The role of central banks in tackling climate change

An introduction

This resource looks at the role that central banks and other financial regulators can play in mitigating climate-related risks to financial institutions and systems.

It is intended to support NGOs to understand and use the financial indicators in the 2020 Climate Transparency Report, the world's most comprehensive annual review of G20 countries' climate action and their transition to a net-zero emissions economy.

The annual Climate Transparency reports include assessments of whether central banks and financial regulators are using the main policy instruments available to them to tackle climate change:

- Enhanced supervisory review, risk disclosure and market discipline
- Enhanced capital and liquidity requirements

ODI

Climate Transparency

Supported by:

Federal Ministry
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based on a decision of the German Bundestag

What are climate-related financial risks?

PHYSICAL RISKS

Physical risks concern the physical damage to firms and assets from climate-related shocks and stresses, such as rising temperatures, heavier rainfall or rising sea levels.

The costs of these damages may be transmitted to a financial institution when they have an interest in a project – for example, if a bank provided a mortgage to a home on a floodplain or a pension fund financed infrastructure that was damaged by a storm.

The costs may also be transmitted indirectly through damages to firms and households in which the financial institution has an interest – for example, if a sovereign wealth fund purchased municipal bonds from a city that has been struck by drought or cyclones.

TRANSITION RISKS

Transition risks concern the potential loss of value of firms and assets because of the low-carbon economic transition.

More stringent climate policies, the emergence of new technologies and changing consumer demand could potentially impact the lifespan or profitability of high-carbon projects. The costs and losses will flow through to financial institutions.

Several cities and countries have announced plans to ban the sales of internal combustion engines. This will affect financial institutions that have outstanding credit with or hold shares in oil majors and ICE manufacturers. However, financial institutions that have invested in or lent money to electricity utilities and electric car manufacturers will benefit from the transition.

LIABILITY RISKS

Liability risks are financial costs and losses to financial institutions that may occur if parties seek compensation for the damages suffered from climate impact.

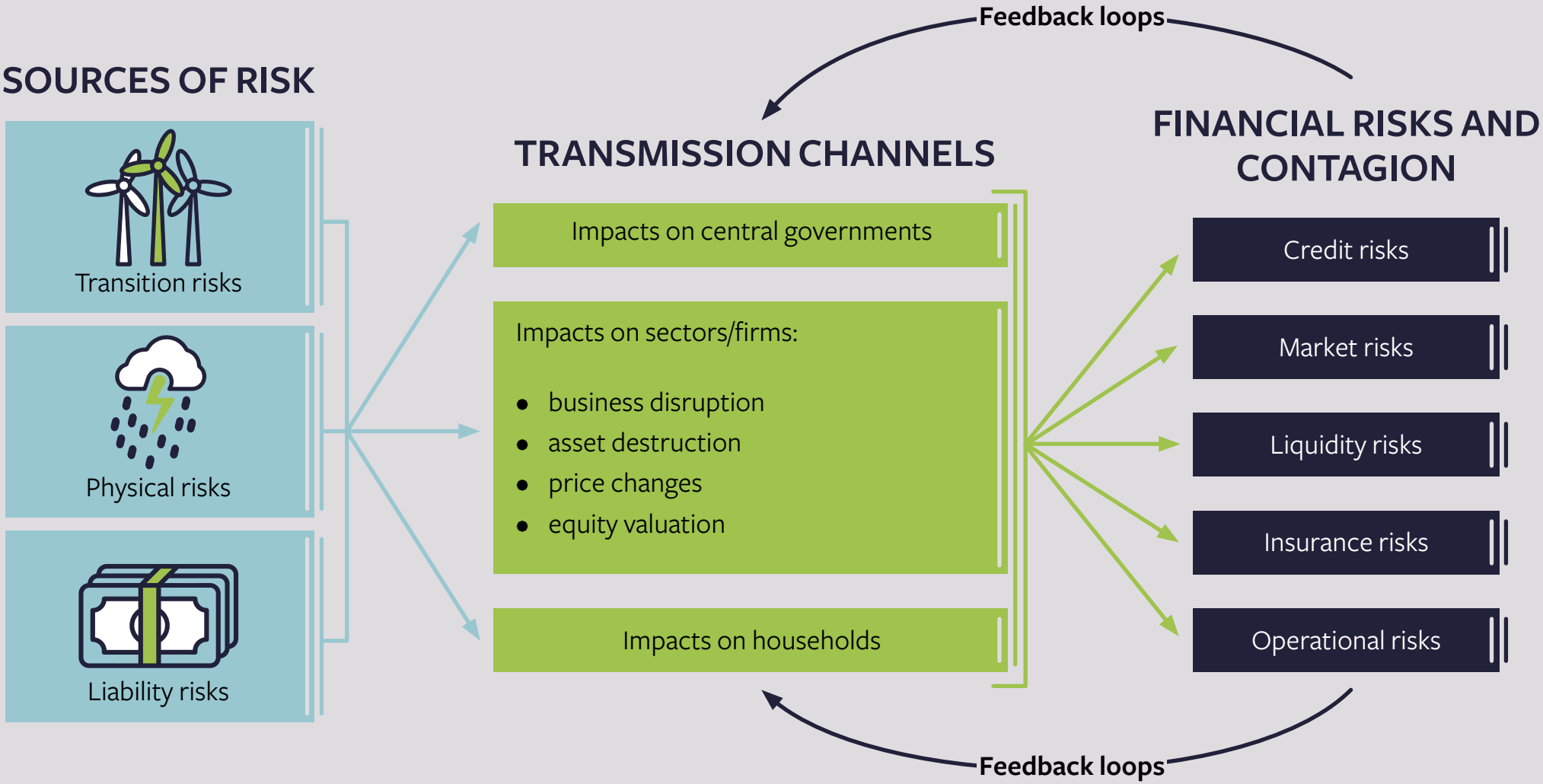
Insurance companies are already facing higher liabilities from weather-related losses. Large emitters are also facing legal action for the climate impacts of their historical greenhouse gas emissions.


