

# Climate Change - Economic Impacts and the Way Forward

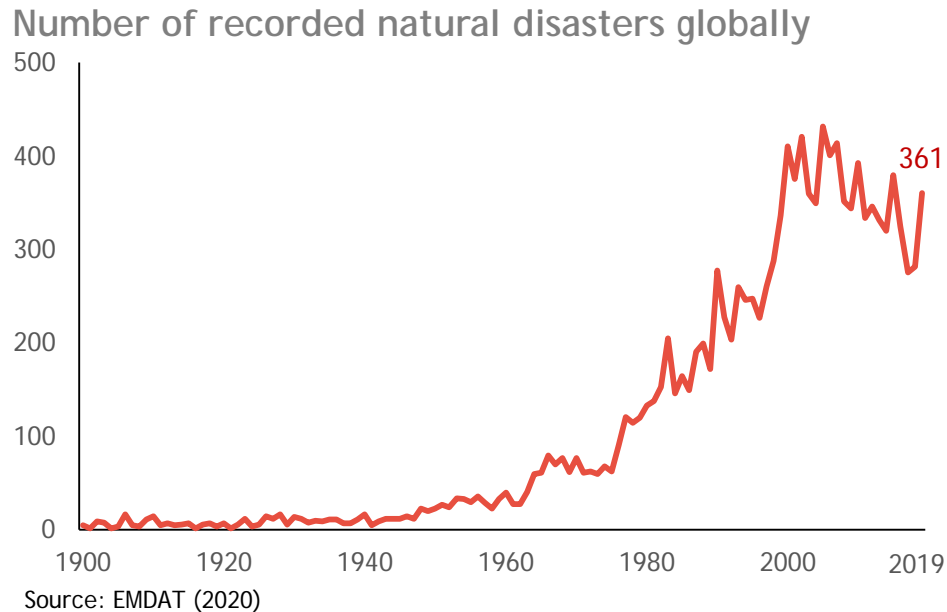
---

Economic Research Department  
November 2021



# Climate change is having real impact on the world

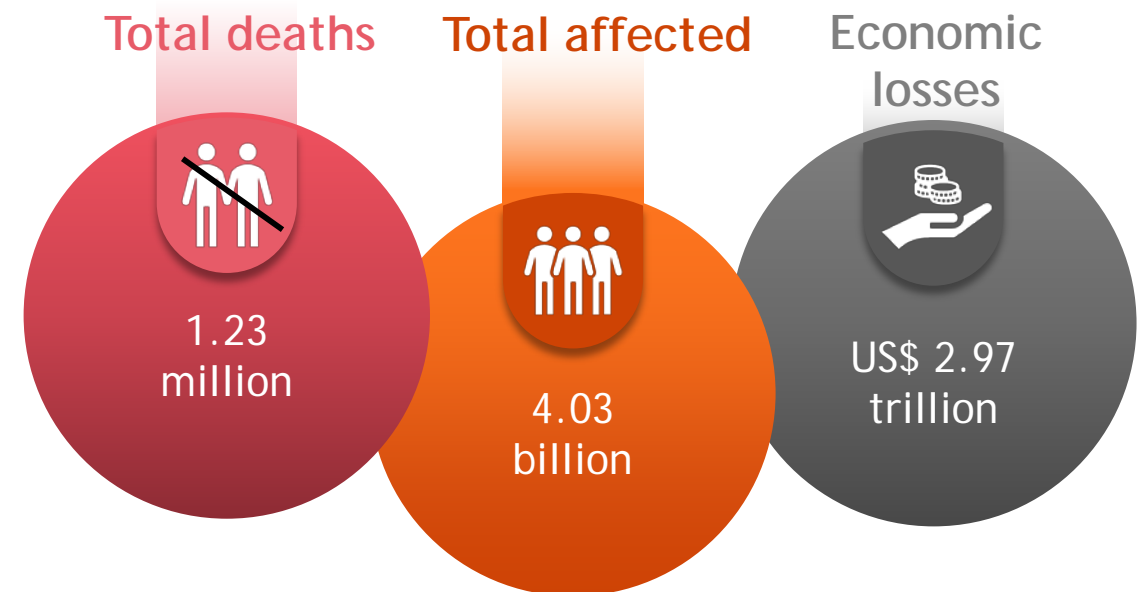
## Occurrence of natural disasters become more frequent



- Extreme events include hurricanes, floods, drought, earthquake, extreme temperatures, landslides, wildfire and volcanic activity.
- Floods and storms accounted for about 70% of the natural disasters occurred since 1990.

