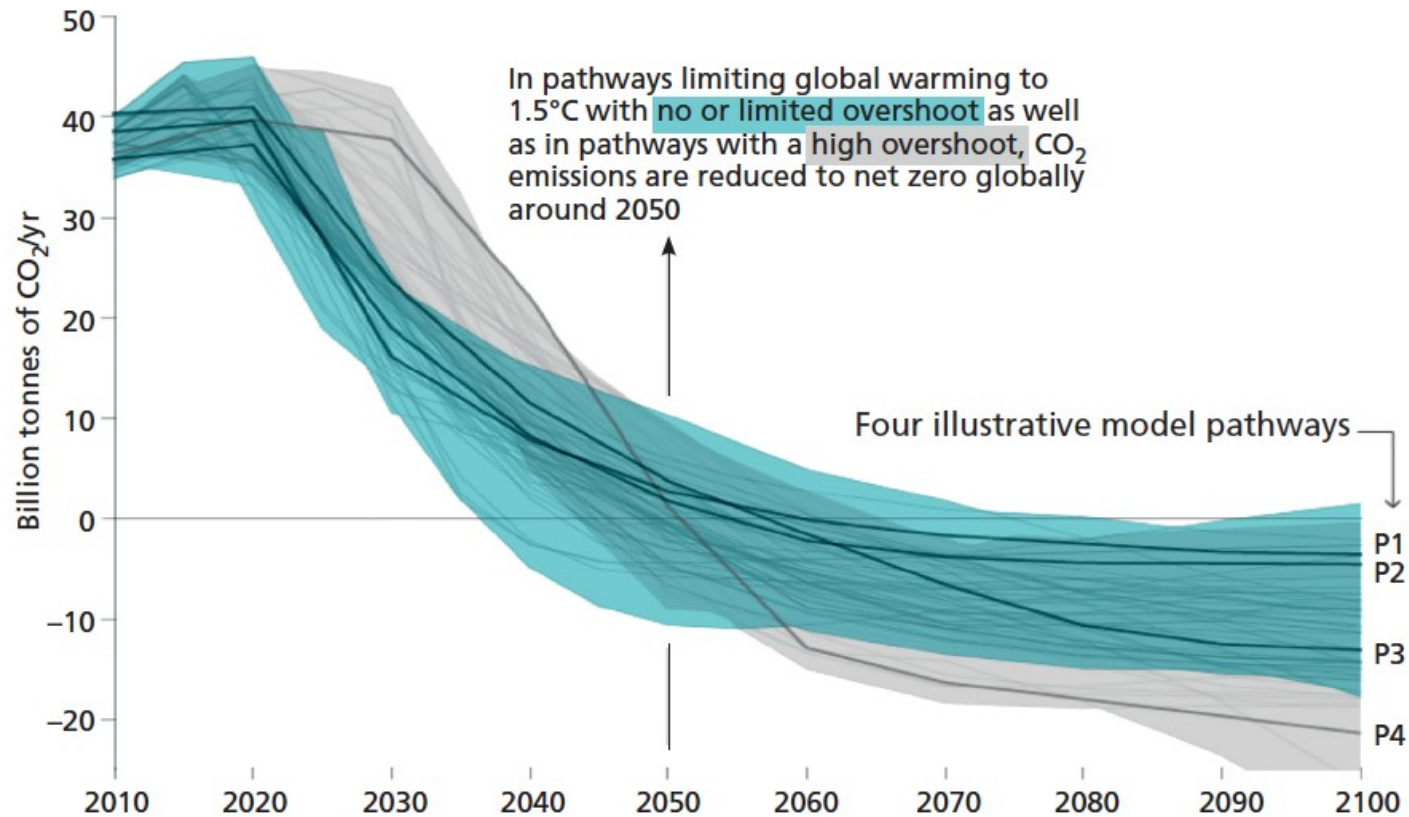
**We need action; transformational**



- Leadership summit of US president Joe Biden welcome
- US rejoining Paris Agreement is important
- US taking leadership on climate change; John Kerry visiting countries in effort to build narrative for action important
- **But not enough**
- Worse, we are in real danger that we will lose another 5 years; focusing on not what we need to do today; but debating on the net-zero goal of countries (should they or not)

## Graph 6.2: Global total net CO<sub>2</sub> emissions

Annual global GHG emissions should ideally peak by 2020, and then drop sharply, hitting net zero by 2050



Source: IPCC (2018), Special Report on Global Warming of 1.5°C, <https://www.ipcc.ch/sr15/>, accessed in November 2020

# Net zero: **what it means**



- IPCC (science based target) said rapid transformation needed; **entire world** needed to move to net zero by 2050; to do this **entire world** needed to half (45%) reduction over 2010 level by 2030
- **Net** word introduced
- Can emit but stay below that can be ‘cleaned up”
- How can you clean up?
- **Plant trees** – increase the sequestration of CO<sub>2</sub> by ‘natural’ systems
- **Build technology** – to take CO<sub>2</sub> from air and pump into deep ground (CCS)