The New York Times

Supreme Court Lets Climate Change Lawsuit Proceed

The court's brief order addressed a threshold question: Should climate suits filed by state and local governments be heard in state or federal court?

How do climate-related risks affect the financial sector?



Adapted from: Bolton P, Despres M, Pereira da Silva LA, Samana F, Svartzman R. 2020. *The Green Swan: Central banking and financial stability in the age of climate change*. Basel: Bank for International Settlements

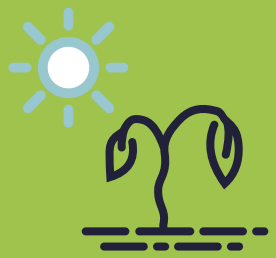
Why are central banks and other financial regulators concerned about climate-related risks?

The primary mandate of most central banks is price stability. Only 12% have an explicit mandate for environmental sustainability.

But climate risks and policies will impact prices and values. A growing number of central banks therefore consider climate change to fall within their mandate.

Financial regulators have a mandate to maintain the stability and integrity of the financial system, including by managing risks. Central banks have a specific mandate to safeguard low and stable inflation. Given the likely physical, transition and liability risks associated with climate change, many financial regulators now consider that they should use monetary policy, microprudential and macroprudential instruments to manage these risks and support the transition efforts to a low-carbon economy.

EXTREME WEATHER EVENTS (e.g. more frequent and severe flooding in residential areas causes house prices to fall and insurance costs to rise).



LONGER-TERM CLIMATIC CHANGES (e.g. declining total rainfall that mean specific crops can no longer be cultivated in the same areas, so food prices rise).

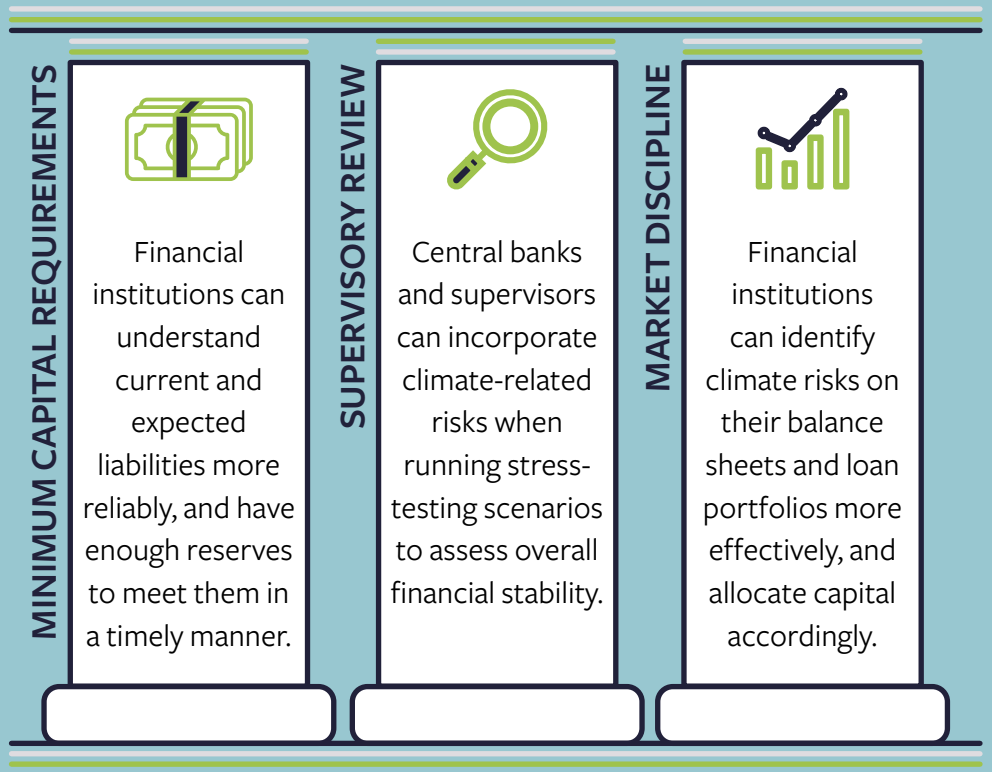
LOW-CARBON ECONOMIC TRANSITIONS (e.g. banning the production of coal-fired power plants creates stranded assets, reducing the value of pension pots).