## ...and having a real economic impact

### Disaster impacts during 2000-2019

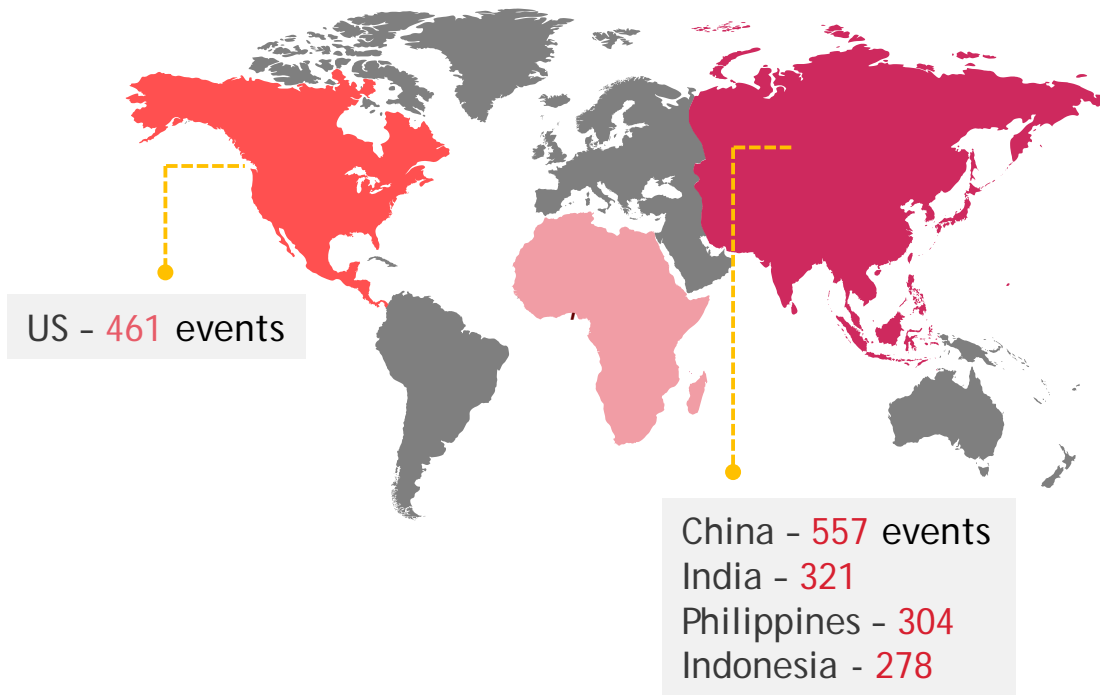


Data source: UN Office for Disaster Risk Reduction

# Although climate risk is a global issue, it disproportionately hurts low-income countries

## Climate disasters are felt globally

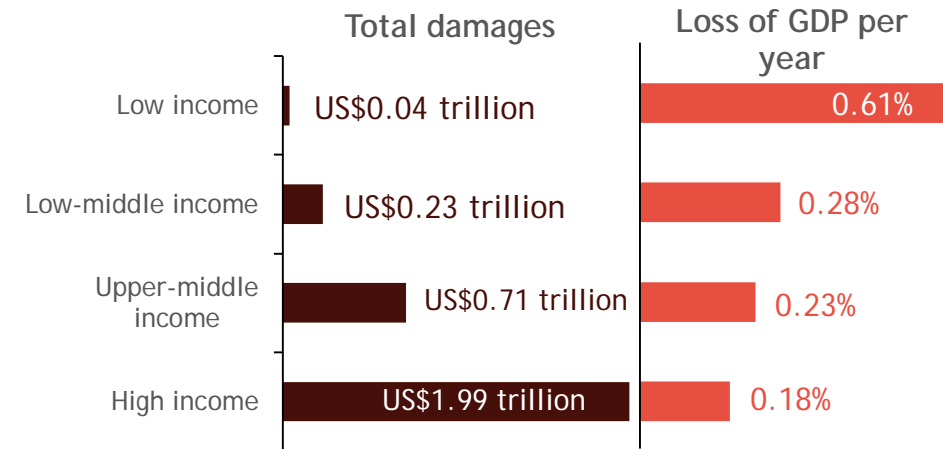
Number of disaster events during 2000-19