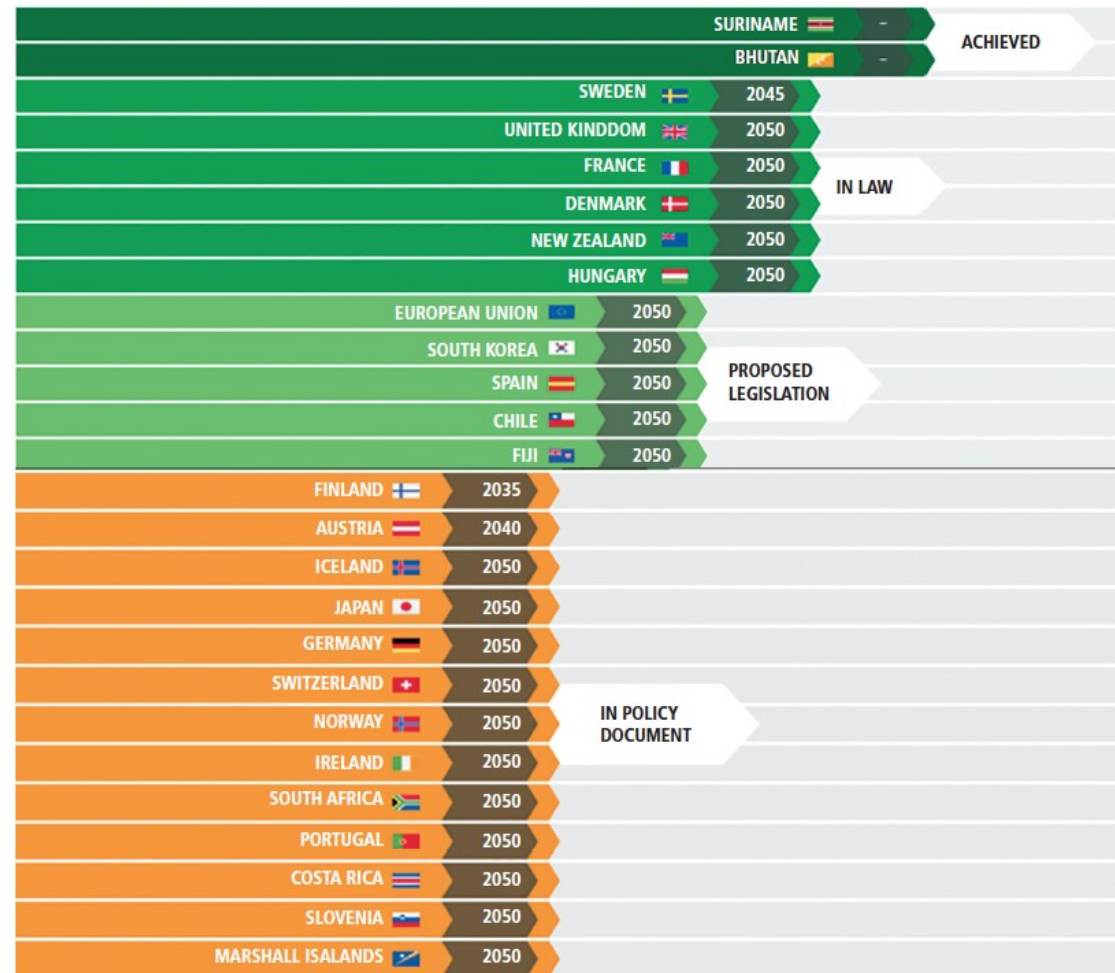


# Net zero: race to zero

- By November 2020; 127 countries pledged their net zero ambition
- China has said it will be net-zero 2060
- US is expected to announce its net-zero target

**Graph 6.5: Where do the countries stand**

*Declaration of net zero targets by countries*



Source: Energy and Climate Intelligence Unit, 2020, <https://eciu.net/netzerotracker>, accessed in December 2021

# CSE position on net-zero



- Net zero is zero zero; GRAND DISTRACTION; SCIENCE MISINTERPRETED BY BIG POLLUTERS
- Why?
- 1. No substance only aspirational. Needs firm and credible pathway on how they will meet net zero; need to benchmark milestones and know that are on track
- 2. Dependence on technologies that do not exist yet: the scale up of these clean up technologies is still far from real
- 3. Trees are about habitats and livelihoods of people: science of carbon sequestration by trees still not even fully established;
- Disruptive technologies good buzzword but crisis requires action today

# Net-zero: misinterprets science; new appropriation of ecological space by rich



- Net zero is zero zero:
- 4. **Highly inequitable**: Science deliberately misinterpreted as it set 2030-2050 target for entire world; so should have been based on common but differentiated responsibility
- This means that rich countries, responsible for stock of emissions in atmosphere should be net zero by 2030; provide space for rest to set targets for 2050
- Currently China has said it will be net-zero in 2060
- Option for India would be to say it will be net-zero by 2070
- What does this even mean? 2050-2060-2070?

# Biden summit: needs **real** ambition



- US taking leadership is good
- But leaders must **walk the talk**, not just talk the talk
- As yet US “leadership” has been flawed and compromised – two-goals (and successfully achieved) since 1990
  - a. Protect national interest to do as little as possible
  - b. Erase the idea of historical responsibility from all negotiations – everybody is equal and everybody must act (Paris)

As a result of this agreement world is in jeopardy – if you aggregate all the emission reduction targets (NDCs) of countries we are on track to cross 3 degree C rise in temperature at least

# Real action possible



- US leadership can walk the talk today
- Its energy related emissions are drastically down
- In past decade 50 per cent shift from coal to gas; energy related CO2 emissions are down 30 per cent (inadequate accounting for methane)
- In 2019 (Trump time) coal fired power generation fell by 18 per cent
- No energy transition; but with shift to gas, energy emissions have been reduced
- Space for further reduction: real change possible

# Real change **not happening**



- According to the US based Rhodium Group data
- Net US GHG emissions in 2019 were higher than at the end of 2016 – the beginning of Trump presidency
- Transport and industry related emissions had increased – taken up the space left by reduced energy emissions
- In 2019 US was not on track to meet its Paris target (26-28 per cent below 2005 level by 2025).
- 2020: Lockdown has been historical shock – 10.3% drop in US GHG emissions; largest since World War II; Great Recession (2009) drop was 6.3%; US is below 1990 levels and will exceed 2020 Copenhagen target of 26-28% below 2005 levels.
- But and this is where the **big and life-size but is**

# Post-lockdown = emissions



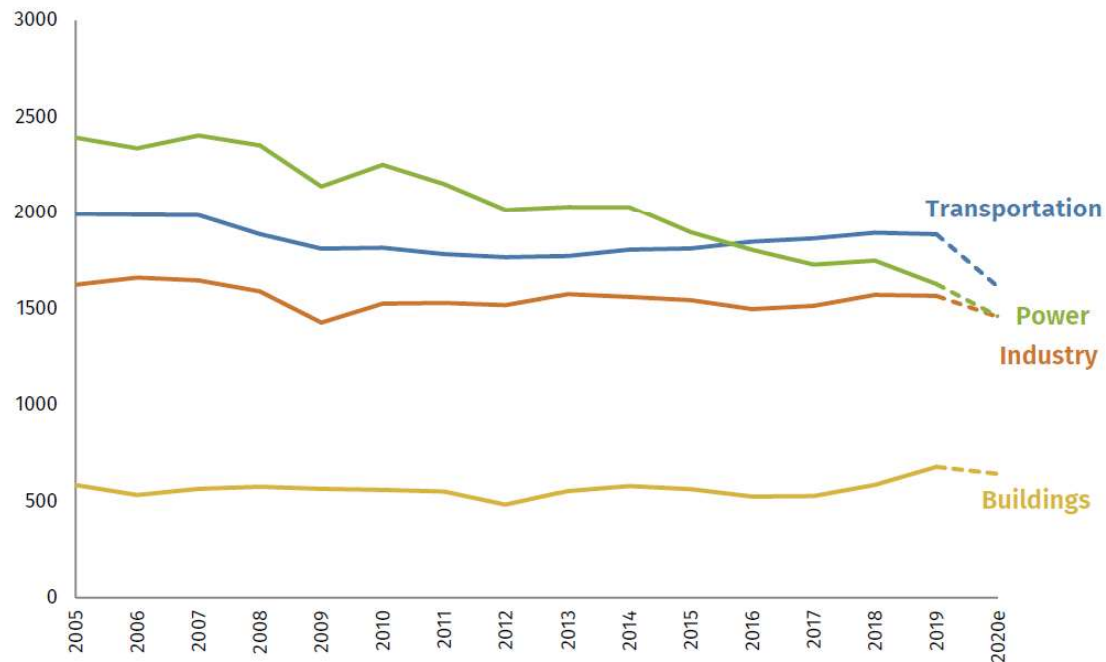
- Blue skies in Delhi came at huge economic cost
- Reductions in GHG emissions in US also at unsustainable economic losses and hardships; unemployment is high; GDP has declined at around 3-4 per cent in 2020
- Now growth will be back and so will emissions
- According to this estimate: “We expect economic activity to pick up again in 2021, without meaningful structural changes in carbon intensity of the US economy, emissions will likely rise again as well”
- In the last count (2019): US would not meet Paris commitment (25-26% below 2005 in 2025)