Source: Dikau S, Volz U. 2019. "Central Bank Mandates, Sustainability Objectives and the Promotion of Green Finance." SOAS Department of Economics Working Paper No. 222, London: SOAS University of London. Available at: https://www.soas.ac.uk/economics/research/workingpapers/file139494.pdf

How can central banks respond to climate-related risks?

The Basel Committee on Banking Supervision (BCBS) is the primary global standard setter for the prudential regulation of banks. It has introduced Basel III, a global voluntary framework for regulating the financial sector. Basel III has three pillars: minimum capital requirements, supervisor review and market discipline.

Improved disclosure of climate-related financial risks would strengthen the ability of central banks to act under all three of these pillars.



of central banks say that they are **monitoring** climate-related risks

of central banks have **mandatory disclosure** of climate-related risks

Source: OMFIF and Mazars (2020) Tackling climate change: the role of banking regulation and supervision. London: OMFIF

There is growing recognition that central banks' ability to set expectations and binding rules will be relevant for managing systemic financial risks that may arise from climate change. There are also debates on the potential role of financial regulators to actively promote green finance and reduce unsustainable economic activities.

What does climate-related financial disclosure involve?

RECOMMENDATIONS FROM THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Governance: Disclose the company's governance around climate-related risks and opportunities.

Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.

Risk management: Disclose how the company identifies, assesses, and manages climate-related risks

Metrics and targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

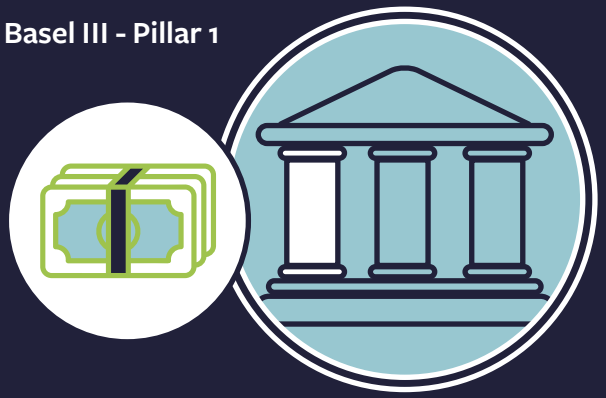
Disclosure requirements should redress an important market failure: a lack of information about the exposure of individual firms, assets and financial institutions to climate-related risks. The collection and release of this information data allows:

- **Enhanced capital and liquidity requirements**: central banks can **shift the way financial institutions allocate credit by designing** 'green supporting' and 'dirty penalising' factors.
- **Supervisory review**: central banks can incorporate climate risks in stress testing scenarios as they assess financial stability.
- **Market discipline**: investors and lenders can accurately value projects and firms, either withdrawing their funds or pushing financial institutions to manage climate risks.

1. What are enhanced capital and liquidity requirements?

Financial institutions are required to have capital and liquidity buffers, so that their reserves are in proportion to the risks they take. These reserves ensure that banks have the ability to meet the short-term demand for cash from their customers (liquidity) and any short-term losses to their own business (capital).

Basel III - Pillar 1



CAPITAL REQUIREMENTS

Sufficient reserves for banks to meet any short-term losses to their own business. Minimum requirements are usually set by the financial regulator based on a risk assessment of the banks' assets.