Data source: UN Office for Disaster Risk Reduction

## But lower-income countries suffer more in terms of GDP

Economic impact of natural disasters, 2000-2019



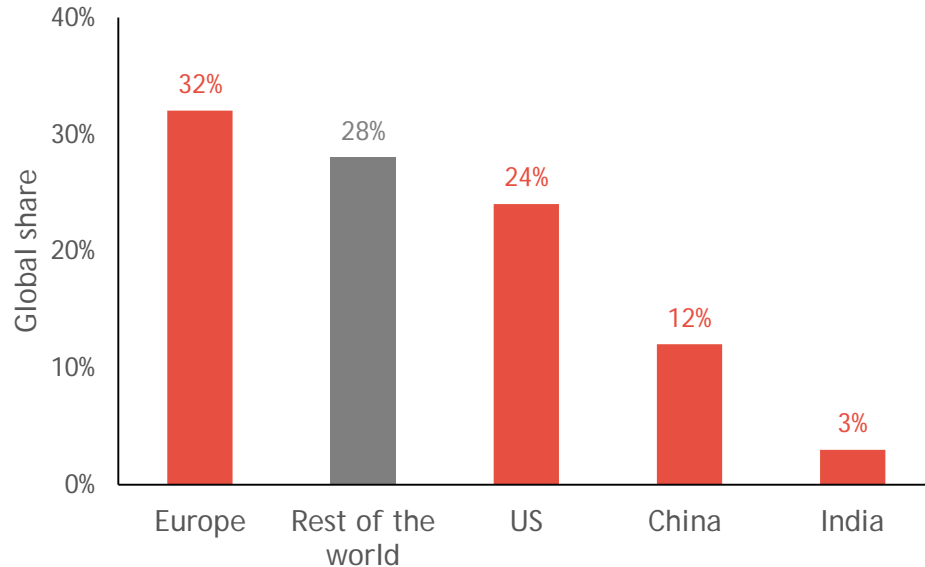
Source: UN Office for Disaster Risk Reduction

- There is a great inequality between rich and poor countries in terms of climate change impacts, especially considering the greater under-reporting from low-income countries.
- The 50 least developed countries contribute only 1% of worldwide greenhouse gas emissions.

# Developed economies have been the biggest greenhouse gas emitters over time, but China is now the biggest emitter

Since 1850, Europe and the US are the largest greenhouse gas emitters

Source of CO2 emissions (1850 - 2017)