# 1. Our ask to Biden

## Walk the talk: **raise domestic ambition**



FIGURE 1  
US GHG emissions by major emitting sector  
Million metric tons CO<sub>2</sub>e, IPCC definitions, excludes international bunkers



**Reverse the gains made  
by lockdown not by  
emitting more but less**

**Set domestic target for  
2030 which is ambitious  
and equitable –  
proportional to the  
contribution to the stock  
of emissions in  
atmosphere**

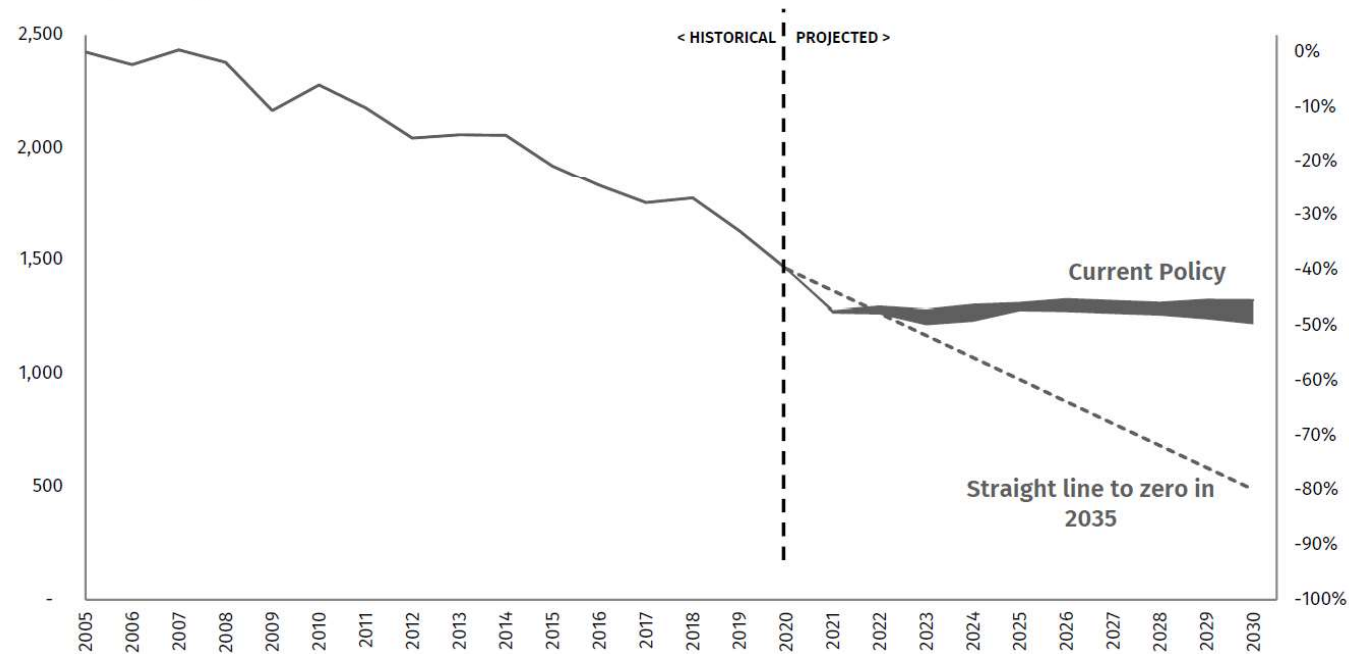
Source: <https://rhg.com/research/build-back-better-clean-electricity/>



# Energy transformation needed: not business as usual

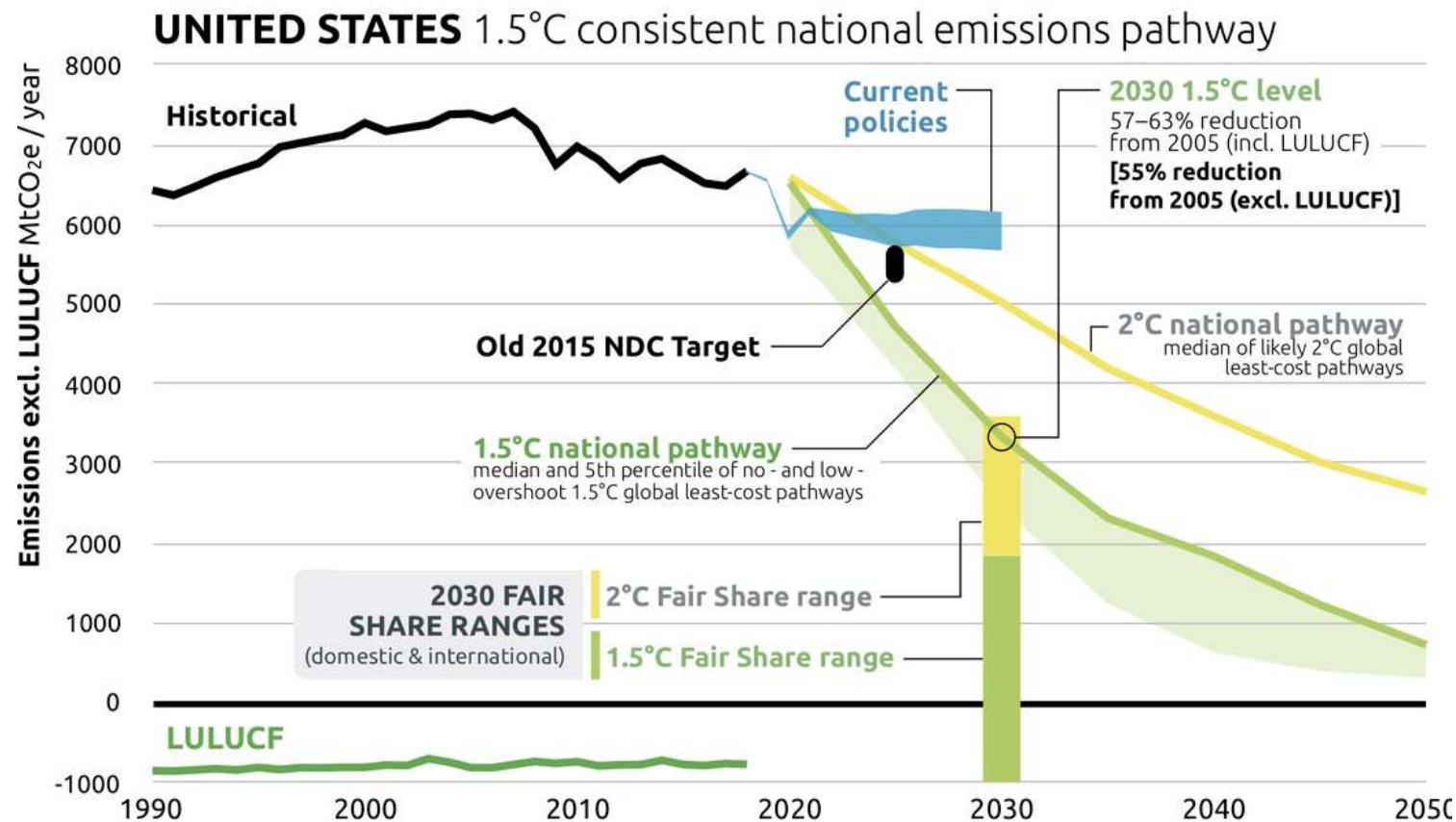


FIGURE 1  
US electric power CO<sub>2</sub> emissions, 2005-2035  
Million tons, % change from 2005



Source: Rhodium Group. Note: 2020 values are preliminary. The projected emissions range represents uncertainty around clean energy technology costs.