LIQUIDITY REQUIREMENTS

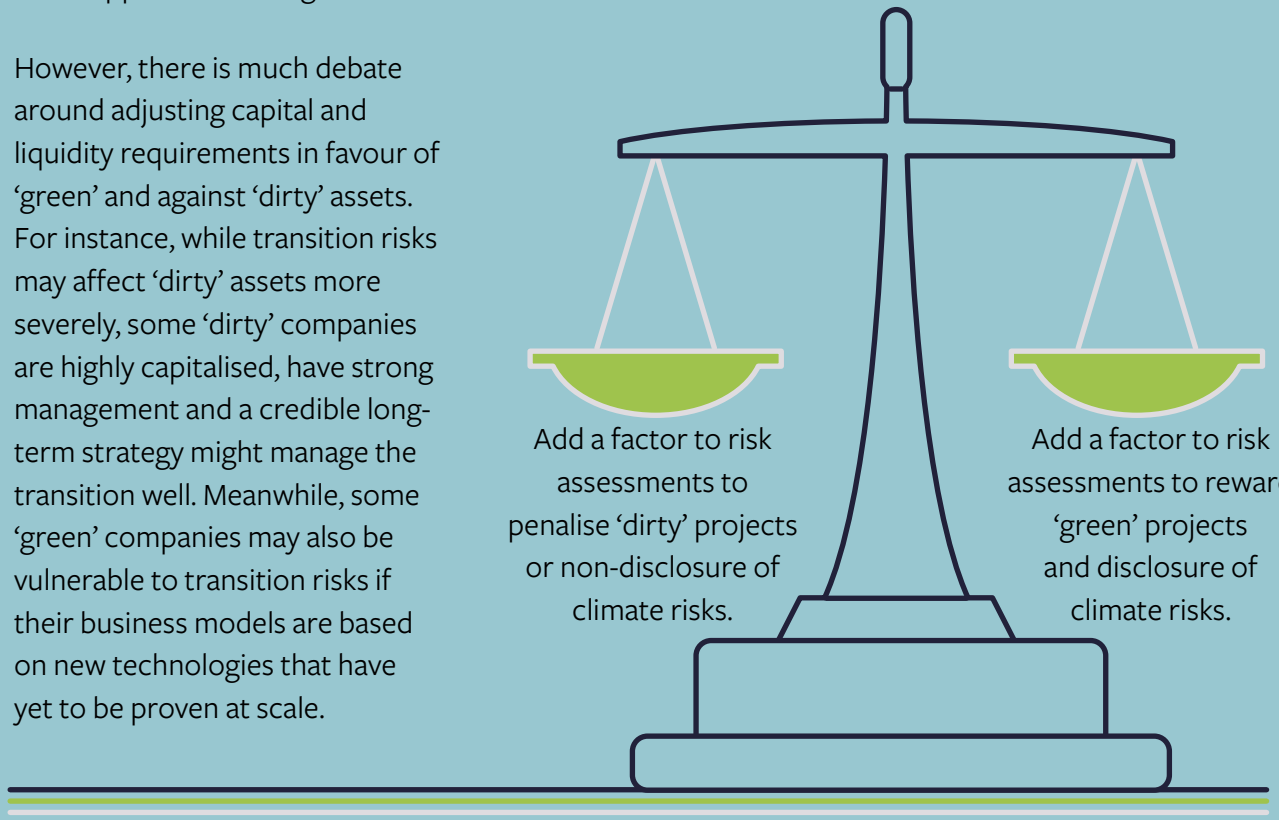
Sufficient reserves for banks to meet any short-term demand for cash from their customers.

Minimum requirements are usually set by the financial regulator according to typical cash outflows or obligations over a defined period.

HOW CAN CENTRAL BANKS INCORPORATE CLIMATE CHANGE?

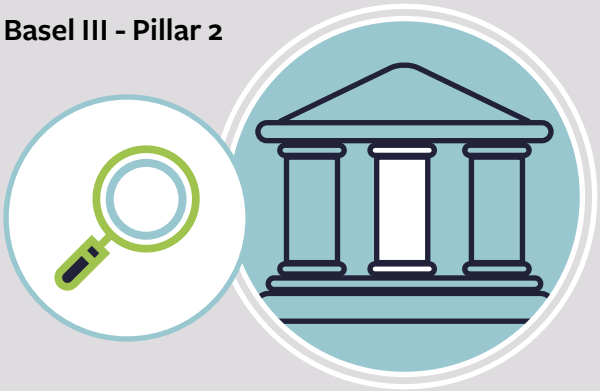
Central banks can add a 'green-supporting factor' or 'dirty-penalising factor' to capital and liquidity requirements. In other words, financial institutions might be required to hold more reserves if they are exposed to climate-related physical, transition and liability risks. This creates an incentive for financial institutions to shift to lower-carbon, climate-resilient loans and investments, as they have more opportunities to generate revenues.

