

SHAPING A SUSTAINABLE FINANCIAL SYSTEM

Future-proofing global finance for a net-zero, nature-positive world



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INTRODUCTION

The financial system has a pivotal role to play in tackling climate change and environmental degradation. Its full potential must be harnessed to serve as an engine in the global economy's transition towards a low carbon economy and sustainable development. However, in its current state, our global financial system lacks the resilience necessary to respond to the incoming shocks.

Policymakers and capital market regulators should work with capital market actors (issuers, investors, central banks, stock exchanges and others) to bolster this resilience. At the same time, it's critical they work to ensure that capital allocation is aligned with the goals set by the Paris Agreement, the 2030 Agenda for Sustainable Development and the upcoming Global Biodiversity Framework.

This paper presents CDP's view of what a sustainable financial system should look like, the reasons to review the current framework, and the main actions to be undertaken to achieve this goal. Accompanying the paper are several real-world examples from key jurisdictions in which CDP operates, creating a snapshot of the sustainable finance policy landscape and highlighting the governance challenges to the development of more sustainable financial systems.

In CDP's view policymakers should focus on three main workstreams, each supported by several priority activities and key recommendations, aiming to:

- A. Make environmental factors integral to investment criteria and corporate governance.**
- B. Make environmental criteria integral to financial stability considerations.**
- C. Align public finances and fiscal policies to support environmental sustainability.**

The lay of the land: taking stock of the recent evolution of the financial system

The financial system is changing. Nearly 15 years after the upheaval caused by the Global Financial Crisis (GFC), a new 'paradigm shift' is reshaping the financial system. In response to an increase in catastrophic weather events, biodiversity loss and water scarcity, financial system actors are starting to realise the role that finance should take in the fight against climate change and environmental degradation.

Some of the main events regarding sustainable finance that have taken place in recent years include:

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- 2015**
- ▼ The Financial Stability Board establishes the Task Force on Climate-Related Financial Disclosures (TCFD).
 - ▼ The Paris Agreement is adopted by 196 countries. Article 2(C) supports "making finance flows consistent with a pathway towards low greenhouse gas (GHG) emissions and climate-resilient development."
 - ▼ The 2030 Agenda for Sustainable Development is launched. Finance is highlighted as a means of implementation for the Sustainable Development Goals.
 - ▼ The third international conference on financing for development is held in Addis Ababa.
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- 2017**
- ▼ At the Paris One Planet Summit, the Network for Greening the Financial System (NGFS) and the One Planet Sovereign Funds Framework are launched.
 - ▼ The TCFD recommendations on climate-related financial disclosures are launched.
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- 2020**
- ▼ The COVID-19 pandemic and its impacts highlight the need to develop resilience to risks and shocks, including those related to climate and the environment.
 - ▼ As part of the European Green Deal, the EU Commission proposes in March the first European Climate Law to enshrine the 2050 climate-neutrality target into law¹.
 - ▼ In September, China pledges to hit peak emissions by 2030 and achieve carbon neutrality by 2060.
-
- 2021**
- ▼ A number of other countries, including the US and Japan, pledge to achieve carbon neutrality by 2050.
 - ▼ G7 Finance Ministers and Central Banks Governors emphasise the need to green the financial system and commit to "properly embed climate change and biodiversity loss considerations into economic and financial decision-making, including addressing the macroeconomic impacts and the optimal use of the range of policy levers to price carbon."
 - ▼ G7 countries also express their support for a move towards mandatory climate-related financial disclosures based on the recommendations of the TCFD and agree on the need for a baseline global reporting standard for sustainability, which jurisdictions can further supplement².
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Yet, despite the many governmental pledges, and the explosive growth in the market for green finance, the situation is not all positive. A recent report by CDP and the Science Based Targets Initiative (SBTi) shows that no major G7 stock indexes are currently on a 2°C pathway, much less the 1.5°C that is so urgently needed³. Even worse, four of the seven indexes analysed are on dangerous temperature pathways of 3°C or above⁴. Moreover, studies show that the ambition gap is still huge: in Europe alone, there is currently a mismatch of over €4 trillion between the capital that has the ambition to be Paris-aligned, and the current available market for Paris-aligned corporate lending⁵. Almost all banks lending to European companies and many asset managers now say they want to align with the Paris Agreement – but fewer than one in ten European companies currently meet that standard.

CDP's view is that greening the financial system is a radical endeavour. Although important, green financial instruments such as green bonds and green loans will not be sufficient to achieve change at the scale required to meet the challenges presented by climate change and environmental degradation. A systemic shift is needed, one that includes a change in the way companies approach and manage their impacts on people and planet, financial institutions deal with the effects of their financing operations, and regulators and policymakers identify risks and opportunities, acting to limit the former and seize the latter.

1. European Commission, '2050 Long-term Strategy'. https://ec.europa.eu/clima/policies/strategies/2050_en

2. UK HM Treasury, (2021) 'G7 Finance Ministers and Central Bank Governors Communiqué'. <https://www.gov.uk/government/publications/g7-finance-ministers-meeting-june-2021-communication/g7-finance-ministers-and-central-bank-governors-communication>

3. Science Based Targets Initiative, 'No major G7 stock index aligned with the Paris climate goals' <https://sciencebasedtargets.org/news/g7-stock-indexes-science-based-targets>

4. Science Based Targets Initiative, (2021) 'Taking the temperature'. <https://sciencebasedtargets.org/resources/files/SBTi-TakingtheTemperatureReport2021.pdf>

5. CDP Europe, (2021) 'Running hot: accelerating Europe's path to Paris'. <https://www.cdp.net/en/articles/media/running-hot-cdp-europe-report-release>

CDP'S VISION OF A SUSTAINABLE FINANCIAL SYSTEM

Why the financial system must focus on the environment

The financial system has a pivotal role to play in achieving the goals set by the Paris Agreement, the 2030 Agenda for Sustainable Development and the upcoming Global Biodiversity Goals. Its full potential needs to be harnessed to serve as an engine in the global economy's transition towards a low carbon economy and sustainable development.

COVID-19 has shown the need for **coordinated** policy actions to finance a more sustainable economy. The goal of 'building back better' cannot be achieved without the participation of financial actors at all levels and needs to be supported by strong policy and regulatory measures. Due to its reported connection to unsustainable forestry practices, some observers have compared the pandemic to a "green swan event", defined by the Bank for International Settlements as "a climate event that is outside the normal range of expected events"⁶ and has highlighted the systemic nature of environmental risks.

And the damage is not only limited to climate: the World Economic Forum estimates that around half of global GDP (US\$44 trillion) is highly or moderately dependent on nature⁷. Moreover, according to World Bank analysis, the collapse of select ecosystem services such as wild pollination, carbon storage, timber from native forests and food from marine fisheries could cause a decline in global GDP of US\$2.7tn by 2030⁸. According to the WWF, this figure could reach US\$9.87tn by 2050⁹.

Armed with sufficient information about the environmental impacts of companies' economic activities, regulators and policymakers can use data as the basis for policies reflecting the systemic nature of the risks posed by climate change and environmental degradation. Financial institutions should be required to address environmental-related financial risks through their existing risk management frameworks in a way that is appropriately governed by corporate management.

Our financial systems do not currently consider environmental risks to a sufficient degree. For example, while it is widely agreed that systemic shocks are more likely in an environment in which financial assets do not fully reflect climate-related physical and transition risks, these risks are not sufficiently priced in by stock markets. However, these risks are not limited to climate. It was estimated that the potential long-run economic damages from biodiversity loss and ecosystem degradation may range between US\$2-4.5 trillion per year.

Several studies have confirmed the existence of a market failure in equity markets. In 2020 the IMF's Global Financial Stability Report examined equity pricing across 68 countries over 50 years¹⁰. The results show that climate risks are not being adequately factored into equity prices, and that global equity valuations are generally not associated with indicators of physical climate risks. Even worse, the results showed that the equity risk premia analysed were only consistent with a world in which no further climate change was expected. Moreover, stocks issued by firms with relatively high exposure to temperature change generally outperformed all others. This suggests a failure by the market in pricing in these risks, potentially due to the fact that information on climate change is either not available or is ignored.

CDP's goal is to achieve a financial system that integrates sustainability considerations into its operations, including the full costing of positive and negative externalities that sustainability implies, leading to a reorientation of capital flows towards the global goals.

6. <https://www.bis.org/speeches/sp200514.htm>

7. World Economic Forum, (2020) 'Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy'. http://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf

8. World Bank Group, (2021) 'The Economic Case for Nature'. <https://openknowledge.worldbank.org/bitstream/handle/10986/35882/A-Global-Earth-Economy-Model-to-Assess-Development-Policy-Pathways.pdf?sequence=1&isAllowed=y>

9. WWF, (2021) 'Global Futures'. https://www.wwf.org.uk/sites/default/files/2020-02/GlobalFutures_SummaryReport.pdf. The WWF report focuses on 6 main 'ecosystem services': the pollination of crops, protection of coasts from flooding and erosion, supply of water, timber production, marine fisheries and carbon storage.

10. IMF, (2020) 'Global Financial Stability Report'. <https://www.imf.org/en/Publications/GFSR/Issues/2020/04/14/Global-Financial-Stability-Report-April-2020-49020>

The financial system's role in advancing the global environmental agenda: CDP's Theory of Change

CDP set out to transform capital markets by making environmental reporting and risk management a new business norm. In the early 2000's, the status quo was unbridled growth with little thought for the environmental consequences; many companies and investors didn't see climate change as a material risk to their profits and operations.

The lack of information about how business was impacting the environment, and the risks of a changing climate and dwindling resources to the global economy demonstrated the need for a disclosure mechanism. To address this, CDP created the largest global environmental reporting platform for companies, cities, states and regions.

For over 20 years, CDP has leveraged investor authority to request environmental disclosure around climate change, deforestation, and water security from corporations. This has led to outstanding results, including over 14,000 entities reporting against CDP's questionnaire in 2021, and more than 590 investors with over \$110 trillion in assets.

However, while investors and buyers continue to be a compelling requesting authority for corporate disclosure on environmental practices, the pace of climate change and the magnitude of its impacts are rapidly increasing. In order to drive the systemic change needed, CDP believes additional forces within the financial system must be mobilized.

Every facet of the broader financial system has a role to play as a lever for greater transparency on the impact of environmental issues.

BANKS & INSURANCE COMPANIES

Integrated financial institutions encompassing commercial and investment banks, insurance companies and diversified finance companies are centrally placed to impact capital availability for corporates.

CREDIT RATING AGENCIES

In the assessment of creditworthiness for issuers of debt, credit rating agencies are well-positioned to tie the cost of capital to the level of environmental risk faced by an issuer. Additionally, credit rating agencies facilitate the trading of securities on a secondary market. With environmental risk increasingly manifesting in credit risk, credit rating agencies can influence underwriters and issuers as well as investors.

To face the unprecedented financial challenge stemming from climate change and environmental risk, public authorities need to cooperate and coordinate efforts on: a) prudential rules; b) public finance and fiscal policy; and c) regulatory policy tools for capital markets. For this reason, the activation of the following actors is crucial:

FINANCIAL REGULATORS

Financial stability in the face of a rapidly changing climate should be a factor in financial regulators' interactions with the banks and insurance sectors, stock exchanges, credit rating agencies and investors. With the power of issuing policy and regulation addressing companies and financial institutions, financial regulators can align corporate behaviour through three main regulatory policy tools that are ultimately key to scaling up sustainable finance: taxonomies, green financial products standards and labels and disclosures.

CENTRAL BANKS AND SUPERVISORS

Having recognized climate risk as a risk to financial stability¹¹, central banks and supervisors are responsible for the prudential oversight and conduct of business in the banking sector, insurance sector and securities markets. Hence, they are best positioned to address climate risk in the financial system. CDP's theory of change for the financial system requires pressuring as many of the points as possible within the system to compel the incorporation of environmental risks and opportunities as standard practice. The risk of climate change is material to the global financial markets. Without systematic targeting and education of each player within the system, climate change could trigger substantial market dislocation.