# Climate Action Tracker: US needs to 57-63% below 2005 level by 2030 to be ambitious and fair: will Biden walk this talk?

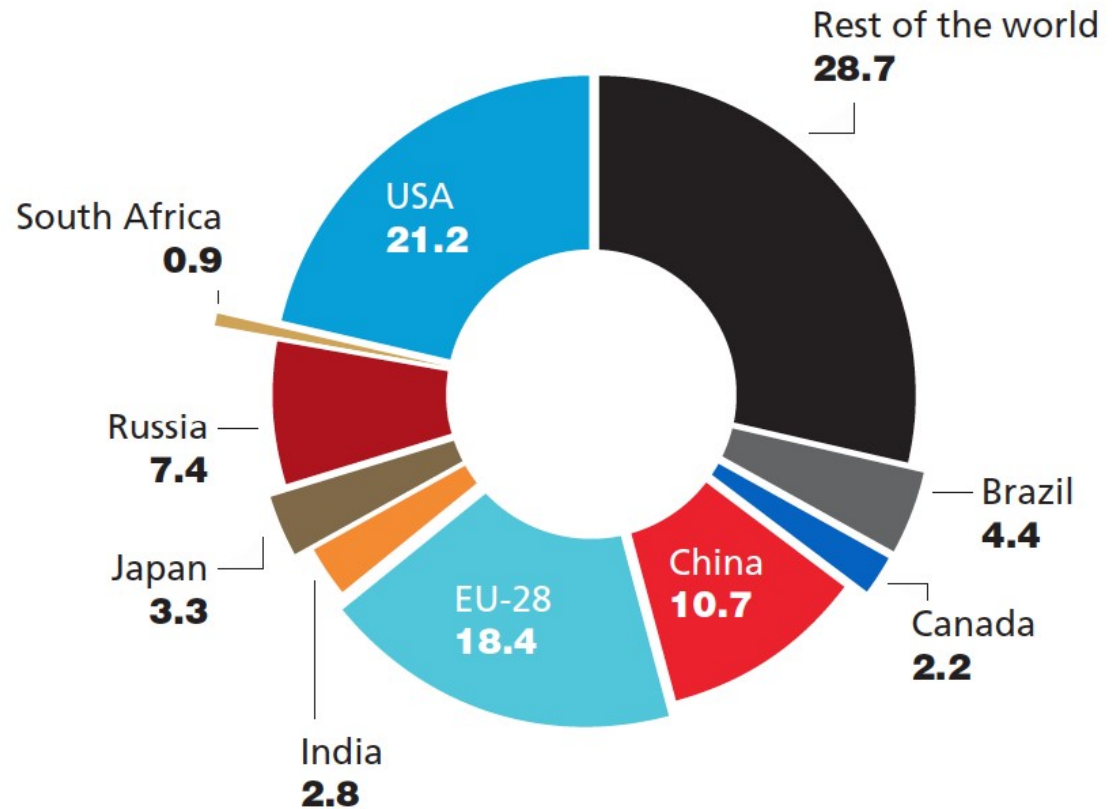


## Ask 2. Do not deny historical responsibility

- Cannot erase the past
- Must accept that climate justice is pre-requisite for ambition and action
- Must accept that countries need the right to development; do not finger-point at others

### Graph 9.1: The carbon pie

*How much of their carbon budgets have countries used up till 2011 (in %)*



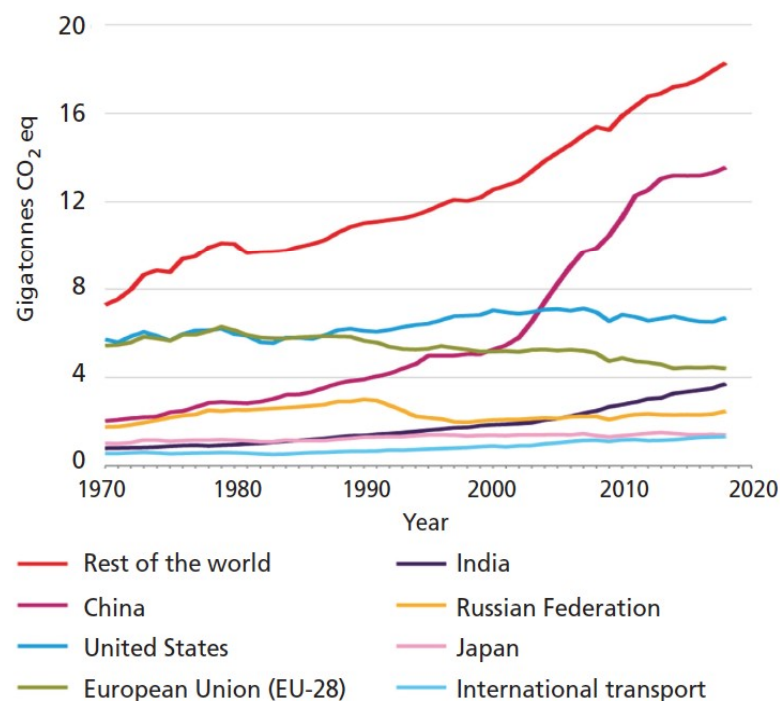
Source: Centre for Science and Environment, 2019, Carbon Budget Factsheet

India: 3-4<sup>th</sup> highest polluter (China, US, EU (28) and then India; but small in share of cumulative emissions; annual emissions