However, there is much debate around adjusting capital and liquidity requirements in favour of 'green' and against 'dirty' assets. For instance, while transition risks may affect 'dirty' assets more severely, some 'dirty' companies are highly capitalised, have strong management and a credible long-term strategy might manage the transition well. Meanwhile, some 'green' companies may also be vulnerable to transition risks if their business models are based on new technologies that have yet to be proven at scale.



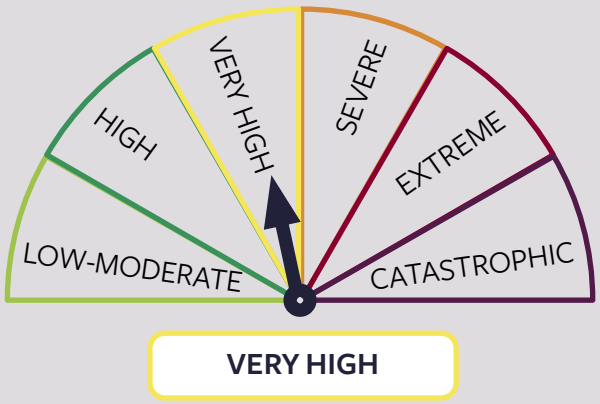
2. What is improved supervision?

Basel III - Pillar 2



Central banks use “stress testing” as their main supervisory tool. Stress tests can reveal systemic vulnerabilities that need risk mitigation measures.

Central banks can use climate-related financial disclosures to more robustly model how climate shocks might affect the financial sector.

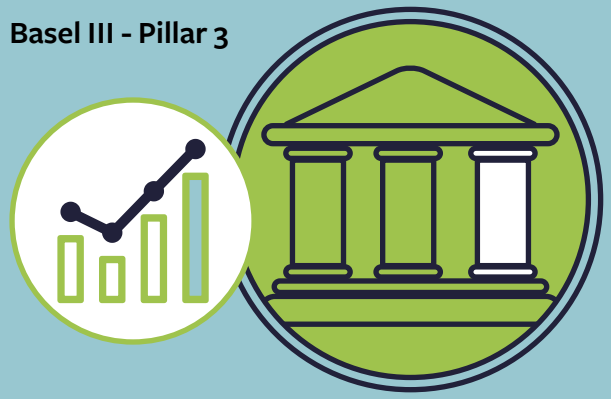


WHAT MIGHT STRESS TESTING REVEAL?

- Flooding in urban areas might affect banks with high exposure to mortgages.
- Commitments to phase out coal might leave investors with stranded assets.
- The rise of new technologies might affect the profitability of established companies.

3. What is market discipline?

Basel III - Pillar 3



Financial institutions can use climate-related risk disclosures to make more informed decisions about how they will allocate their own funds. Armed with this information, they can reduce their own exposure to climate-related risks by withdrawing finance or by encouraging clients to mitigate these risks.

The disclosures therefore also create incentives for households and firms to act on climate change so that they can secure finance more easily. Market discipline among financial institutions can therefore reinforce regulation and supervision by central banks.

How can central banks support a low-carbon transition?

Central banks and other regulators have an important role to play in managing climate-related financial risks, but also facilitating a low-carbon transition. For example:

GREEN CREDIT ALLOCATION

Central banks or other regulators can introduce sustainable finance taxonomies that classify which activities qualify as ‘green’ or ‘grey’. Financial institutions can use these taxonomies to make more informed lending and investment decisions, improving comparability and accountability across the sector. A sustainable finance taxonomy can also be linked to capital and liquidity requirement.

GREEN QUANTITATIVE EASING

Central banks often purchase assets to stimulate the economy. Many favour bonds over equity or project loans. Their purchases are therefore biased towards incumbents in carbon-intensive industries, such as manufacturing and electricity generation, which are more likely to issue bonds. Central banks could green their balance sheets by purchasing other types of assets, such as equities, or preferentially purchasing green bonds.

For the latest information about G20 central banks and their response to climate change, please see the latest Climate Transparency G20 report:
www.climate-transparency.org/g20-climate-performance

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