STOCK EXCHANGES

Leveraging their advantaged position between issuers and investors, stock exchanges can act as quasi-regulators, by increasing expertise among issuers and other capital market actors and developing environmental disclosure by means of their listing rules.

CDP sees the financial system as an essential driver of the transition to net-zero. Without a structural reimagining of the whole system, it will be impossible to shift the necessary funding away from environmentally damaging activities, and towards environmentally sustainable ones. This will require the intervention of all actors in the system. In particular, policymakers should employ their position and power to push and support the flow of private capital towards transition-aligned activities.

The three workstreams examined below detail the areas of focus for policymakers to prioritise. Each workstream includes priority activities and a series of policy recommendations.

11. NGFS, (2019) A call for action: Climate change as a source of financial risk. https://www.ngfs.net/sites/default/files/medias/documents/synthese_ngfs-2019_-_17042019_0.pdf

A. Make environmental factors integral to investment criteria and corporate governance.

Capital market actors should be regulated, and their actions supervised, in a way that ensures that the right incentives are in place to push these actors towards integrating environmental criteria in their day-to-day investment decisions, and to ensure that damaging phenomena such as greenwashing do not take place. It is imperative that these environmental considerations are embedded in the governance models of capital markets and of the actors in the ecosystem.

Embedding these environmental considerations can be achieved by ensuring that:

- ▼ **A1: Policymakers and financial market regulators adopt mandatory disclosure requirements for capital market actors and companies.**
- ▼ **A2: Financial market regulators develop internationally aligned sustainable finance taxonomies.**
- ▼ **A3: Corporate governance codes and regulations are designed to account for environmental factors.**

A1. Policymakers and financial market regulators should adopt mandatory disclosure requirements for capital market actors and companies.

Clear and comparable environmental data is necessary for the development of good policies. To this end, environmental information must be gathered, reported, and disseminated in standardized ways. Once sufficient information about environmental impacts is gathered, it is possible to start engaging with regulators to ensure this data is used as the basis for the development of policies that reflect the systemic nature of the risks posed by climate change and environmental degradation. This can be achieved through the development of risk management guidelines by regulators.

The need for mandatory disclosure extends to financial institutions as well. CDP's research on the role of financial institutions in financing the transition found the climate impact of institutions' investment and

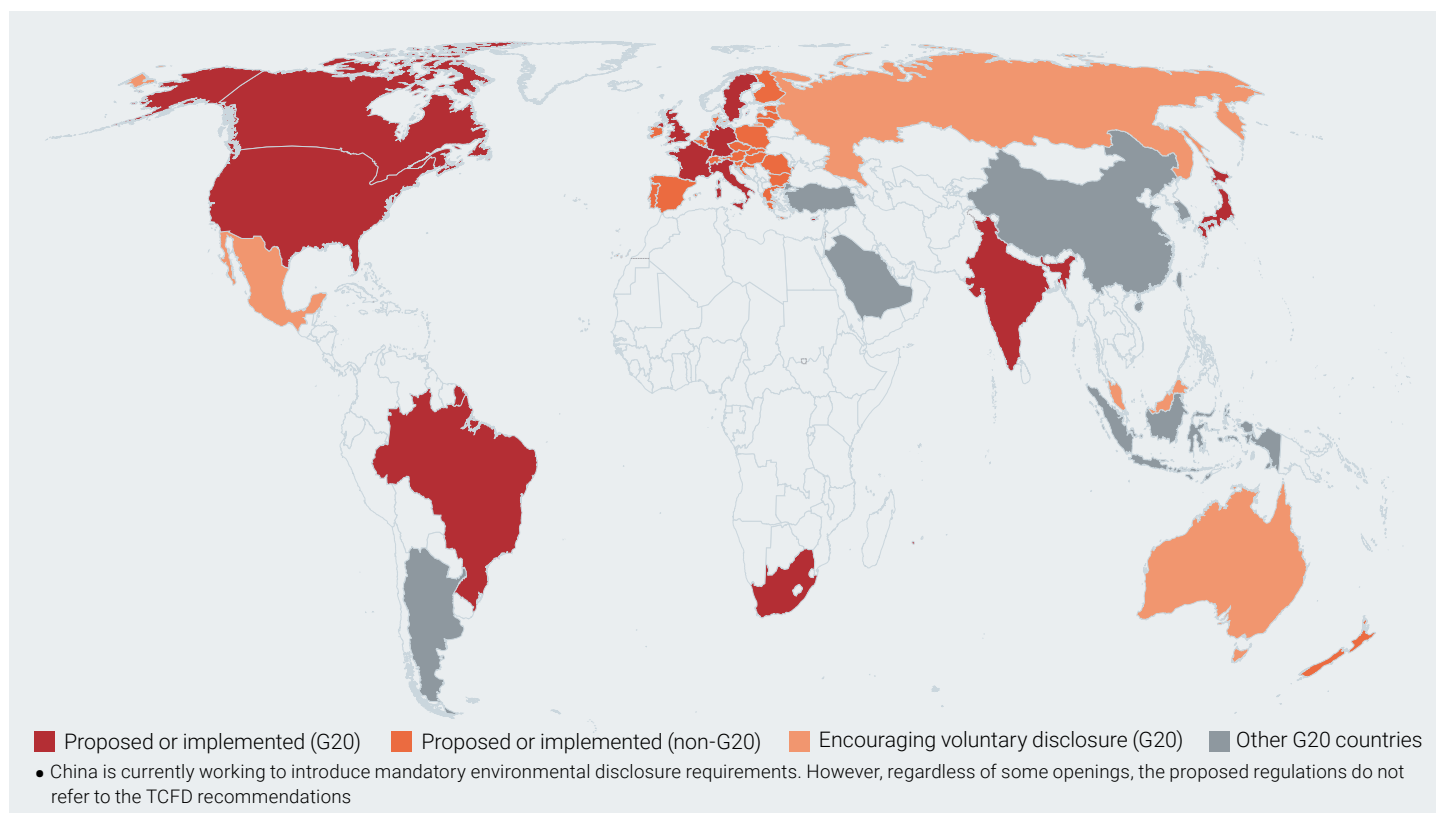
lending is over 700 times their direct impact on average¹². Yet, for many institutions that is not where the focus is, with only 25% reporting the emissions associated with their portfolio, and 49% not analyzing their portfolio's impact on climate at all.

This shows a worrying disconnect between what is normally reported by Financial Institutions (FIs), and what their actual impacts are, and can lead to miscounting that would eventually impair the achievement of net-zero targets set both by FIs and by governments.

Currently, most of the mandatory reporting requirements adopted by jurisdictions around the world focus on TCFD-aligned disclosure.

12. CDP, (2021) 'The Time to Green Finance' <https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/741/original/CDP-Financial-Services-Disclosure-Report-2020.pdf?1619537981>

TCFD-aligned mandatory disclosure around the world



SOURCE: World Bank

Policymakers and regulators around the world have started requiring TCFD-aligned disclosure from capital market actors. In the wake of the UK Government's commitments, the Financial Conduct Authority (FCA) launched two consultations on the topic in June 2021, proposing to extend its existing rules to a larger pool of companies listed in the UK. At the same time, the Brazilian Central Bank and the country's securities market authority (Comissão de Valores Mobiliários - CVM), have proposed new rules based on the TCFD recommendations. Similar initiatives have been proposed, or are already in the pipeline, in New Zealand, Hong Kong, Japan and Switzerland, among others. Others, like China and India, have regulation that does not refer directly to the TCFD, but still requires disclosure on ESG issues¹³.

The reliance on the TCFD framework is understandable, as the TCFD recommendations have become the most common reference point for disclosure of climate-related financial information. However, although it represents an important first step, mandatory disclosure regulation should not be limited to climate-related financial risks. By their own nature, TCFD-aligned disclosures focus purely on the financial aspect of climate change. This may lead to overlooking other connected issues such as forests and water security, together with the impacts of economic activities on people and planet. In order to support the shift of financial flows towards the goals of the Paris Agreement and

the Agenda 2030 on Sustainable Development and the upcoming Global Biodiversity Framework, high-quality environmental disclosure regulation should build upon the TCFD recommendations to also incorporate the wider spectrum of environmental issues, such as deforestation, biodiversity, and water security. Policies should also expand beyond the current focus on risks and opportunities, by also requiring companies to report on their impacts on people and planet¹⁴.

CDP analysis found the lack of proper disclosure from financial institutions on matters such as deforestation¹⁵ and water security¹⁶ to be a strong limitation to the effectiveness of both environmental and financial policies. In a recent paper¹⁷ CDP identified five main elements that regulations on mandatory environmental disclosure should include. These are to:

- 1. Aim at environmental integrity, addressing sustainability-related financial disclosures as well as impact on people and planet, with a holistic environmental approach.**
- 2. Ensure compatibility of disclosure standards required or recommended.**
- 3. Provide an enforcement system.**
- 4. Adhere to technical quality and content of the reporting process.**
- 5. Allow space for innovation and more mature disclosure.**

13. CDP, 'Shaping High-quality Mandatory Disclosure: Taking Stock and Building Upon the TCFD Recommendations.' https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/863/original/TCFD_disclosure_report_2021_FINAL.pdf?1632299932

14. The concept of 'double materiality' incorporates the effects of the company's activities on climate change and the environment as well as on the bottom line. While materiality is the effect of climate change on finance and corporate activities, double materiality includes the effect of finance and corporate activities on climate change. <https://greencentralbanking.com/research/double-materiality-what-is-it-and-why-does-it-matter/>

15. CDP, (2021) 'Towards a new normal in forest disclosure for banks'. https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/004/424/original/CDP_Rabobank_case_study.pdf

16. CDP, (2020) 'Turning the tide: Recommendations for policymakers on tackling corporate water pollution'. https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/339/original/CDP_Water_pollution_policy.pdf?1605770278

17. CDP, (2021) 'Shaping high quality mandatory disclosure: Taking stock and building upon the TCFD recommendations' https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/863/original/TCFD_disclosure_report_2021_FINAL.pdf?1632299932

One of the main comments made in response to the call for stronger action from financial authorities focuses on the lack of high-quality data.

These comments are part of a wider discussion around the need for better, more standardised data, which is being espoused by a number of actors, including the NGFS¹⁸, the International Organisation of Securities Commissions (IOSCO), and others.

In particular, gaps have been identified in the provision of forward-looking data (for example targets or emissions pathways), new metrics and targets, granular data (for example geographical data at entity and asset levels) and data on specific topics such as biodiversity.

With regards to forward-looking financial sector metrics, the former, CDP has engaged with the TCFD in its recent consultation, highlighting how the benefits of forward-looking climate-related metrics outweigh the challenges. In CDP's view, these challenges include the availability of emissions data (out of the 7,000 largest and most polluting companies asked to disclose to CDP, only 2,500 respond and disclose their emissions), together with a lack of companies publicly committing and disclosing their emissions reduction targets (lack of targets or emissions forecasts data). This leads to estimates and modelled data being used which can reduce the accuracy of forward-looking metrics.

CDP is trying to assuage these challenges by driving structured, comparable disclosure on emissions and targets. CDP provides forward-looking metrics in terms of Implied Temperature Rise metrics for investors. It has also developed a framework that helps investors and banks set a science-based target for the Implied Temperature Rise of their portfolios.

CDP has recently engaged with the TCFD in its development of new and updated metrics and targets. CDP's view is that policymakers should require companies, including financial institutions, to adopt and disclose on mid-term to long-term targets supported by interim targets, based on a 1.5°C scenario, rather than a "2°C or below" one¹⁹.