**Graph 3.1: The top emitters**

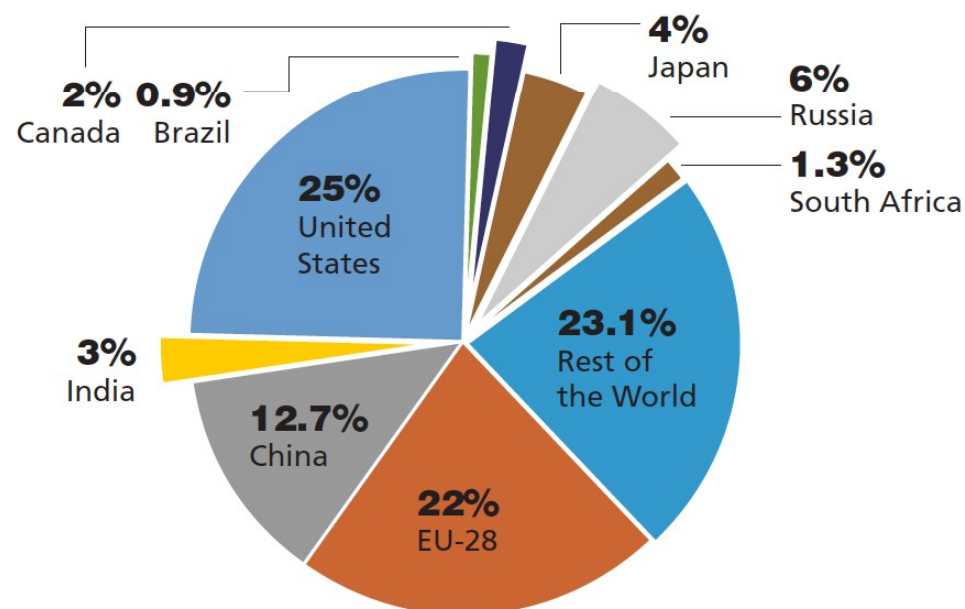
*In 2005, China replaced the US as the biggest emitter*



Source: PBL Netherlands Environmental Assessment Agency, 2019, 'Trends in Global CO<sub>2</sub> and Total Greenhouse Gas emissions', <https://www.pbl.nl/en/publications/trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report>, accessed in November 2020

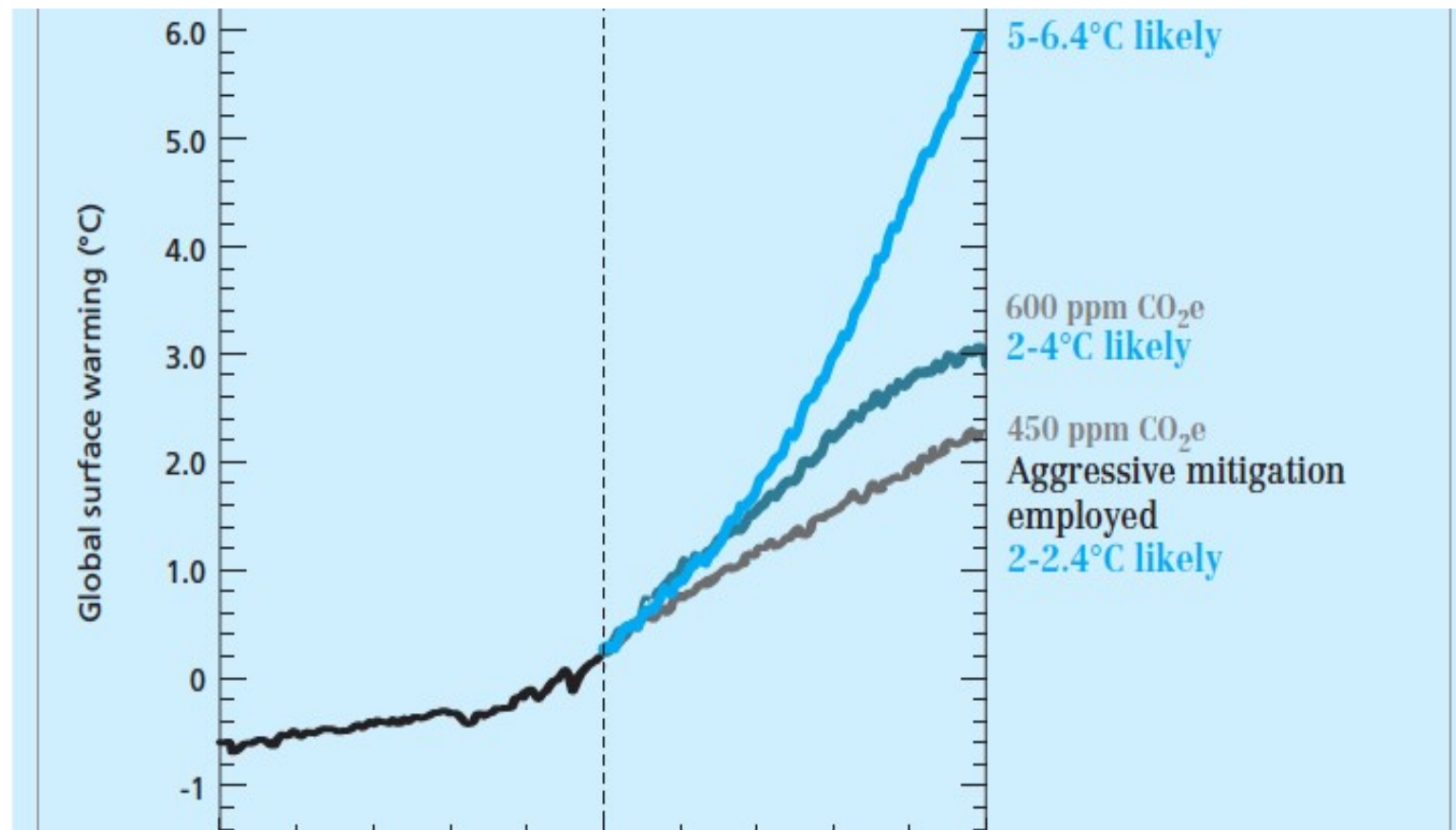
**Graph 3.2: Percentage share of global cumulative CO<sub>2</sub> emissions (1751-2017)**

*The US, EU, Russia and Japan have together accounted for 57 per cent of the carbon pie*



Source: Our World in Data, <https://ourworldindata.org/CO2-and-other-greenhouse-gas-emissions>, accessed in October 2020

Science is politics:  
GHG emissions = Concentration =  
temperature rise = **CARBON BUDGET**