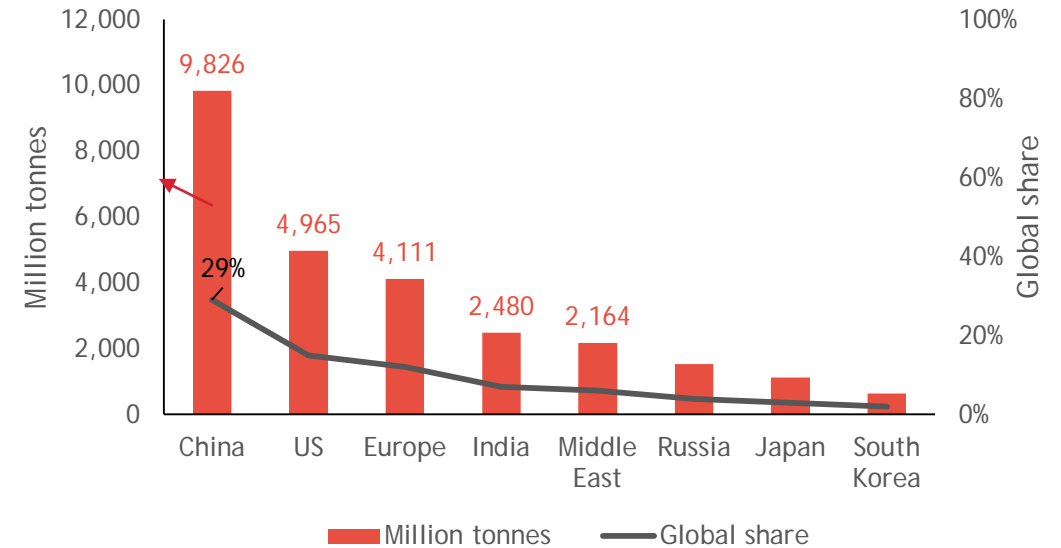


Source: Brookings

- The US and other developed nations continue to be responsible for a large share of the current excess concentration of CO<sub>2</sub>.

But China is now the biggest emitter

Source of CO2 emissions in 2019

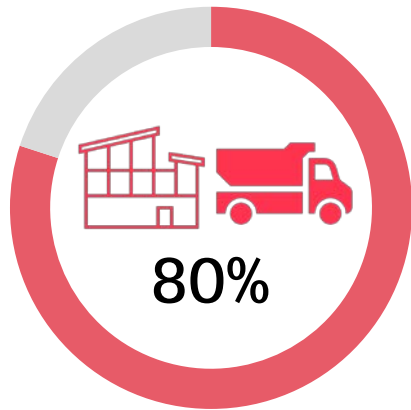


Source: BP Statistical Review of World Energy

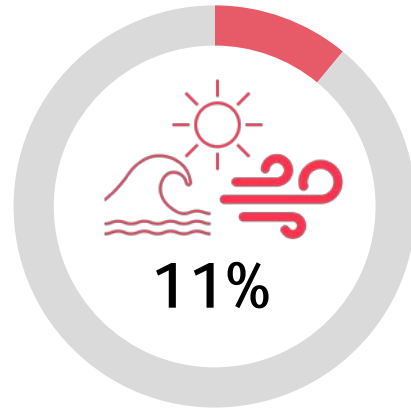
- There is an argument that the world is exporting its greenhouse emissions to China.
- At the same time, China's high concentration of emissions represents an opportunity for it to make a meaningful impact in the global effort to avert climate change.

# Despite pledges to reduce greenhouse gas emissions, targets are still short of what is required

## Developed countries still heavily reliant on fossil fuels



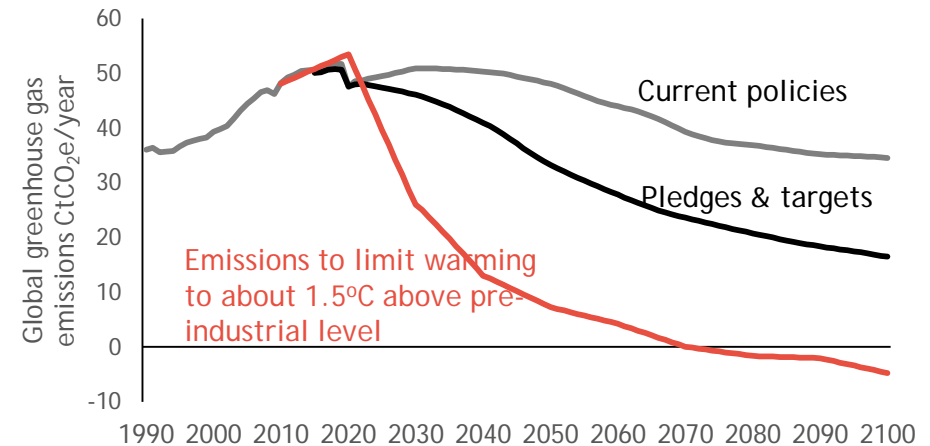
- 80% of OECD countries' energy supply come from coal, oil, gas and petroleum products.
- Total fossil fuel support in 44 OECD and G20 economies rose by 10% in 2019 to USD 178 billion.



- Renewable energy accounts for only 11% of energy supply in the OECD.
- UK fired up an old coal plant in September to meet electricity needs in view of soaring gas prices.