Specifically for FIs, CDP advocates for the disclosure of financed emissions, preferably in line with a recognised standard like those of the Partnership for Accounting Financials (PCAF)²⁰. This would be in line with the widely shared goal of achieving further standardised data on climate change and environmental risks, opportunities and impacts.

As a response to this need for more standardized data, in September 2020 a group of five internationally recognised framework- and standard-setting institutions including, CDP, the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB), co-published a shared vision of the elements necessary for more comprehensive corporate reporting, together with a joint statement of intent to drive

towards this goal – by working together and by each committing to engage with key actors, including IOSCO and the IFRS, the European Commission, and the World Economic Forum's International Business Council²¹.

Since then, the IFRS Foundation has been working on creating an International Sustainability Standards Board to develop a set of Sustainability-related Financial Disclosures Standards. This work is supported by a number of key financial actors, including IOSCO which is planning to develop approaches to support securities regulators' supervision of sustainability-related disclosures once the ISSB's reporting standards are in place²².

The NGFS itself supports this view, and has stated that "when balancing the need for robust and comprehensive data against the opportunity cost of inaction, central banks should be cognisant of the risk that acting early with imperfect information could be less costly than acting only once stronger data standards have emerged²³."

Key policy recommendations

- ▶ Regulators must require environmental disclosure from listed companies, including financed emissions from financial institutions, forward-looking metrics, and emissions reduction targets.
- ▶ Disclosure regulation should use the TCFD recommendations as a basis to be built upon. Regulation should incorporate financial factors and encompass a wider spectrum of impacts of economic activities on people and planet, together with the opportunities presented by environmental action. It should focus not only on climate but also other environmental factors such as contribution to deforestation, water insecurity and impacts on biodiversity. The regulations should incorporate the five elements of high-quality mandatory disclosure identified by CDP.
- ▶ Regulators and policymakers should support the move towards more standardized data by recognizing and endorsing the current development of global standards and relying on existing systems such as CDP's disclosure platform to provide historical datasets and expertise. The work of the IFRS foundation is a welcome development, but its focus on sustainability-related financial disclosures will not be enough to ensure the necessary shift of capitals towards the goals of the Paris Agreement, the 2030 Agenda and the Global Biodiversity Framework. For this, a stronger focus on impacts is needed.

18. NGFS, (2021) 'Progress report on bridging data gaps' https://www.ngfs.net/sites/default/files/medias/documents/progress_report_on_bridging_data_gaps.pdf

19. <https://www.cdp.net/en/articles/climate/how-tcfd-recommendations-can-be-bolder-for-a-15c-future>

20. PCAF, <https://carbonaccountingfinancials.com/>

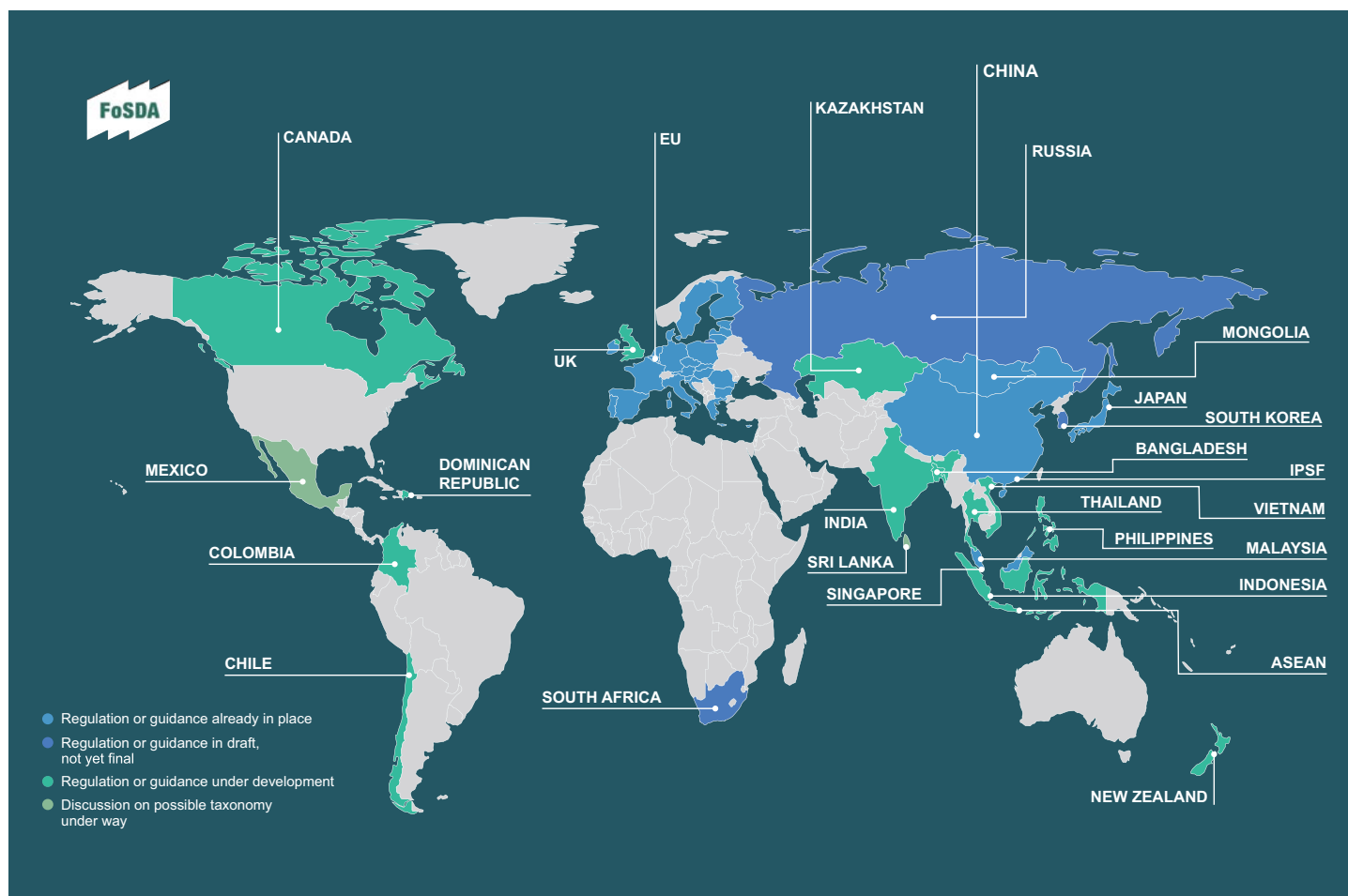
21. Impact Management Project, 'Statement of intent to work together towards comprehensive corporate reporting'. <https://impactmanagementproject.com/structured-network/statement-of-intent-to-work-together-towards-comprehensive-corporate-reporting/>

22. IOSCO, (2021) 'Report on Sustainability-related Issuer Disclosures'. <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD678.pdf>

23. NGFS (2021) 'Adapting central bank operations to a hotter world: Reviewing some options'. <https://www.ngfs.net/en/adapting-central-bank-operations-hotter-world-reviewing-some-options>

A2. Financial market regulators should develop internationally aligned sustainable finance taxonomies.

Taxomania: An International Overview²⁴



SOURCE: Future of Sustainable Data Alliance

Sustainable investment taxonomies are "systems of classification or standards aimed at helping financial market participants and their stakeholders communicate through a shared understanding, via a common vocabulary, to compare and assess products and services²⁵." Taxonomies can be developed by several different actors, both public and private. For example, the EU Taxonomy is being developed and will be enforced through the ordinary EU legislative procedure, while the Malaysian Taxonomy was put in place by the country's central bank. In addition, private actors can create sustainable finance taxonomies, such as the transition taxonomy currently under development in Canada.

It is widely recognized that sustainable finance taxonomies are a necessary tool to to avoid the risk of greenwashing²⁶ of financial products²⁷. Taxonomies will support investors and other capital market actors to compare investment opportunities, a goal that represents the focus of the so-called 'digital taxonomies'. These, usually using the XBRL framework, are designed to be machine-readable, enabling transmission of disclosures to multiple users with greater speed and accuracy compared to reporting in an unstructured file format. The end goal is to enable a simplified and automatic system to compare investment opportunities according to common definitions.

24. The Future of Sustainable Data Alliance (FoSDA) is a global alliance created with the aim of identifying and accelerating the reliable, actionable ESG data and related technology that is needed for improved investor decision making on the global journey to sustainable development. CDP is a member of the FoSDA Data Council. For more information see: <https://futureofsustainabledata.com/>

25. Green Finance Industry Taskforce, (2021) 'Identifying a Green Taxonomy and Relevant Standards for Singapore and ASEAN'. <https://abs.org.sg/docs/library/gfit-taxonomy-consultation-paper>

26. Greenwashing is defined as "the process of conveying a false impression or providing misleading information about how a company's products are more environmentally sound. Greenwashing is considered an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly."

27. OECD, (2020) 'Developing Sustainable Finance Definitions and Taxonomies'. <https://www.oecd-ilibrary.org/sites/134a2dbe-en/index.html?itemId=/content/publication/134a2dbe-en>

While the EU Taxonomy is probably the most widely recognized public finance taxonomy, others have already been developed, including the Chinese NDRC Green Industry Guiding Catalogue and PBC Green Bond Endorsed Project Catalogue, as well as the Climate Change and Principle-Based Taxonomy developed by Bank Negara Malaysia. There are currently over 50 different taxonomies in development around the world, both at the public and the private level. Most of these exercises differ in scope, range, and focus. For example, some jurisdictions (such as Canada) are focusing on transition taxonomies, with the aim of classifying those activities that can support the transition to a low-carbon economy. Other actors, mostly in the private sector, are instead working on developing digital taxonomies.

The risk is that this trend will lead to the development of several different taxonomies incompatible with each other, which would increase the uncertainty and undermine the central goal of these exercises: that of reducing greenwashing and enabling simpler comparison.

Regulators should strive towards alignment of the different taxonomies, while maintaining enough flexibility to cater for regional specificities. The Association of Southeast Asian Nations (ASEAN) is working to develop its own sustainable finance taxonomy, aiming to complement the individual initiatives of the Association's members (e.g., Malaysia and Singapore). At the same time, the International Platform for Sustainable Finance is running a project, led by the EU and China, to develop a Common Grounds Taxonomy, which may provide an initial starting point by serving as a common language to develop regional and country-specific instruments. This is in line with the suggestions of the G20 Sustainable Finance Roadmap.

As with many other elements of a sustainable financial system, taxonomies should not be limited to climate-related issues. For example, taxonomies can help ensure finance is in line with targets of deforestation-free forest-risk commodity value chains, as highlighted by recent CDP analysis on the role of the Chinese financial regulators on these issues²⁸.

In this, the EU may be a good example. The Taxonomy Regulation establishes six environmental objectives:

- ▼ Climate change mitigation;
- ▼ Climate change adaptation;
- ▼ The sustainable use and protection of water and marine resources;
- ▼ The transition to a circular economy;
- ▼ Pollution prevention and control; and
- ▼ The protection and restoration of biodiversity and ecosystems.

Although the first focus has been on climate change mitigation and adaptation, all the objectives will be addressed over time. Beyond the EU, the paper put out for consultation by the Singapore Monetary Authority acknowledged the importance of a similar approach. The paper envisaged that "a taxonomy for Singapore-based FIs would draw on the theoretical underpinnings of the EU taxonomy, including for example the six environmental objectives (which are relevant and hence applicable across geographies), and the broad approach to classification of economic activities²⁹."

Key policy recommendations

- ▼ Policymakers must develop internationally aligned taxonomies, using a common language but allowing for regional specificities.
- ▼ The principle of Do No Harm should form the basis of any taxonomy developed.
- ▼ Taxonomies should not be limited to climate-related activities but extend beyond to other environmental issues. Climate may be a first stepping-stone, but the goal should be to get a comprehensive regulation for a wider range of environmental issues.
- ▼ Taxonomies should be created in digital form, allowing systems to automatically read and work with the information contained, thus simplifying classification of investments.