# Budget – what can the world emit to stay below 1.5 °C



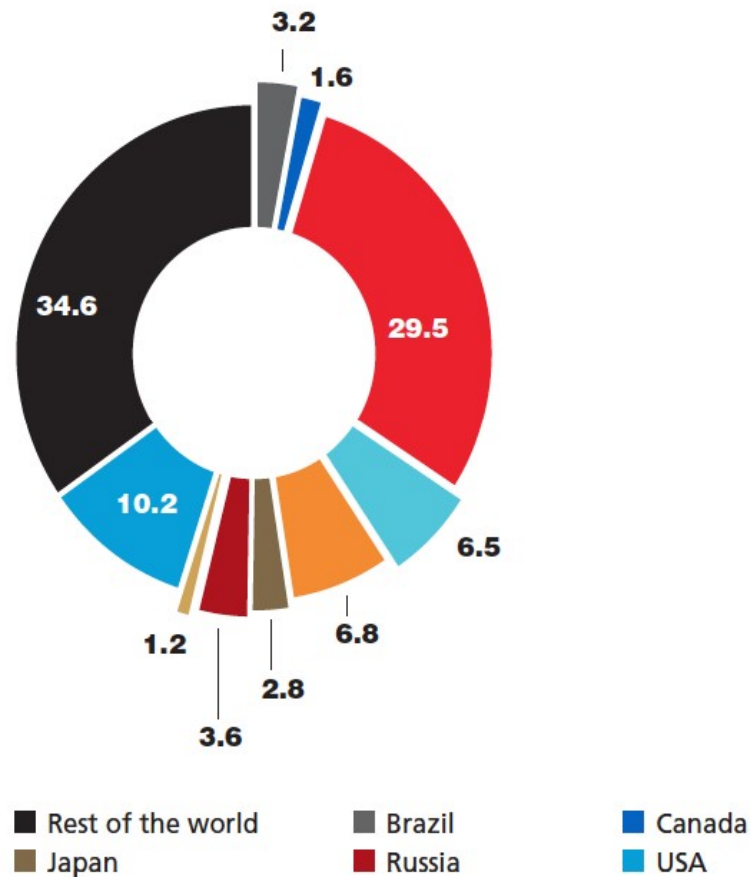
- IPCC says that for a 66 per cent chance to keeping warming below 1.5°C the world can afford to emit 420 to 570 gigatonnes (GT) between 2018 and the end of the century
- **At current rates world will exhaust budget for the century in this decade itself**
- **What is then the option for the world; for the poor in the world?**



## Graph 9.2: Global carbon emissions

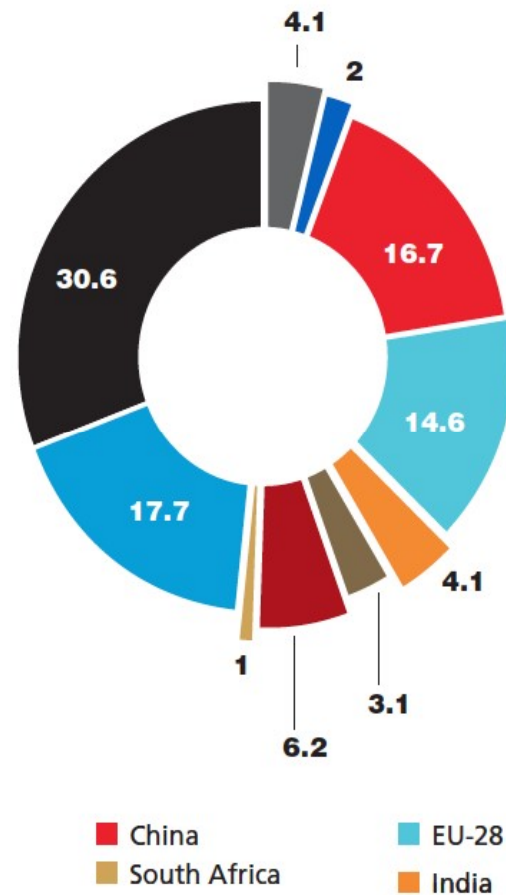
Per cent of global CO<sub>2</sub> emissions