## National pledges are insufficient

### Expected emissions based on current policies and pledges



Source: Climate Action Tracker (May update)

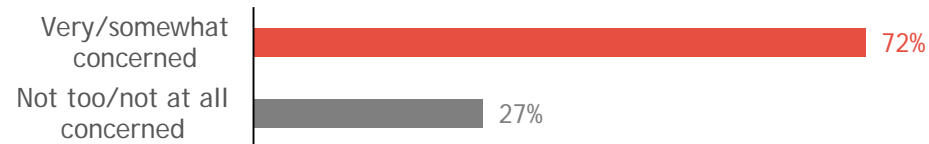
- In the recent COP26 climate summit, >40 countries signed to phase out coal use in 2030s (developed countries) or 2040s (developing countries). But the US, China, Australia and India were missing.
- Current pledges are not enough to limit warming to within 1.5°C of the pre-industrial level, widely viewed as the threshold for large-scale climate disaster events

Sources: OECD; BBC News

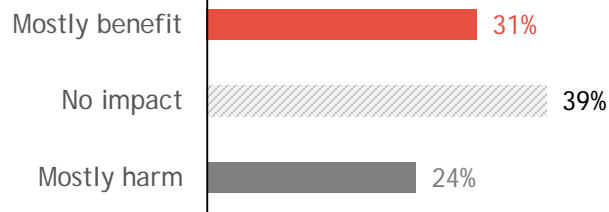
# General pessimism about whether we are doing enough

## People are not confident in governments' efforts to tackle climate change

Are you concerned about how climate change will affect your life?



What do you think about actions taken internationally against climate change to domestic economies?

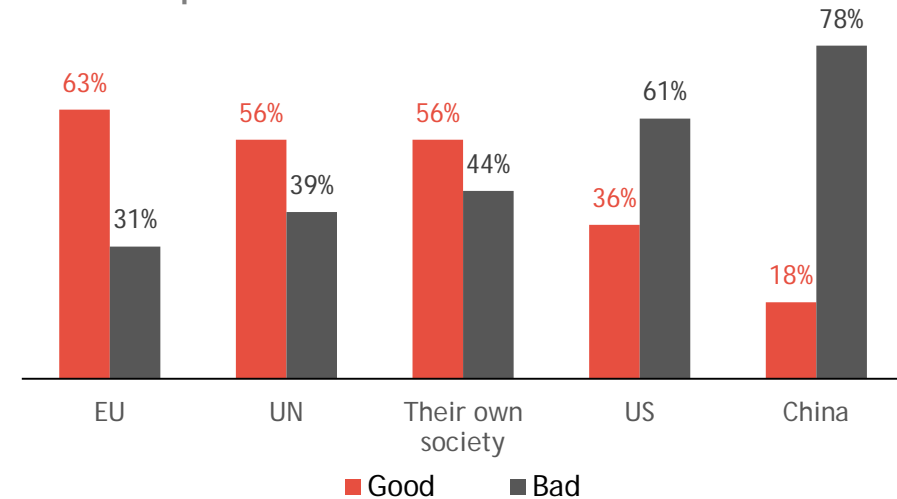


Source: Spring 2021 Global Attitudes Survey, Pew Research Centre

- People are concerned about the impacts global climate change will have on their lives.
- But they are pessimistic about the global community's ability to solve the climate issues.

## US and China's efforts on climate change viewed poorly

International perception on different economies' climate response



Source: Spring 2021 Global Attitudes Survey, Pew Research Centre

- The EU and the UN are respected for their responses to climate change, while China fares poorly in the eyes of people across the world.
- 78% assessed China's handling of climate change as "bad", with 45% saying it was "very bad".