28. CDP, (2021) 'Forests and sustainable finance: The role of China'; https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/607/original/NICFI_China_Policy_Brief_EN.pdf?1615283393

29. Green Finance Industry Taskforce, (2021) 'Identifying a Green Taxonomy and Relevant Standards for Singapore and ASEAN'. <https://abs.org.sg/docs/library/gfit-taxonomy-consultation-paper>

A3. Corporate governance codes and regulations should be designed to account for environmental factors.

In addition to being one of the three fundamental elements of ESG investing, corporate governance is also a pivotal element in the development of a sustainable financial system. Policymakers and regulators have the power to require that companies' internal systems and processes integrate environmental considerations and should use this power to ensure that it is so. Better corporate governance in this area would help the companies themselves, by avoiding the risk of litigation and shareholder revolts. The recent case of the Dutch decision in *Milieudefensie and Ors. v Royal Dutch Shell plc* shows how important it is for company directors to be aware of and manage the ever-increasing climate and environmental risks in order to comply with their company law duties³⁰. It is interesting to note that rating agencies are starting to integrate litigation risk into their company assessments.

Regulators have a wide range of instruments at their disposal, ranging from voluntary corporate governance codes to comply-or-explain instruments, to more traditional (and mandatory) company law regulation.

In this case, the term 'corporate governance' is intended in a wide sense, to include issues such as fiduciary duty, duty of care, due diligence duty, Board composition, executive compensation structures and stakeholder involvement. For investors, this should also include stewardship regulation.

Recently, the EU launched a consultation on Sustainable Corporate Governance. CDP provided a response to this consultation³¹, highlighting several important elements that a sustainable corporate governance regime should present. Keeping into account the specificities of the European context, a number of these elements can be applied across jurisdictions.

- ▶ Directors' duty of care should be linked to and be guided by corporate sustainability reporting. Internal control and governance systems should address ESG factors.
- ▶ Short-termism should generally and broadly be replaced by long-term risk management along with long-term investment strategies embedded in the fiduciary duties of asset owners and managers to support directors' duties to implement sustainable business models over longer time-horizons. Investors should explicitly integrate climate and environmental risks into their legal fiduciary duties and consider risks over the timeframes of their clients' assets.
- ▶ Corporate directors should be required to set up adequate procedures and to set measurable, science-based targets to ensure that possible risks and adverse impacts on climate and the environment can be identified and mitigated. In cases where this is material, these should include company-wide risk-assessments of the risks deforestation poses to the company, as well as a commodity-specific, public forest-related corporate policy.

- ▶ Where material, companies should consider setting an internal price on carbon and water. As highlighted by CDP research, where implemented in a coordinated way across the organization, these tools allow for better managing of the company's risks, opportunities and impacts on people and planet³². Currently, just 13% of respondents to CDP's water questionnaire, across a variety of sectors, have set an internal water price³³. On the other hand, more than one third of companies that responded to CDP's internal carbon pricing questions in 2020 are either currently using or planning to use an internal price on carbon, an increase of 2.8% from 2018 and 11% since 2015.
- ▶ Policymakers should consider requiring mandatory environmental due diligence. This should take a horizontal approach across climate change, forests, biodiversity and water to reflect the dependencies between environmental issues.

The move towards integrating ESG concerns into corporate governance is not limited to Europe. In June 2021 the US Securities and Exchange Commission (SEC) Commissioner Allison Herren Lee delivered a speech highlighting the relevance of ESG risks and opportunities for companies and their boards. Meanwhile, Japan is in the process of reviewing its Corporate Governance Code and its Guidelines for Investor and Company Engagement³⁴. The new rules will require Boards to develop policies for the company's sustainability initiatives, and to disclose environmental information in line with the TCFD recommendations.

Requirements of sustainable corporate governance arrangements should extend beyond the company's direct operations and require consideration of the impacts along the supply chain. Companies using the CDP Supply Chain program integrate their environmental data into a combination of procurement tools and processes to ensure their purchasing practice is sustainable. Other companies have set clear expectations by including specific language around environmental performance in their contracting and tendering documents.

A further step should be requiring companies to develop transition plans and votes at companies' Annual General Meetings (AGMs). This was highlighted in CDP's policy brief 'The time for action is now'³⁵ calling for shareholder votes on climate transition plans to be required at AGMs. This is expected to increase companies' accountability towards their shareholders for their climate plans and to be essential to achieve the Paris Agreement goals. Some companies are already moving voluntarily: Aena (the Spanish airport operator) was the first company to give shareholders a vote on its efforts to tackle climate change after a request from The Children's Investment Fund (TCI) with support from other major shareholders. Unilever was the first company to voluntarily seek shareholder approval for a climate transition plan.

30. Harvard Law School Forum on Corporate Governance, (2021) 'What the Shell judgment means for US directors'. <https://corpgov.law.harvard.edu/2021/07/22/what-the-shell-judgment-means-for-us-directors/>

31. CDP Europe, (2020) 'European Commission proposal for an initiative on sustainable corporate governance – Comment from CDP Europe'. https://6f6fcb86e61af1b2fc4-c70d8ead6ced550b4d-987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/739/original/CDP_Europe_comment_on_Corporate_Sustainable_Governance.pdf?1619162546

32. CDP, (2017) 'Water security: how can pricing drive change' <https://www.cdp.net/en/articles/water/water-security-how-can-pricing-drive-change>. Also see Putting a price on carbon report <https://www.cdp.net/en/research/global-reports/putting-a-price-on-carbon>.

33. CDP, (2021) 'A wave of change'. https://6f6fcb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/577/original/CDP_Water_analysis_report_2020.pdf?1617987510

34. FSA, (2021) 'Revisions of Japan Corporate Governance Code and Guidelines for Investor and Company Engagement'. <https://www.fsa.go.jp/en/news/2021/20210406/01.pdf>

35. CDP, (2020) 'The time for action is now'. <https://www.cdp.net/en/policy-and-public-affairs/policy-briefings/the-time-for-action-is-now>

Governments should encourage investors to base their assessment on the set of principles laid out by the Oxford Martin Net Zero Carbon Investment Initiative, according to which companies should:

- ▼ Commit to a timeframe to reach net-zero emissions in line with the Paris Agreement goals;
- ▼ Demonstrate that they will be able to continue to be profitable once they reach net-zero emissions; and
- ▼ Set quantitative mid-term targets to be able to demonstrate progress against their long-term goals³⁶.

Lastly, requisites for investors should consider the specificity of their role, and cover issues such as fiduciary duty (which should be clarified as comprising the consideration of ESG factors), board-level oversight of climate-related issues, and stewardship.

Regarding board-level oversight, FIs have been making positive steps in recent years, and most now have some board-level oversight of climate-related issues. However, this can still be improved. Across all financial industries, board oversight covers climate risks and opportunities in financial institutions' own operations more often than it does their financing activities. Boards are less likely to have oversight of their climate impact than risks and opportunities affecting their bottom line. These trends are most extreme in the insurance industry – board-level oversight covers the impact of insurance underwriting on climate change at only 31% of insurers. The situation could be improved by employing financial incentives.

Regulation about engagement with invested companies is particularly relevant in this case, given the power that investors hold to shape company behavior. CDP analysis shows that 82% of banks and 67% of insurers currently engage their clients on climate-related issues, most commonly to educate clients about their own climate strategies and sustainable finance products. A lower number of asset owners (46%) and asset managers (50%) engage, most commonly as active owners. For some, this lower number will be because they use external asset managers. If investors do not have direct shareholder relationships, they should ensure their external asset managers are engaging companies, so the feedback loop is not broken.

Key policy recommendations

- ▼ Corporate governance codes and regulations should consider environmental factors, and their requirements extend beyond a company's direct operations, along its supply chain. They should include issues such as fiduciary duty, duty of care, due diligence duty, board composition, executive compensation structures and inclusive stakeholder involvement.
- ▼ Mandatory votes on climate transition plans should be introduced at company AGMs.
- ▼ Rules should be developed for investors regarding investment stewardship. These should cover engagement strategies, which should include targets, metrics, and time-bound commitments.

B. Make environmental criteria integral to financial stability considerations.

Traditional central bank models are not enough to respond to the multifaceted challenges posed by climate change and environmental degradation.

Since Mark Carney's 'Tragedy of the Horizon' speech in 2015³⁷, through the launch of the NGFS in 2017, and the Bank for International Settlements 'Green Swans' report in 2020³⁸, the world of central banks has been undergoing a profound transformation. This 'epistemological break' is leading to a review of the role of central banks, in particular through a realisation of the need to focus on forward-looking risks.

A recent speech by the Governor of the Bank of England, Andrew Bailey, highlighted what the Bank should do to address the risks of climate change³⁹. The Governor highlighted the important role that central banks more generally can play to address climate change. In addition to building resiliency at a micro and macro level, climate change and the transition to a net-zero economy are highlighted as relevant factors for the conduct of monetary policy.

In July 2021 the EU presented an action plan to include climate change considerations in its monetary policy strategy⁴⁰. Through the strategy, the Bank's Governing Council committed to:

- ▼ further incorporating climate change considerations into its monetary policy framework;
- ▼ expanding its analytical capacity in macroeconomic modelling, statistics and monetary policy with regard to climate change;
- ▼ including climate change considerations in monetary policy operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases; and
- ▼ implementing the action plan in line with progress on the EU policies and initiatives in the field of environmental sustainability disclosure and reporting.

The NGFS already highlighted similar points in its previous publications, including calling for central banks to "acknowledge that climate change already is part of their monetary policy contexts⁴¹."

Although the points made about the risks to neutrality of their mandate may sound reasonable, central banks have a pivotal role to play. They should not shy away from it.

In this case too, CDP argues that climate change is only one side of the discourse, and that ignoring other risks and impacts (such as water security or biodiversity) is done at the banks' own risk.

This can be achieved by ensuring that:

- ▼ **B1: Supervisory bodies and regulators include environmental criteria in supervision and prudential regulation.**
- ▼ **B2: The mandates of central banks and financial market regulators and supervisors explicitly integrate environmental criteria.**
- ▼ **B3: Central banks integrate environmental factors into their own portfolio management.**

37. Bank of England, (2015) 'Breaking the tragedy of the horizon - climate change and financial stability - speech by Mark Carney'. <https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability>

38. Bank for International Settlements, (2020) 'The green swan: central banking and financial stability in the age of climate change'. <https://www.bis.org/publ/othp31.pdf>

39. Bank of England, (2021) 'Tackling climate change for real: the role of central banks – speech by Andrew Bailey'. <https://www.bankofengland.co.uk/speech/2021/june/andrew-bailey-reuters-events-global-responsible-business-2021>

40. European Central Bank, (2021)

41. NGFS, (2020) 'Climate Change and Monetary Policy – Initial takeaways'. https://www.ngfs.net/sites/default/files/media/2020/06/29/climate_change_and_monetary_policy_final.pdf

B1. Supervisory bodies and regulators should include environmental criteria in supervision and prudential regulation.

In April 2021 CDP released its inaugural financial services disclosure report, using disclosure data from 332 financial institutions accounting for a combined US\$109 trillion in assets⁴². The aim was to provide a baseline assessment of how ready the financial sector is for the climate transition. The results were staggering: more than half of the banks, asset owners and asset managers assessed did not align their portfolios with a net-zero carbon world, while only 27% of insurers are aligning their underwriting portfolios.

On the risk side, the considerations are still worrying: the results showed that it is more common for financial institutions to identify climate-related risks they classify as operational risks (41% of financial institutions) than credit risks (35% of financial institutions) and market risks (26% of financial institutions). Yet the credit and market risks identified have a much higher reported potential financial impact - up to US\$1.05 trillion between them. This means that a majority of banks, asset owners, asset managers and insurance companies have not yet identified risks in their financing portfolios, which will be of a greater magnitude than those in their own operations.