Future 2012-2030



Source: Centre for Science and Environment, 2019, Carbon Budget Factsheet

Past, present and future 1850-2030



Old and new world  
occupiers of the carbon  
budget

US

China

Equalize by 2030

Leave nothing for rest

Highly iniquitous

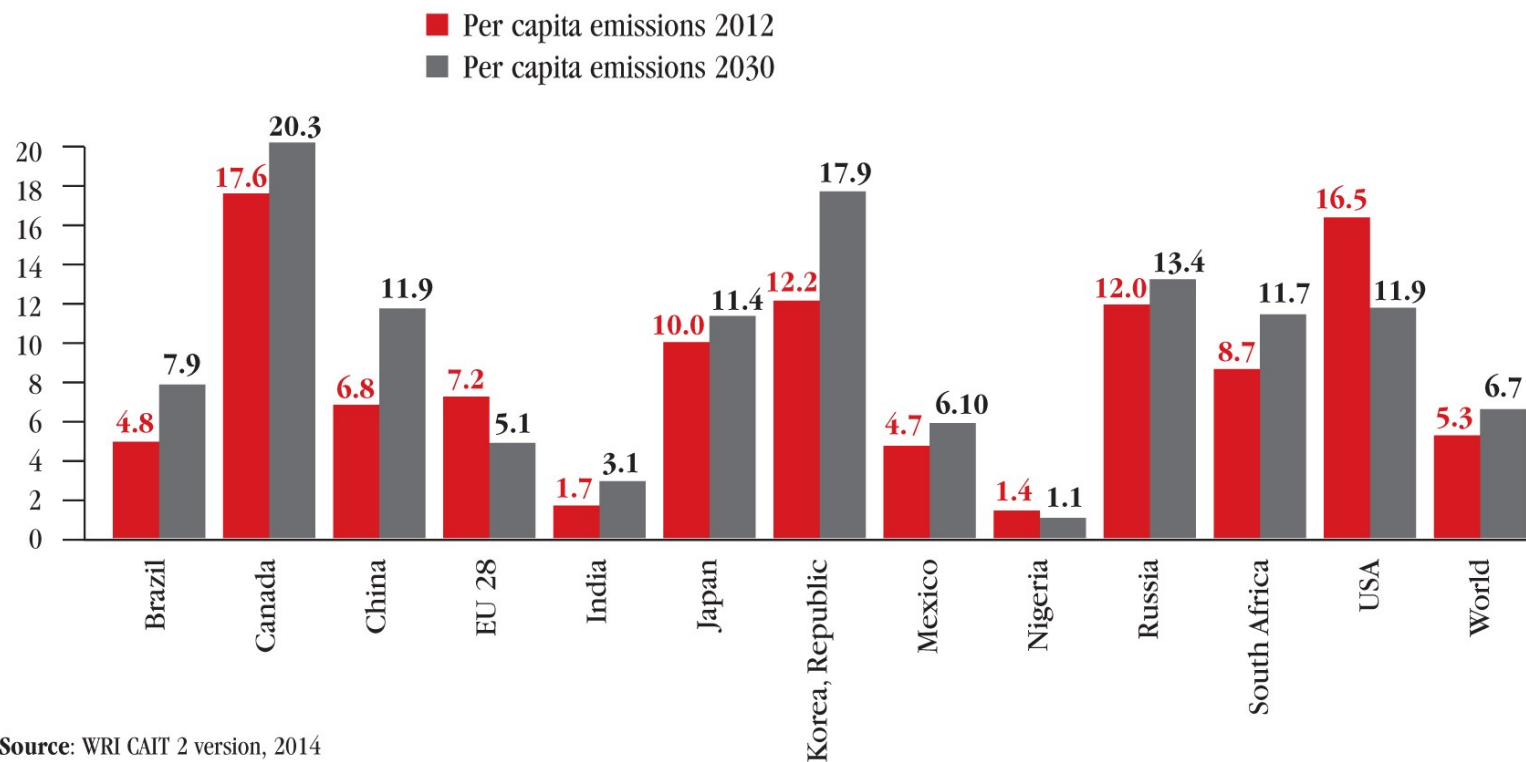
Highly unjust

Makes for non-  
agreement

# Unjust world/ climate apartheid will not make it effective



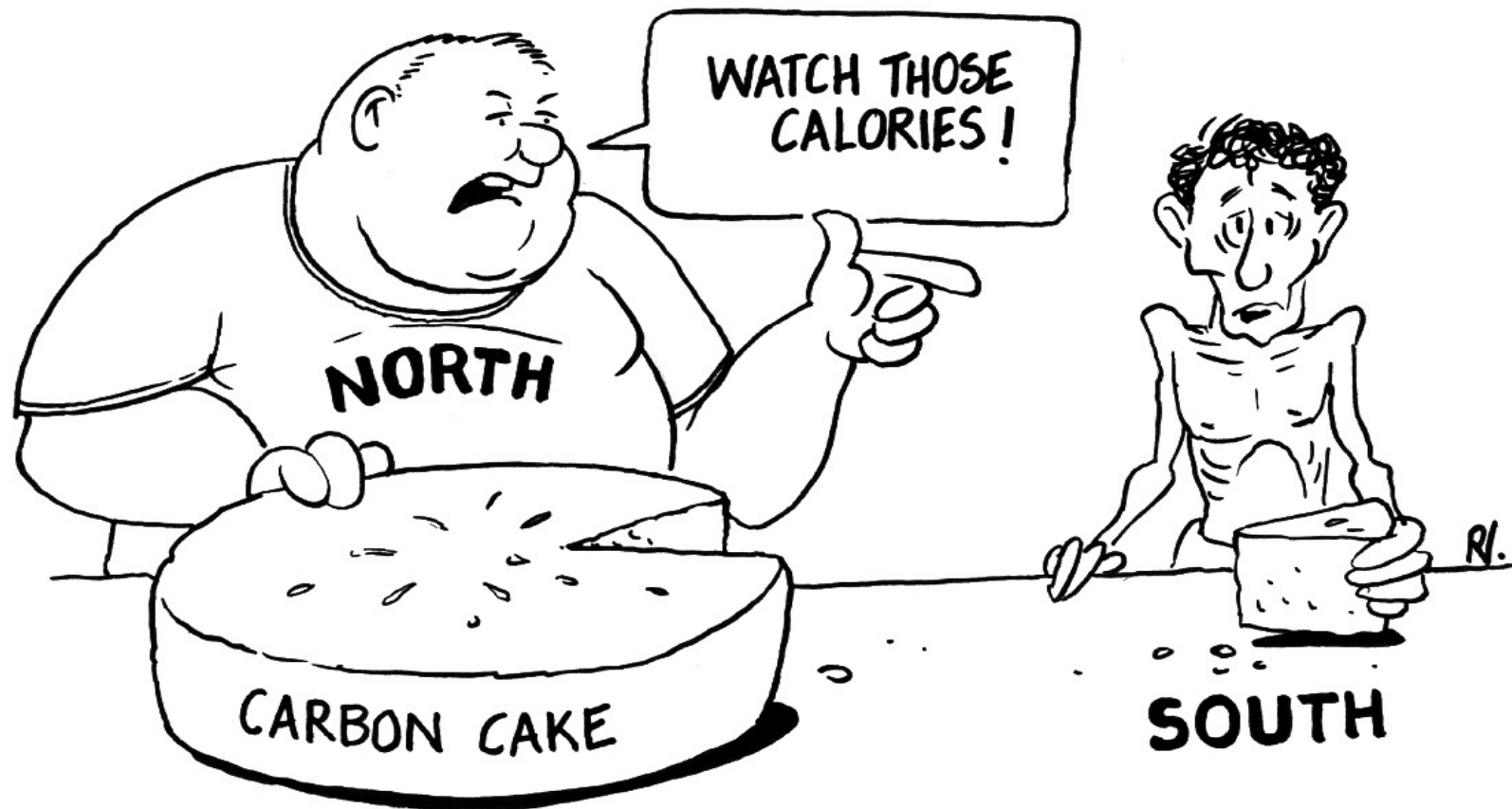
## Per capita emissions: Present and future