# However, China has recently taken a strong stand to ensure its emissions peak in 2030 and to achieve carbon neutrality by 2060



## ↓ fossil fuel use

- Fossil fuel projects are excluded from the 2021 green bond projects catalogue
- Largest carbon trading market in the world launched in July 2021
- Coal use starts phasing down from 2026
- Promise to stop building coal-fired power projects abroad
- Proposal for **mandatory** company disclosure of environmental information



## ↑ green & renewable energy

- Already a leader in solar and wind power, China more than doubled its construction of new wind and solar power capacity in 2020 from a year earlier
- Share of renewables and nuclear power in its energy consumption increased to 20% by 2025, up from 15.9% in 2020
- As the largest electric vehicle producer and buyer in the world, China now requires that new energy vehicles make up 40% automobile sales by 2030



## Promote green finance

- By end-2020, China's green loans totalled US\$1.8 trn and green bonds US\$125 bn, ranking as the world's largest and 2<sup>nd</sup> largest, respectively\*.
- The People's Bank of China commits to provide 1-year facility for commercial banks at 1.75% to subsidize up to 60% of their lending to green initiatives.
- The 2021 green bond projects catalogue unifies domestic green bond standards and is better aligned with global standards
- Performance of 24 financial institutions' green loans and green bonds to be reviewed every quarter.

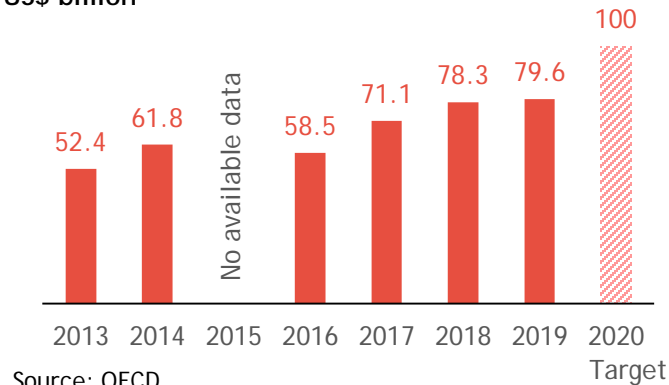
\*Data from China.org

# Looking forward, green investments are set to soar

## Green investment in developing countries is rising

Climate finance provided by developed countries for developing countries

US\$ billion



### US\$300 billion

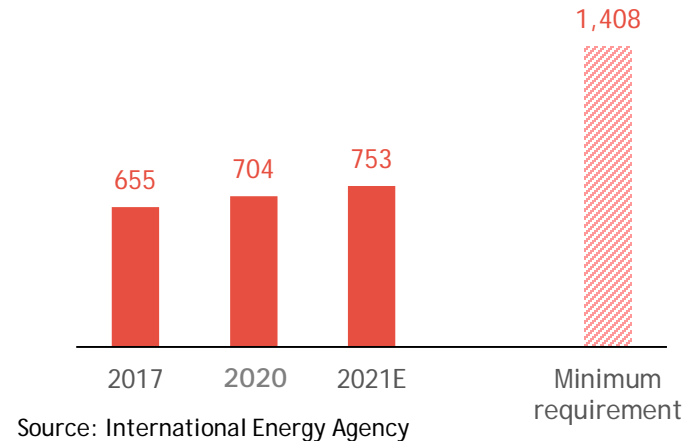
While developed countries have promised US\$100 billion to developing countries, they could need **US\$300 billion per year** by 2030 to cope with climate change

(United Nations)

## Investment in renewables is set to soar

Global investment in clean energy

US\$ billion (in 2019 dollars)



### 1,200 Gigawatts (GW)

China is the largest producer, investor and user of renewable energy. It is committed to increase wind and solar capacity to 1,200 GW by 2030, from 500 GW currently.

(Source: Bloomberg)

## Carbon pricing is another way to bring down emissions



### Carbon tax

For instance, the EU is proposing a carbon border adjustment mechanism (CBAM) to tax imported goods produced by emissions-intensive Processes.



### Emission trading systems (ETS)

Currently, ETS covers 17% of global CO2 emissions, with China's national ETS being the world's largest. Others are planning to join the league.

(Source: CarbonBrief)



# Disclaimer

This document is prepared by The Bank of East Asia, Limited (“BEA”) for customer reference only. Other than disclosures relating to BEA, the content is based on information available to the public and reasonably believed to be reliable, but has not been independently verified. Any projections and opinions contained herein are as of the date hereof, are expressed solely as general market commentary, and do not constitute an offer of securities, nor a solicitation, suggestion, investment advice, or guaranteed return. The information, forecasts, and opinions contained herein are as of the date hereof and are subject to change without prior notification, and should not be regarded as any investment product or market recommendations. This document has not been reviewed by the Securities and Futures Commission of Hong Kong, Hong Kong Monetary Authority, or any regulatory authority in Hong Kong.