Regulators and supervisors should focus on limiting these issues, by ensuring that risks are efficiently reflected and facilitating the alignment of portfolios to a net-zero future.

For the banking sector, the Basel Framework set by the Basel Committee on Banking Supervision (BCBS) should also be reviewed. The BCBS recently launched two analytical reports on the topic, concluding that, while climate risk drivers can be captured in traditional financial risk categories, additional work is needed to connect these to banks' exposures and to reliably estimate such risks⁴³. Potential changes include:

- ▶ Pillar I capital requirements (setting out rules to counter credit, operational and market risk) should be adapted to incorporate the financial risks caused by environmental factors. As shown by CDP analysis, credit and market risks have a much higher reported potential financial impact than operational risk - up to US\$1.05 trillion between the two. However, currently it is more common for FIs to classify climate-related risks as operational risks (41% of institutions analysed), rather than credit risk (35%) or market risks (26%)⁴⁴.
- ▶ Regulatory expectations under Basel Pillar II requirements should integrate environmental criteria. These expectations should include short- and long-term Paris-aligned climate targets, time-bound transition plans and a mechanism to integrate climate criteria into financing decisions.
- ▶ The supervisory elements of Basel III should be bolstered by including environmental-related stress tests and reinforcing risk disclosure and market discipline.

A recent report by the European Banking Authority seems to be going in the direction indicated by this last point, suggesting that: "The supervisory review should also proportionately incorporate ESG risks into the assessment of the credit institution's internal governance and wide controls. In addition, it should proportionately incorporate ESG risks as drivers of financial risks, in particular risks to capital and risks to liquidity and funding. The assessment of these ESG risks should progressively and proportionally be incorporated into the supervisory capital assessment."

The results of the economy-wide climate stress tests run by the European Central Bank also bolster this view, showing that that firms and banks clearly benefit from adopting green policies early on to foster the transition to a zero-carbon economy.

With reference to the scenarios used in these stress tests, in June 2021 the NGFS launched the second iteration of its climate scenarios, including a new Net Zero 2050 scenario⁴⁵. This focuses on limiting global warming to 1.5°C through more stringent climate policies and innovation. CDP believes that this should be the scenario of choice for central banks' stress tests, as it is in line with the latest warnings from the Intergovernmental Panel on Climate Change (IPCC). Around the world, other regulators and supervisors are taking steps in a similar direction: Bank Negara Malaysia (BNM) Governor Nor Shamsiah recently announced that the central bank would soon consider climate issues within the context of capital requirements and supervisory assessments. The governor also reported that BNM has set up a financial stability committee that would put in place a four-year plan for climate stress testing at the counterparty level.

In July 2021 the Financial Stability Board released a Roadmap for assessing climate-related financial risks. The Roadmap contains indications on the "regulatory and supervisory practices and tools that allow authorities to address identified climate-related risks to financial stability in an effective manner"⁴⁶. However, this specifically focuses on financial risks and does not cover other issues such as the development of sustainable finance, and the impacts on people and planet caused by economic activities.

Beyond the banking sector, other financial regulators are taking initiatives to regulate the work of capital market actors.

In 2017, the Indonesian Financial Services Authority (OJK) issued a Regulation (POJK 51/POJK.03/2017) with the objective to promote sustainable economic growth, including progress toward the SDGs⁴⁷. It mandates financial institutions, issuers and listed companies to implement sustainable finance practices, requiring them to develop sustainable finance action plans and submit annual sustainability reports to OJK. The enactment of the regulation required FIs and corporate actors to take a more active role in achieving the national sustainable development agenda, including a wider focus than simply climate.

42. CDP, (2021) 'The Time to Green Finance'. <https://www.cdp.net/en/research/global-reports/financial-services-disclosure-report-2020>

43. Basel Committee on Banking Regulation, (2021) 'Basel Committee publishes analytical reports on climate-related financial risks'. <https://www.bis.org/press/p210414.htm>

44. CDP, (2021) 'The Time to Green Finance'.

45. NGFS, (2021) 'NGFS Climate Scenarios for central banks and supervisors'. https://www.ngfs.net/sites/default/files/media/2021/08/27/ngfs_climate_scenarios_phase2_june2021.pdf

46. FSB, (2021) 'Roadmap for Assessing Climate-related Financial Risks'. <https://www.fsb.org/wp-content/uploads/P070721-2.pdf>

47. CDP, (2021) 'Measuring corporate progress towards Indonesia's sustainability Policies' https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/823/original/SDG_OJK_Policy_Brief_EN.pdf?1626166486

The EU has been particularly active in this area, with its Sustainable Finance Action Plan (both in its original form, and the updated version)⁴⁸.

Financial institutions should be required to set science-based targets and align their lending and investment activities with the Paris Agreement. In April 2021 the Science Based Targets initiative (SBTi) launched its new guidance for financial institutions⁴⁹. The SBTi framework for financial institutions aims to support FIs in their efforts to address climate change by providing resources for science-based target setting. The framework includes target setting methods, criteria, a target setting tool and a guidance document.

One of the most cited obstacles to these developments is the lack of reliable forward-looking data. CDP offers a suite of products that can support FIs in monitoring their portfolios. For example, the CDP Temperature Ratings dataset provides a temperature pathway for over 3,300 global companies, based on emissions reduction targets covering all relevant emissions in a company's value chain⁵⁰.

Lastly, it is important that financial regulators do not limit their focus to climate. Rather, they should include a wider spectrum of environmental issues, such as deforestation, biodiversity and water security. For example, CDP analysis shows that at least US\$2.1 billion of loans made by Chinese financial institutions to Chinese companies in the soy supply chain are exposed to deforestation risks, representing 40.09% of total loans provided to the sector; bond and share issues with value of over US\$7.1 billion are exposed, as are US\$1.55 billion worth of shares. However, none of the financial institutions identified have assessed their capital exposure related to deforestation risks, nor have any developed dedicated policies to address deforestation risks. Only 23% (eight out of 35) have a policy in place to integrate general environmental considerations into financial decision-making⁵¹. More generally, further analysis shows that Chinese financial institutions still lack awareness of the risks of financing forest-risk commodity businesses, showing the real need for clear policy signals and incentive measures⁵².

This is not only limited to China, though: the results of CDP research in South-East Asia show that financial institutions (in this case banks) in the region must step up their activities on deforestation (both in terms of reporting and analytical frameworks), and that regulators should push them to doing so through incisive policies aligned with the management and protection of natural capital⁵³.

All these issues are interrelated, and compound each other, increasing the risk to the financial system. The NGFS is already moving in this direction and, together with the INSPIRE Network, has created a Study Group on Biodiversity and Financial Stability, with the aim to understand the potential implications of biodiversity loss for financial stability. The Study Group has recently published a paper on the topic⁵⁴.

Key policy recommendations

- ▶ The Basel Framework should be adapted to respond to the urgency of the environmental crisis. This would entail adapting Pillar I capital requirements; reviewing regulatory expectations under Pillar II; and bolstering the supervisory element of Basel III.
- ▶ Central banks should run economy-wide stress tests. These should cover at least three scenarios, preferably using those developed by the NGFS (including an 'orderly transition' one). Stress tests may start with a focus on climate but should expand to further environmental topics such as biodiversity when data is sufficiently developed.
- ▶ Financial regulators should not limit their focus to climate, but rather include a wider spectrum of environmental issues, such as deforestation, biodiversity and water security.

48. European Commission, (2021) 'Strategy for financing the transition to a sustainable economy'. https://ec.europa.eu/info/publications/210706-sustainable-finance-strategy_en

49. SBTi, (2021) 'Financial Institutions'. <https://sciencebasedtargets.org/sectors/financial-institutions>

50. CDP, <https://www.cdp.net/en/investor/temperature-ratings>

51. CDP, (2019) 'The neglected risk – Why deforestation risk should matter to Chinese financial institutions'. https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/004/574/original/CDP_China_soy_finance_research_report.pdf?1559310918

52. CDP, (2021) 'Forests and sustainable finance: the role of China'. https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/policy_briefings/documents/000/005/607/original/NICFI_China_Policy_Brief_EN.pdf?1615283393

53. CDP (2020), 'Increasing transparency of banks: the transition to sustainable lending to the forest risk commodity sector'. <https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/316/original/CDP-SEA-banks-pilot-executive-summary.pdf?1596042488>

54. Joint NGFS-INSPIRE Study Group on Biodiversity and Financial Stability, (2021) 'Biodiversity and financial stability: exploring the case for action'. https://www.lse.ac.uk/granthaminstitutewp-content/uploads/2021/06/NGFS-Occasional-Paper_Biodiversity-and-financial-stability_exploring-the-case-for-action-17-06-2021.pdf

B2. The mandates of central banks and financial market regulators and supervisors should explicitly integrate environmental criteria.

Discussions about central banks' role in supporting the climate transition have often hit a wall due to the lack of an explicit reference in the banks' mandates to consider climate and environmental factors in designing and implementing their monetary policies. A 2019 study found that, of 133 central banks sampled, only 12% had explicit sustainability mandates while 29% were mandated to support the government's policy priorities, which in most cases includes sustainability goals⁵⁵. The situation is clearly changing, with governments such as the UK integrating climate change in the mandate of their central banks. This, however, is a slow process and governments and legislators at the national level should be strongly encouraged to update the mandates of their central banks and financial markets regulators and supervisors to reflect the relevance of the climate crisis.

The NGFS is working in this direction, and in 2019 was already arguing that "climate-related risks are a source of financial risk, and it therefore falls squarely within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks⁵⁶."

A stronger recognition of the relevance of climate change to the mandates would strengthen the case for a number of other activities in the field of monetary policy, including (but not limited to) the greening of corporate bond purchase schemes.

On this, the People's Bank of China is ahead of the curve, having a dedicated policy to promote green finance via monetary policy, last highlighted by the Bank's Governor in March 2021. To this end, the Bank aims to encourage financial institutions to extend credit support for controlling carbon emissions. This would be achieved by adopting preferential interest rates and a special re-lending facility of green finance.

Others are catching up, though. In May 2021 the Bank of England opened a consultation on the "Options for greening the Bank of England's Corporate Bond Purchase Scheme (CBPS)". In it, the Bank highlights that, since "there is increasingly persuasive evidence that market prices materially under-estimate the risks and the opportunities associated with the transition to net-zero", a divergence between today's view of market neutrality and how a portfolio might look if prices did properly reflect those factors is created. However, until recently, the Bank did not have the mandate to reflect such mispricing.

In March 2021, however, the Chancellor updated the Bank's Monetary Policy Committee's (MPC's) remit to confirm that the economic strategy of the Government – a 'secondary objective' for the MPC – includes supporting the transition to a net-zero emissions economy. This change requires the Bank to review the makeup of the CBPS.

The European Central Bank (ECB) is also in a phase of development. Since her first days in office, the new Governor Christine Lagarde

has taken a strong stance on the relevance of climate change for the stability of the European economy and financial system. Recently, the ECB committed to adjusting the framework guiding its allocation of corporate bond purchases to incorporate climate change criteria, in line with its mandate. These will include the alignment of issuers with, at a minimum, EU legislation implementing the Paris Agreement through climate change-related metrics or commitments of the issuers to such goals. What is interesting here is the mention of the Bank's mandate. Again, it is clear that having a mandate clearly stating the need to take environmental criteria into consideration would support the move of this kind of programmes towards more sustainable outcomes.