Source: WRI CAIT 2 version, 2014



# Acceptable???



# We wish But cant wish away the poor

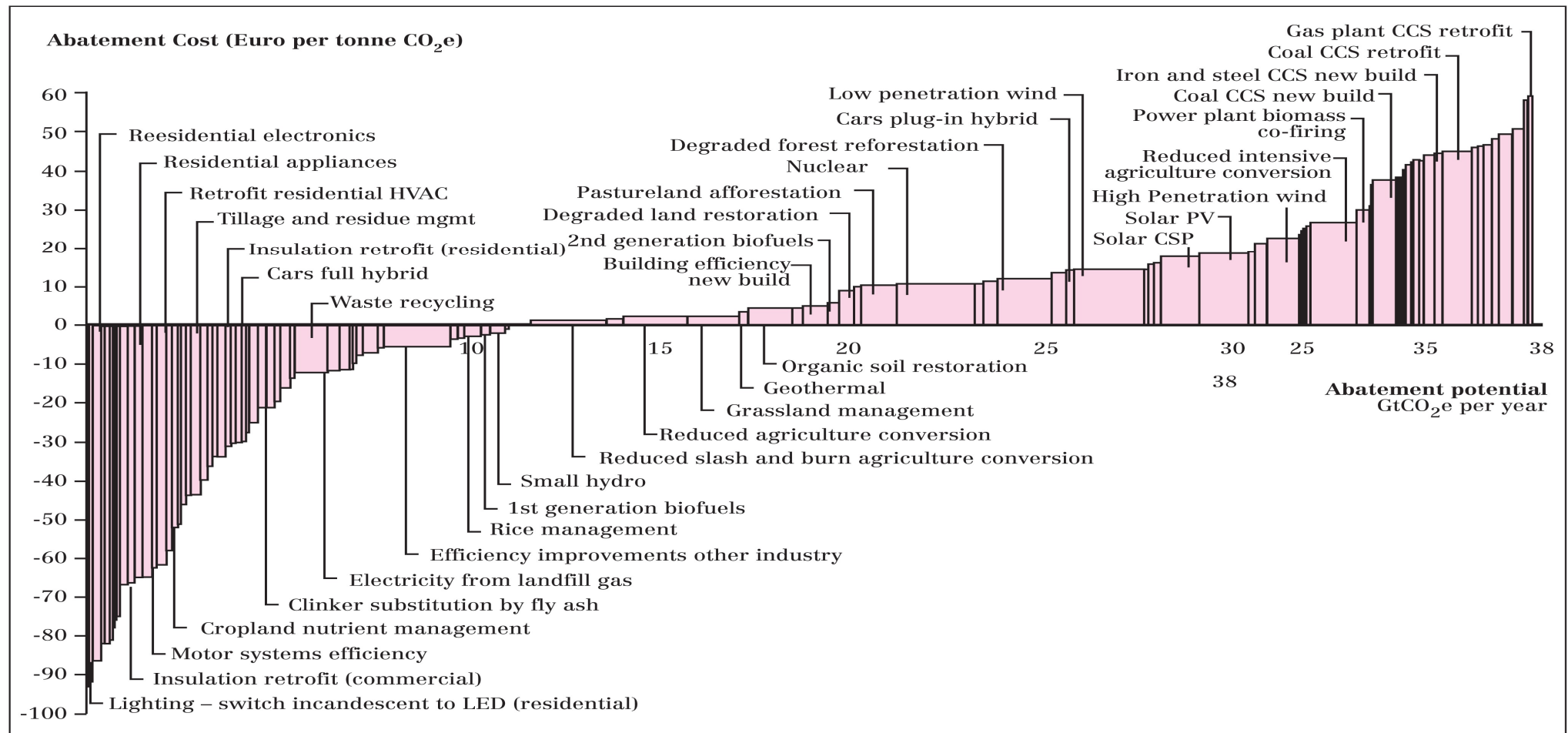


- The fact is the budget will be over
- This means that we will be on course to increasing temperatures
- But what then does it mean for the poor? Large numbers of people in India, Africa and South America
- Will they stop **development**? Will they stop breathing, eating, cooking, studying, working?
- How will they grow? Or do we ask them to stop all activity?
- How will they not grow? The price of mitigation is too expensive for us, how will the poor afford it
- They will get richer; and like us, they will emit; temperatures will increase.  
**We will all be at risk**

# Bottomline: Words are cheap; transformation is not



**Figure 1: McKinsey's global GHG abatement cost curve**



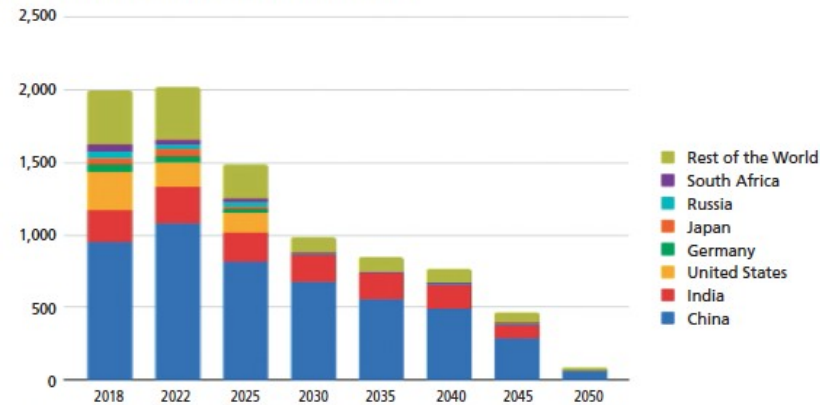
**Coal** must be  
phased out: but  
how; who; when  
and to what

**We need real  
answers on this**

**Not sticks and  
stones**

**Graph 10.3: Coal capacity by country**

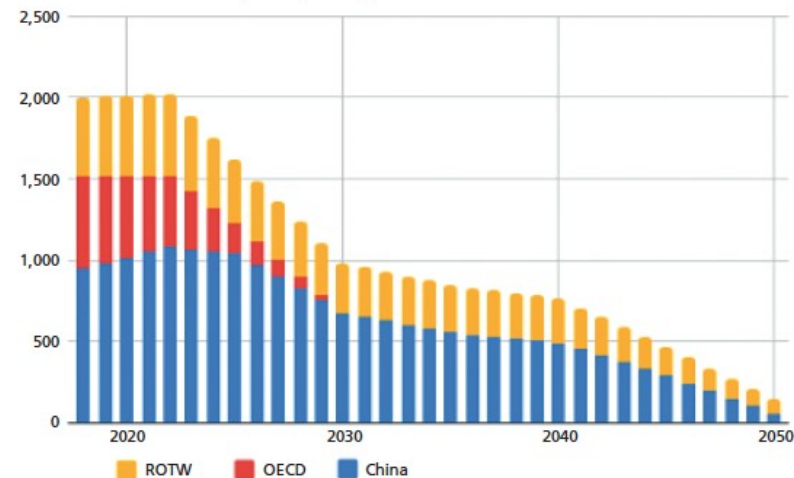
*Country breakdown of the global coal fleet under the 1.5°C pathway from 2018 to 2050. Currently, China has the world's largest coal fleet, with half of global capacity*



**Source:** CoalSwarm and Greenpeace, 2018, A Coal Phase-Out Pathway for 1.5°C, <https://endcoal.org/2018/10/new-ipcc-report-calls-for-steep-reductions-in-coal/>, accessed in October 2020

**Graph 10.4: Coal power capacity in the 1.5°C pathway (GW)**

*Under the pathway, coal plants are phased out first in the OECD countries, where the coal fleet is older, then in China and the rest of the world (ROTW), where plants are newer*



**Source:** Coal Swarm and Greenpeace, 2018, A Coal Phase-Out Pathway for 1.5°C, <https://endcoal.org/2018/10/new-ipcc-report-calls-for-steep-reductions-in-coal/>, accessed in October 2020



### 3. Our ask to Modi

India's leadership is key (global and domestic)



- 1. Must ask for real action by 2030 from historical and big polluters (including China)
- 2. Must ask for actions to set targets for reduction, including net-zero, to be based on climate justice
- 3. Must take action at home – we need to cut GHG emissions because of our domestic reasons/because of co-benefits/ it works for us to be climate-smart and to do development differently

# India **must** run the talk



- Currently we are on track to meet Paris NDC:
- Emission intensity of GDP to be reduced by 33-35 per cent below 2005 levels by 2030
- India's target has also been called "compatible with 2 degree C"
- But we can do more; for our sakes and this will build more push for ambition in the rest of the world
- What?
- Must do and what we must not do

# India's climate agenda is for co-benefit



- **Must do**
  - 1. Work aggressively to meet the 450 GW by 2030 renewable energy target; currently we are off-track to meet even the 175 GW by 2022 RE target
  - 2. Work aggressively to increase the role of forest sinks in the country; but not to sequester carbon but to build livelihoods of people
- **Must not do**
  - 1. Derail the coal thermal power standards so that the old, inefficient and pollution plants would be phased out; we would install pollution control equipment on the newer plants and build only ultra-ultra-critical coal plants if necessary
  - Recently MOEF&CC notification which makes it cheaper to not-comply with the regulations to phase out/clean up will negate and destroy the move to cleaner coal

# Biden-leadership summit



- **Is a call to arms**
- Must move ahead with determination
- Must demand transformational action
- But all this requires the leader to walk the talk; **nothing less will do**
- **It's a make or break time for the world**



# Must learn

## Inter-connected; inter-dependent world



- Coronavirus moved with speed across nations; cities and villages because we are inter-connected
- The movement of people and goods – between nations; within nations – is massive
- We are also as strong as our strongest link; weak as our weakest
- If virus remains in any region; any country; the contagion will spread
- **Need to provide for all**
- **Same for climate change**