BEA will update the published research as needed and as required by the law. In addition to certain reports published on a periodic basis, other reports may be published at irregular intervals as appropriate without prior notice.

No representation or warranty, express or implied, is given by or on behalf of BEA, as to the accuracy or completeness of the information and stated returns contained in this document, and no liability is accepted for any loss arising, directly or indirectly, from any use of such information (whether due to infringements or contracts or other aspects). Investment involves risks. The price of investment products may go up or down. Past performance is not indicative of future performance. The investments mentioned in this document may not be suitable for all investors, and the specific investment objectives or experience, financial situation, or other needs of each recipient are not considered. Therefore, you should not make any investment decisions based solely on this document. You should make investment decisions based on your own investment objectives, investment experience, financial situation, and specific needs; if necessary, you should seek independent professional advice before making any investment.

The views and opinions in this document do not constitute the official views of BEA.

This document is the property of BEA and is protected by relevant intellectual property laws. Without the prior written consent of BEA, the information herein is not allowed to be copied, transferred, sold, distributed, published, broadcast, circulated, modified, or developed commercially, in either electronic or printed forms, nor through any media platforms that exist now or are developed later.

For more information, please visit our webpage at <https://www.hkbea.com/html/en/bea-about-bea-economic-research.html>. For any enquiries, please contact the Economic Research Department (email: [lerd@hkbea.com](mailto:lerd@hkbea.com), tel: (852) 3609-1504, post: GPO Box 31, Hong Kong).



# Thank You

For further information please contact Economic Research Department

Celia Lam

[LAMCYH1@hkbea.com](mailto:LAMCYH1@hkbea.com)

3609 1542

Annie Wong

[WONGAYK@hkbea.com](mailto:WONGAYK@hkbea.com)

3609 1534

Francis Cheng

[CHENGFFS@hkbea.com](mailto:CHENGFFS@hkbea.com)

3609 1543

# Appendix: Greenhouse gas emissions and carbon neutrality pledges by selected countries

## Rating of selected country's climate policy (November update)

| Climate Action Tracker's ratings | Country     | Carbon emission reduction goals by 2030   | Carbon zero target | Comments  |
|----------------------------------|-------------|---|--------------------|---|
| Critically Insufficient          | Russia      | ↓30% below 1990 levels  | 2060               | Target actually leads to rising emissions   |
|                                  | Singapore   | Emissions to peak in 2030, halved by 2050   | 2060               | No plans for net zero   |
|                                  | Thailand    | Drafted long-term low-carbon strategy until 2050  | N/A                | Domestic emissions are projected to increase until 2030                                 |
| Highly Insufficient              | Australia   | ↓26-28% below 2005 levels   | N/A                | No specified date for reaching net zero   |
|                                  | China       | ↓carbon intensity by "over 65%" in 2030 compared to 2005 levels; emissions peak in 2030 | 2060               | China commissioned 38.4 GW of new plants in 2020, representing 76% of the world's total |
|                                  | India       | Emissions intensity ↓33%-35% below 2005 levels  | 2070               | Yet to submit a 10-year national plan to the UN   |
|                                  | Indonesia   | ↓forestry emissions to 2010 levels; no restrictions on other sectors                    | 2060               |   |
|                                  | South Korea | ↓40% below 2017 levels  | 2050               | 2030 target not stringent enough  |
| Insufficient                     | EU          | ↓54% below 1990 levels  | 2050               | Many EU member states still do not have a coal phase-out plan by 2030                   |
|                                  | Germany     | ↓65% below 1990 levels  | 2045               | Its 2038 coal phase-out is regarded as too slow   |
|                                  | Japan       | ↓46% from 2013 levels   | 2050               | Yet to submit a 10-year national plan to the UN   |
|                                  | US          | ↓50%-52% from 2005 levels   | 2050               | Insufficient international climate finance contribution                                 |
| Almost sufficient                | UK          | ↓68% (by 2030) and 78% (by 2035) from 1990 levels                                       | 2050               |   |

Source: Climate Action Tracker