All this being said, climate is not the only emergency facing the financial system. When drafting these new mandates, policymakers should consider that other issues such as deforestation, water scarcity and biodiversity, although less in the public eye at the moment, will have significant repercussions on the stability of the financial system (and strong feedback loops in the real economy) if left unchecked. To support this concept, studies from different sources are increasingly showing the importance of not stopping at climate. A recent report by WWF highlights similar points, stating that current practices of only integrating climate-related risks and impacts in existing mandates of central banks and financial supervisors, and not including risks from nature loss, fall short in ensuring a sustainable financial system⁵⁷. A study carried out by the UCL Institute for Innovation and Public Purpose shows that over 40% of the ECB's corporate bond portfolio is potentially exposed to high or very high dependencies upon ecosystem services⁵⁸. A mandate expressly integrating nature (among other factors) would allow the Bank to more easily sway its large-scale asset purchase programme to account for these risks, without having to interpret its secondary mandate in this sense, a position that not everyone embraces.

Key policy recommendations

- ▶ Governments should explicitly integrate environmental criteria in the mandate of central banks and financial markets regulators and supervisors.
- ▶ New mandates should not be limited to climate but include other sustainability considerations such as nature, water and biodiversity. This would allow a further expansion of central banks' operations into these areas, which are increasingly being recognized as presenting systemic risks on par with those of climate change.

55. Simon Dikau & Ulrich Volz, 2019. "Central Bank Mandates, Sustainability Objectives and the Promotion of Green Finance," Working Papers 222, Department of Economics, SOAS, University of London, UK.

56. NGFS 'A call for action Climate change as a source of financial risk'

57. WWF, (2021) 'Nature's next stewards. Why central bankers need to take action on biodiversity risks'. https://wwf.panda.org/wwf_news/?3183441/Central-banks-and-financial-supervisors-urgently-need-to-act-on-nature-related-risk-warns-new-WWF-report

58. UCL IIPP, (2021) 'Quantitative easing and nature loss: exploring nature-related financial risks and impacts in the European Central Bank's corporate bond portfolio'. https://www.ucl.ac.uk/bartlett/public-purpose/sites/bartlett_public_purpose/files/quantitative_easing_and_nature_loss_23_july.pdf

B3. Central banks should integrate environmental factors into their own portfolio management.

In addition to the more traditional instruments of monetary policy, central banks have a further role to play in the ecological transition through the management of their own investment portfolios. In this case, the focus is not on the banks' policy portfolios, but on their own portfolios (aiming to generate returns) and their pension portfolios.

This also directly links to the recommendation above: adapting the mandate of central banks would free up their option to engage with responsible investment, thus allowing for a wider range of investment options and supporting the development of green finance instruments.

The adoption of Sustainable and Responsible Investment (SRI) practices by central banks can help to demonstrate this approach to other investors and mitigate material ESG risks as well as reputational risks. Central banks can use the power of their example to drive the market towards more sustainable practices.

Indeed, one of the five recommendations advanced by the NGFS in its original paper focused on integrating sustainability factors into central banks' own-portfolio management.

Central banks have already been taking steps in this direction. Just recently, Eurosystem central banks have agreed to a common stance on climate-related investments in non-monetary policy portfolios⁵⁹. In 2019, the Banque de France (BdF) started publishing an annual Responsible Investment (RI) Report, with a focus on its own funds and pension portfolios. Interestingly, in March 2019 the Nederlandsche Bank (DNB) performed a climate stress test on its own balance sheet, based on the methodological framework internally developed by its Financial Stability department for supervisory purposes⁶⁰.

So, why should central banks take steps to align their own-portfolio management to address environmental issues?

Generally, the NGFS identifies two high-level SRI objectives for central bank portfolios: (i) a financial SRI objective which aims to address the impact of climate-related risks and/or ESG-related risks on the portfolio and (ii) an extra-financial SRI objective which aims to address the impact of the portfolio on the environment and society, alongside financial returns. It is however important to note that these objectives are increasingly likely to overlap as adaptation and mitigation policies evolve in response to climate change, reflecting the concept of dynamic materiality.

Currently, negative screening and green bond investments are the most prominent strategies adopted by central banks in managing their own portfolios. However, the range of SRI practices is not limited to these. Other potential strategies include best-in-class⁶¹, ESG integration, and impact investing⁶². Voting and engagement is an important aspect of central banks' SRI approach. This is mostly due to the banks' activities being an example for the market.

Although mostly central banks seem to be favouring proxy voting to direct engagement, with some having adopted proxy voting strategies, direct engagement can have strong effects on corporate behaviour. It could also reduce the reputational risk associated with certain investments. The results of the engagement process should be carefully evaluated, and actions should be taken in case the process did not yield the results agreed upon between the bank and the invested company. The escalation 'ladder' should move from engagement with the issuers to tilting away from the issuer's assets, and only ultimately to divestment of holdings in the event of failure to comply with the agreed-upon time-bound, action-specific roadmap. Divestment can always be reversed if the company subsequently demonstrates that it is complying with the roadmap and therefore should not be viewed as a permanent position. The engagement process could borrow from the five phases described in 'Let's Discuss Climate: The essential guide to bank-client engagement' developed by the University of Cambridge Institute for Sustainability Leadership (CISL) and members of the Banking Environment Initiative⁶³.

Key policy recommendations

- ▶ Central banks should commit to net-zero targets and adopt a transition plan to achieve them.
- ▶ In managing their own portfolios, central banks should consider employing a set of instruments including exclusions, best-in-class approach, ESG integration and effective stewardship, and cover the whole spectrum of ESG.
- ▶ Divestment should be considered as an option but kept as a last resource. Provided that this does not undermine the bank's independence or lead to a conflict of interests, direct engagement with invested companies should be preferred. Divestment decisions should be reversible pending improvement in the companies' performance against specific metrics and targets.

59. ECB, (2021) 'Eurosystem agrees on common stance for climate change-related sustainable investments in non-monetary policy portfolios' https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210204_1~a720bc4f03.en.html

60. DNB, (2019) 'An energy transition risk stress test for the financial system of the Netherlands'. https://www.dnb.nl/media/pdnpdalc/201810_nr_7_-2018-_an_energy_transition_risk_stress_test_for_the_financial_system_of_the_netherlands.pdf

61. NGFS defines best-in-class as "a broad strategy that involves either positive screening or index-adjusted weighting, also referred to as ESG tilting, by comparing the ESG characteristics of a firm to those of its peers."

62. According to GIIIN, impact investing is "a strategy that aims to generate an intentional and quantifiable positive impact alongside financial returns".

63. CISL, (2021) 'Let's Discuss Climate: The essential guide to bank-client engagement'. <https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/lets-discuss-climate-the-essential-guide-to-bank-client-engagement>

C. Align public finances and fiscal policies to support environmental sustainability.

In addition to directly contributing to the achievement of countries' net-zero targets, public spending and fiscal policies should aim to support and encourage private investment towards environmentally positive activities. Policy measures such as tax breaks, de-risking guarantees and specific regulatory requirements would create confidence in the private sector, and in turn direct and attract flows of capital and investment.

Policymakers should clearly outline their plans to deploy these policy instruments. In the wake of the COVID-19 crisis, and against the backdrop of the investments needed for a recovery, these instruments include redirecting existing fossil fuel subsidies to sustainable activities, introducing a price on carbon, and adopting green procurement guidelines for public activities, in order to increase the market for sustainable goods and services. Public bodies should also set an example, by ensuring that state-owned companies do not harm the environment in their operations, and that Public Pension Funds (PPFs) and Sovereign Wealth Funds (SWFs) redirect their investments away from environmentally negative businesses and projects, towards environmentally positive ones.

This can be achieved by ensuring that:

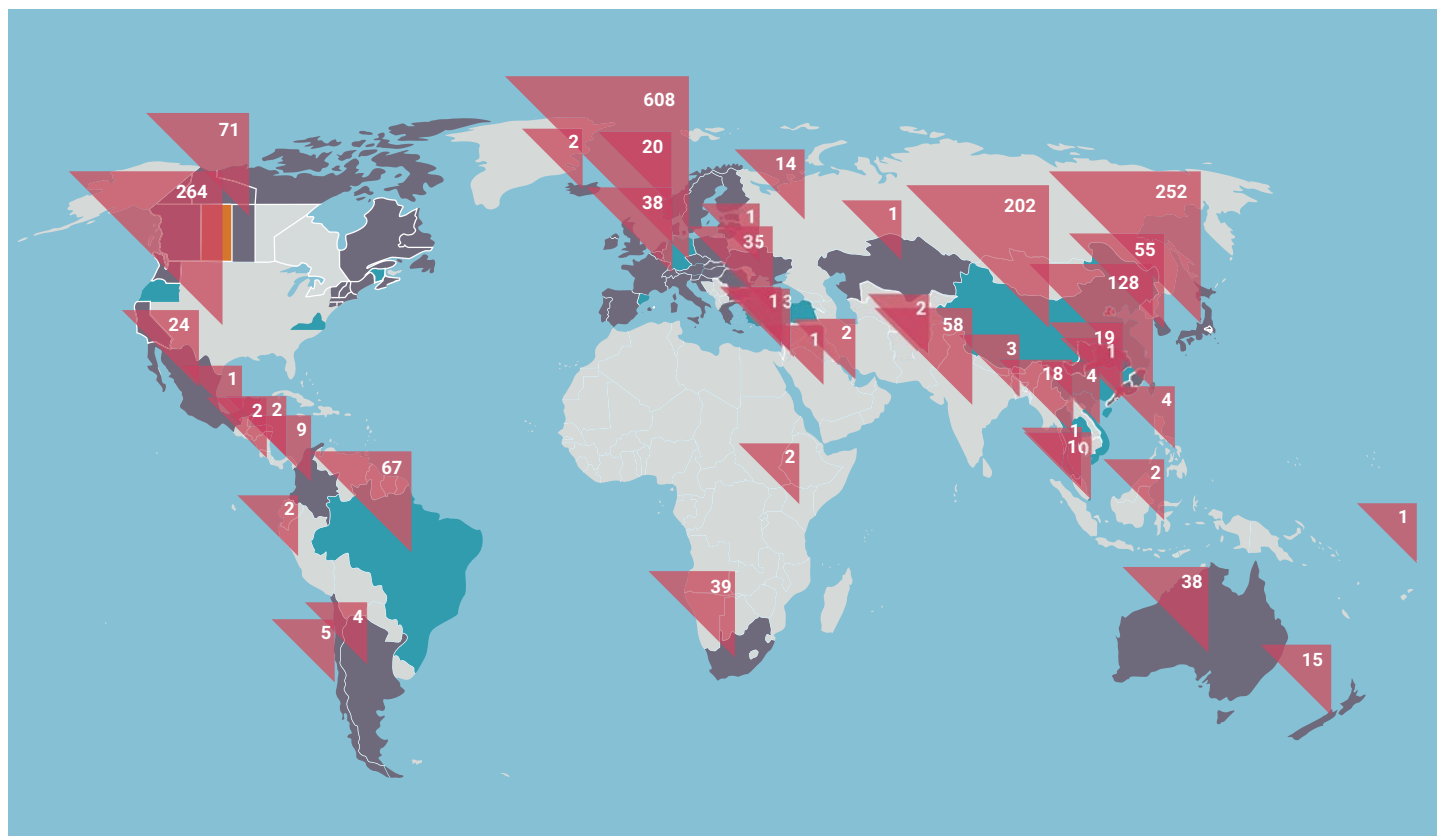
- ▼ **C1: A price on carbon is set, in line with the recommendations of the High-Level Commission on Carbon Prices.**
- ▼ **C2: COVID-19 economic recovery addresses environmental sustainability.**
- ▼ **C3: State-owned companies disclose their impacts and their business model takes environmental considerations into account.**
- ▼ **C4: Environmental factors are integrated into sovereign wealth/pension funds risk management processes.**

C1. A price on carbon must be set, in line with the recommendations of the High-Level Commission on Carbon Prices.

Carbon pricing has emerged as a key policy mechanism to curb and mitigate the dangerous impacts of greenhouse gas pollution and drive investments towards cleaner, more efficient alternatives.

Carbon pricing can be introduced either by developing an Emissions Trading System (ETS)⁶⁴, or through a carbon tax⁶⁵. Other indirect ways of pricing carbon include fuel taxes, removing fossil fuel subsidies, and incorporating a 'social cost of carbon' in regulations⁶⁶. The topic is discussed in this section because, whatever the means of implementation, carbon pricing can be employed by governments to encourage private investments in green economic activities.

As shown by CDP's Carbon Pricing Connect service, the number of jurisdictions with carbon pricing policies is rising every year, with over 60 carbon pricing initiatives in place or scheduled by governments and regulators in 2021⁶⁷. There is growing consensus that carbon pricing is a very flexible and cost-effective approach to mitigating the impacts of climate change. Momentum is expected to continue as the international community acts to implement the Paris Agreement, especially in consideration of the provisions of Article 6 of the Agreement, supporting the development of international carbon markets.



The visualisation above, sourced from the World Bank State and Trends of Carbon Pricing Report, overlays carbon pricing regulations with the number of companies disclosing the adoption of an internal carbon price through CDP (showing that there is widespread adoption of Internal Carbon Prices around the world).

64. Emissions Trading Systems (ETS), also known as cap-and-trade (CaT), establish a limit (cap) on emissions within a specific jurisdiction which is reduced over time thereby reducing overall emissions. This is a market-based approach allowing companies to buy and sell allowances (trade) equivalent to the total emissions cap, with a financial incentive for companies to reduce emissions. Emissions Trading Systems provide certainty about future emissions, but not about the price of those emissions, which will inevitably vary over time. These schemes can apply across various levels. In 2020, the ETS most often disclosed to CDP was the EU ETS. Other common schemes reported to CDP included the Tokyo CaT and the Korean national ETS.

65. Carbon taxes are a direct cost levied by governments who set a price that companies must pay for each ton of GHG emissions emitted. A carbon tax differs from an ETS in that it provides a higher level of certainty about cost but less certainty about the level of emission reductions that will be achieved. The most common carbon tax as disclosed to CDP is the Japan national carbon tax with over 170 companies reporting to CDP that they are subject to this regulation. Two other frequently identified carbon taxes are the British Columbia carbon tax in Canada and the South Africa carbon tax, which regulate more than 50 and 45 of the disclosing companies respectively.

66. World Bank, 'Pricing Carbon'. <https://www.worldbank.org/en/programs/pricing-carbon>

67. CDP, (2021) 'Carbon Pricing Connect'. <https://www.cdp.net/en/climate/carbon-pricing/carbon-pricing-connect>

The consensus is that global carbon pricing will be widely adopted, and carbon prices will gradually be increased. Therefore, any stragglers will be forced to adopt carbon pricing through a mechanism of border price adjustments on carbon-intensive products from countries that don't have a sufficiently high carbon price.

After the 2017 conclusion by the High-Level Commission on Carbon Prices that a well-below 2°C pathway would require carbon-pricing levels of US\$40-80 per tonne by 2020 and US\$50-\$100 per tonne by 2030 across major economies; in 2021 the OECD reviewed these. They suggested a central estimate of US\$147 by 2030 for carbon-pricing to actually facilitate net-zero emissions by 2050⁶⁸.

In June 2021, the International Monetary Fund (IMF) put a proposal to develop an internal carbon price floor among large emitters⁶⁹. The following month, at the G20 Venice Climate Conference, several actors came out strongly in favor of introducing carbon prices, including Yale University Prof. William Nordhaus, IMF Director Kristalina Georgieva, and BIS General Manager Agustín Carstens⁷⁰. Just the day before, the finance ministers and central bank governors of the G20 issued a communiqué that included an endorsement of carbon pricing "if appropriate"⁷¹. This was the first time the G20 collectively expressed an endorsement for this policy.

Recent CDP analysis shows that governments are lagging behind companies in the implementation of carbon prices⁷². In 2020, over 5,900 companies reported internal carbon pricing data to CDP, an 80% increase over the last five years. Moreover, nearly half (226) of the world's 500 biggest companies by market capitalization are now putting a price on carbon or planning to do so within the next two years.

Putting a price on carbon emissions is always a challenging policy issue as it raises the price of energy. Carbon pricing alone is insufficient to incent enough clean energy innovation to abate global warming in a timely fashion. Still, it is an essential complement to government incentives to change behaviour⁷³.

The discussions about the advantages of carbon prices over other regulatory approaches to achieve net-zero rest on three main points:

1. Carbon prices are quicker and less expensive to implement.
2. The revenues raised can be used to respond to concerns about the regressive impacts of carbon taxes.
3. If implemented in a sufficiently strong and broad manner, carbon pricing provides incentives for technological development.

Carbon pricing may also work as an incentive to induce innovation in low carbon technologies. Especially if combined with the elimination of fossil fuel subsidies, putting a price on carbon emissions further induces profit-motivated enterprises to divest from fossil fuels and to invest in cleantech innovation. The World Bank agrees with this point, arguing that "carbon price also stimulates clean technology and market innovation, fuelling new, low-carbon drivers of economic growth"⁷⁴.

Key policy recommendations

- ▼ Governments should set internationally aligned carbon prices, at least at the level set by the High-Level Commission on Carbon Prices.
- ▼ Carbon pricing mechanisms should not just focus on the price that is set. Just as much attention should be given to what percentage of the economy's emissions are subject to an adequate level of carbon pricing.

68. OECD, (2021) 'Effective carbon rates 2021'. https://www.oecd-ilibrary.org/taxation/effective-carbon-rates-2021_0e8e24f5-en

69. IMF, (2021) 'Proposal for an international carbon price floor among large emitters'. <https://www.imf.org/en/Publications/staff-climate-notes/Issues/2021/06/15/Proposal-for-an-International-Carbon-Price-Floor-Among-Large-Emitters-460468>

70. Financial Times (2021), 'G20 ministers endorse carbon pricing to help tackle climate change'. <https://www.ft.com/content/9cd74b8f-4d6c-4cf8-a249-87c0acb1a828>

71. Italian G20 Presidency, (2021) 'Second G20 Finance Ministers and Central Bank Governors meeting – Communiqué'. <https://www.g20.org/wp-content/uploads/2021/04/Communique-Sec-ond-G20-Finance-Ministers-and-Central-Bank-Governors-Meeting-7-April-2021.pdf>

72. CDP, (2021) 'Putting a Price on Carbon'. https://6f6fcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/651/original/CDP_Global_Carbon_Price_report_2021.pdf?1618938446

73. Peter Van Dijk and others, (2021) 'How tax incentives can assist Canada to become a competitive clean technology country'. <https://globalriskinstitute.org/publications/tax-incentives-to-fight-climate-change/>

74. The World Bank, 'Pricing Carbon'. <https://www.worldbank.org/en/programs/pricing-carbon>

C2. COVID-19 economic recovery must address environmental sustainability.

The COVID-19 pandemic represents a turning point in the history of our society. On the one hand, it is an immense tragedy that caused untold suffering and will have frightening and long-lasting repercussions on the life and economy of every country on earth. On the other hand, it represents the opportunity to click the reset button on the world economy and the financial system and restart it in a way that is more considerate of our relationship with the environment and prepares us to face the challenges that lay ahead.

Unfortunately, there are signs that the efforts to recover from the economic shock of the pandemic are not meaningfully focusing on green activities. For example, in 2021 CDP Europe conducted a study on the recovery in Italy. The results were not encouraging, showing that under a business as usual scenario, Italian companies would currently be on a 2.0°C to 2.8°C scenario⁷⁵.

As previously highlighted by CDP⁷⁶, in designing and implementing COVID-19 recovery packages, policymakers should keep a set of key considerations in sight. Policymakers and financial institutions should monitor and measure private spending during and after the crisis, ensuring that companies do not use the public money received for distribution to their shareholders. Companies should implement measures in line with, or investments in technologies that will help deliver on, the Paris Agreement and the Sustainable Development Goals. Recipients of these funds should have to clearly account for which areas they were, are and will be allocated to.

In addition to publicly disclosing on their environmental performance, companies receiving public support should publicly commit to a net-zero 2050 strategy, setting short- and medium-term targets that allow to monitor their performance. This should be done following reliable methodologies such as that created by the SBTi. In addition, corporate pension plans should be aligned with the Paris Agreement's well-below 2°C goal.

The economic recovery from the COVID-19 pandemic must serve a dual purpose: steer the global economy towards carbon-neutrality in as short a time as possible, but also help reduce the increasing inequality in our economic and financial system, including considerations of economic equity and of the 'just transition'.

Key policy recommendations

- ▶ Public money should serve the long-term public good. Companies receiving public funds as a result of the COVID-19 crisis should be required to develop measures supportive of the goals of the Paris Agreement and the UN Sustainable Development Goals. These include disclosing on their environmental performance all along the value chain, ensuring that board members develop sufficient knowledge of environmental issues, developing time-bound transition plans complete with interim targets, and presenting these plans to AGMs for a shareholder vote.
- ▶ Recovery measures should be put in place to drive innovation and competitiveness. They should specifically support companies, technologies and industries that need to be supported by public funds if the countries' net-zero targets are to be achieved.
- ▶ Ensure the resilience of the financial system and the real economy: governments must assess how to improve the capacities of the financial system and companies to cope with crises, and how to interact with the private sector to ensure the resilience and flexibility of supply chains and to produce in a more sustainable way.
- ▶ Public investment should unlock private finance. According to recent studies, between US\$3.1 trillion and US\$5.8 trillion per year is needed until 2050 to achieve net-zero⁷⁷. Public spending should spur demand and encourage more private finance.
- ▶ COVID-19 recovery packages should incorporate the principles of the just transition. Investments should focus on the people and regions most impacted by the crisis and the transition to a zero-carbon, resource-neutral economy and society.

75. CDP Europe, (2021) 'It's getting hot in here – the green recovery at risk'.

76. CDP Europe, (2020) 'CDP data and insight to support European policy measures towards a Green Recovery from the Covid-19 crisis'. https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d-987d7c03fcdd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/003/435/original/CDP_data_and_insight_for_Green_Recovery.pdf

77. Bruegel, (2021) 'How much investment do we need to reach Net Zero?' <https://www.bruegel.org/2021/08/how-much-investment-do-we-need-to-reach-net-zero/>

C3. State-owned companies disclose their impacts and their business model must take environmental considerations into account.

According to the IMF, state-owned enterprises' assets are worth US\$45 trillion, equivalent to half of global GDP⁷⁸. In many jurisdictions, state-owned companies maintain a relevant role in the development of national economies, in many cases being major employers and taxpayers. The definition itself of a 'state-owned company' is complicated, and in many cases it is difficult to ascertain with certainty what level of influence a government can have on companies it nominally controls or has an interest in. For example, mechanisms such as golden shares (awarding the state special voting privileges) can allow the state to hold only a direct minority shareholding in a company, while still exercising significant control over its strategic decisions. Other mechanisms, such as indirect ownership (government owning stakes in public banks, public pensions funds, or sovereign wealth funds, that in turn own shares in a company) can provide similar results. In any case, where a government holds a significant control over a company's strategic decisions, it should aim at enhancing its environmental performance. This would not only help the economy as a whole but would support the government in achieving its net-zero ambitions, where these have been set.

Recent analysis by CDP, together with the World Benchmarking Alliance⁷⁹, shows that the environmental record of state-owned companies in the oil & gas sector, is not a positive one. This is particularly worrying, considering that companies with state ownership account for the majority of current and expected emissions in the sector.

Activities in this area should follow what has been suggested above regarding private companies, including target-setting, environmental disclosure of risks, opportunities and impacts, corporate governance arrangements, and others.

One of the main guidance documents in the area of governance of this kind of companies, the OECD Guidelines on State-Owned Enterprises⁸⁰, already contains reference to relevant topics such as environmental disclosure and risk management. However, these guidelines were published in 2015 and reflect a view of these issues that is by now mostly outdated. For example, no reference is made to net-zero commitments and transition plans. The Guidelines, and any similar document, should be updated to reflect the latest developments in the area of corporate sustainability.

Some actions towards regulating state-owned enterprises on their environmental performance are being taken, albeit indirectly. This is mostly achieved through regulations imposing environmental (mostly TCFD-aligned) disclosure requirements. For example, the recently proposed updated UK FCA rules extending TCFD-aligned mandatory disclosure to all listed companies contains a specific provision requiring "sovereign controlled companies" to report in the same way as other enterprises⁸¹.

Public banks are in a particularly good position to help support the transition to a low-carbon economy. In addition to their direct investments, public banks can help mobilize private sector investments by sharing risk, showing new investment opportunities, and increasing technical capacity. The Public Bank Climate Tracker Matrix published by E3G is a useful tool in tracking various public banks' (including Multilateral Development Banks) trajectory towards the goals of the Paris Agreement⁸². This tool should be developed to include other topical environmental issues, such as biodiversity and water.

An example of this is the work of the European Investment Banks (EIB). The EIB Group recently adopted a new Climate Bank Roadmap⁸³, committing it to align all its financing activities with the Paris Agreement from the start of 2021, supporting €1 trillion of investment for climate action and environmental sustainability by 2030, and dedicating more than half of its annual financing to green investments by 2025. As part of this pledge, in June 2021 the EIB Group became the first multilateral development bank to sign up to CDP as an investor signatory⁸⁴.

Moreover, the recent launch of the UK Infrastructure Bank has been hailed as an opportunity to support the UK economy in achieving its climate goals.

Key policy recommendations

- ▶ Countries should require state-owned companies to report their environmental risks, opportunities and impacts, at least in line with internationally recognized disclosure frameworks such as the TCFD.
- ▶ Countries should ensure that the boards of state-owned companies maintain oversight over environmental issues. This includes ensuring that there is enough capability on the board, and that board members' compensation is linked to environmental issues.
- ▶ International guidance on state-owned companies should be updated to reflect the latest developments in sustainable corporate governance.
- ▶ Public banks should support governments' climate goals by providing direct investment in environmentally friendly activities, together with supporting the shift of private capital flows towards sustainable projects.

78. International Monetary Fund, 'State-Owned Enterprises in the Time of COVID-19' (May 2020). <https://blogs.imf.org/2020/05/07/state-owned-enterprises-in-the-time-of-covid-19/>

79. World Benchmarking Alliance, (2021) 'Oil and Gas Benchmark'. <https://www.worldbenchmarkingalliance.org/publication/oil-and-gas/>

80. OECD, (2015) 'OECD Guidelines on State-Owned Enterprises'. <https://www.oecd-ilibrary.org/docserver/9789264244160-en.pdf?expires=1626814787&id=id&accname=guest&checksum=DADA-FA05E1B3823D6B78B87B15955494>

81. UK FCA, (2021) 'Enhancing climate-related disclosures by standard listed companies and seeking views on ESG topics in capital markets – Consultation paper 21/18'. <https://www.fca.org.uk/publication/consultation/cp21-18.pdf>

82. E3G (2021) 'E3G Public Bank Climate Tracker Matrix'. <https://www.e3g.org/matrix/>

83. EIB, (2020) 'Climate Finance Roadmap'. <https://www.eib.org/en/press/all/2020-307-eu-member-states-approve-eib-group-climate-bank-roadmap-2021-2025>

84. EIB, (2021) 'CDP welcomes the EIB Group as an investor signatory'. <https://www.eib.org/en/press/all/2021-182-cdp-welcomes-the-european-investment-bank-group-as-an-investor-signatory>

C4. Environmental factors must be integrated into sovereign wealth/pension funds risk management processes.

Public Pension Funds (PPFs) and Sovereign Wealth Funds (SWFs) have an important role to play in ensuring that environmental factors are fully integrated in the financial system⁸⁵. On the one hand, as long-term investors' ESG factors constitute particularly material risks for the sustainability of their investments. On the other hand, as 'universal owners' they are in the perfect position to drive the inclusion of these factors along their investment value chain⁸⁶. Moreover, their sheer size means that an adoption of environmentally-minded practices in these actors' operations would shift a relevant amount of funds towards achieving the goals of the Paris Agreement, the Sustainable Development Goals and the upcoming Global Biodiversity Framework. Indeed, a 2020 study by Deloitte on the landscape of sovereign investors shows that at the time these were holding up to US\$15,272 billion in assets under management. Their geographical distribution is of particular interest, too. While some very important regions are currently highly underrepresented (Africa, for example, did not have any PPFs yet), the expectation is that Latin America will see an increase in its Public Pension Funds, while an increasing number of commodity-driven SWFs are expected to be established in emerging markets, especially in sub-Saharan Africa. This provides the perfect opportunity to create institutions that, right from their birth, have strong environmental characteristics.

Initiatives are in place to ensure that these actors leverage their position to support environmental goals. In particular, the One Planet Sovereign Wealth Fund Working Group (OPSWF) was established at the 2017 One World Summit with the goal of accelerating efforts to integrate financial risks and opportunities related to climate change in the management of large, long-term asset pools⁸⁷. On July 6, 2018, the six OPSWF founding members published a voluntary framework ('the Framework') outlining principles for SWFs to systematically integrate climate change into their decision-making and how to collectively support global climate action. Albeit voluntary and currently only focused on climate, initiatives such as this can represent a first step for PPFs and SWFs to create the necessary capabilities and processes to integrate a wider range of environmental topics into their investment decisions.

However, studies show that although awareness of the risks and opportunities of climate change is growing, most SWFs are still failing to take meaningful action in addressing these risks, and much less in managing their impacts on climate and the environment at large.

A recent report by the International Forum of Sovereign Wealth Funds (IFSWS) highlighted this situation. Although 88% of the funds surveyed claimed to incorporate climate change risks in their investment processes "in some way", according to the study there were "sharp differences" in the approaches taken. Moreover, only eight SWFs from a group of 34 have more than 10% of their portfolios invested in climate-related strategies.

The fact that just 14% of the respondents had made a divestment based on environmental considerations may be explained by the high reliance of this kind of actors on investments in natural resources (according to data from the Financial Times, around two-thirds of the revenues of SWFs are derived from oil and natural gas production)⁸⁸.

However, a number of SWFs and pension funds have taken steps towards reducing their exposure to carbon-intensive activities. For example, Norway's Sovereign Wealth Fund has been at the forefront of this movement. In May 2020, it announced the exclusion of five global coal companies based on an assessment against a set of new stricter coal criteria, "unacceptable emissions" and damages to UNESCO's world heritage sites⁸⁹. In the United States, in January 2018 the New York State Common Retirement Fund (the third largest public pension fund in the US) announced plans to divest fossil fuel investments over the next five years⁹⁰.

On the other hand, more than half of responders reported undertaking climate-related engagement with portfolio companies. In CDP's view divestment is not necessarily needed, as active engagement may often be a better choice. However, engagement should integrate specific time-bound targets and goals. CDP's Climate Change questionnaire for Financial Services firms⁹¹, together with the Technical Note on Portfolio Impact Metrics⁹², can provide useful guidance on how this engagement should be carried out.

Key policy recommendations

- ▶ Public Pension Funds and Sovereign Wealth Funds in all the list should sign up to and implement the recommendations and principles of international environmental initiatives, such as the One World Sovereign Funds Forum, the TCFD, or the Principles for Responsible Investment, and align their investments accordingly.
- ▶ Public Pension Funds and SWFs should disclose the environmental impacts of their investments, in line with internationally recognized frameworks such as the TCFD. These should include issues going beyond climate, encompassing the wider spectrum of environmental issues, such as nature-related risks, opportunities, and impacts.
- ▶ Public Pension Funds and SWFs should set science-based, short-, medium- and long-term net-zero targets.
- ▶ Public Pension Funds and SWFs should engage with their invested companies to ensure that their operations integrate sustainability considerations.

85. UNCTAD, (2020) 'How public pension and sovereign wealth funds mainstream sustainability'. <https://www.eib.org/en/press/all/2020-307-eu-member-states-approve-eib-group-climate-bank-roadmap-2021-2025>.

86. In the setting of sustainable investment, universal owners have been defined as 'investors who own the externalities associated with their portfolio companies, their response being to manage the value AND utility of members' wealth by addressing financial and non-financial considerations with both "within-the-system and change-the-system" actions.' (Thinking Ahead Institute Asset Owner 100 Survey 2018. <https://www.thinkingaheadinstitute.org/research-papers/the-thinking-ahead-institutes-asset-owner-100-2/>). More in general, universal owners are characterised by their large shareholdings in companies across a huge range of sectors and markets.

87. One Planet Sovereign Wealth Funds. <https://oneplanetwealth.org/>

88. Financial Times, (2021) 'Sovereign wealth funds sidestep climate change threat'. <https://www.ft.com/content/aec5d879-eca2-404c-942b-52e02312022d>

89. Norges Bank, (2020) 'Exclusion decisions and decisions to revoke exclusions'. <https://www.nbim.no/en/the-fund/news-list/2020/exclusion-decisions-and-decisions-to-revoke-exclusion/>

90. NRDC (2020) 'New York Announces Historic Fossil Fuel Divestment Plan'. <https://www.nrdc.org/experts/rich-schrader/new-york-announces-historic-fossil-fuel-divestment-plan>

91. CDP, 'Climate Change Questionnaire 2021'. <https://www.cdp.net/en/guidance/guidance-for-companies>

92. CDP, (2021) 'CDP Technical Note on Portfolio Impact Metrics for Financial Services Sector Companies'. https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/002/428/original/CDP_Technical_Note_on_Portfolio_Impact_Metrics_for_Financial_Services_Sector_Companies.pdf?1610122108

CONCLUSION: DECALOGUE FOR A SUSTAINABLE FINANCIAL SYSTEM

Policymakers at all levels have a very active role in encouraging the development of a sustainable financial system. There is a lot to do, and the window of opportunity is incredibly narrow, but we won't get a better chance to change our financial system to be ready for the challenges of the future.

For this reason, CDP has prepared a "Decalogue for a Sustainable Financial System", ten priority actions that policymakers and financial regulators should pursue these policy initiatives ensuring the sustainability and resilience of the financial system.

The financial system should be transformed so that:

- 1. Policymakers and financial market regulators adopt mandatory disclosure requirements for capital market actors and companies.**
- 2. Financial market regulators develop internationally aligned taxonomies.**
- 3. Corporate governance codes and regulations are designed to account for environmental factors.**
- 4. Supervisory bodies and regulators include environmental criteria in supervision and prudential regulation.**
- 5. The mandates of central banks and financial market regulators and supervisors explicitly integrate environmental criteria.**
- 6. Central banks integrate environmental factors into their own portfolio management.**
- 7. A price on carbon is set, in line with the recommendations of the High-Level Commission on Carbon Prices.**
- 8. COVID-19 economic recovery addresses environmental sustainability.**
- 9. State owned companies disclose their impacts and their business model takes environmental considerations into account.**
- 10. Environmental factors are integrated into sovereign wealth/pension funds risk management processes.**

It is important to highlight that these policy initiatives are not an exhaustive list to ensure the development of a more sustainable and fairer financial system. Policymakers should:

▼ Take a holistic environmental approach.

Although tackling climate is fundamental, as the most immediately visible of the current environmental crises, this is not enough. Policy actions should adopt a holistic approach to the environment, considering issues such as water, forests and biodiversity, among others.

▼ Address both risks and impacts.

Policymakers and regulators must go beyond a simple analysis of risks and opportunities and take into account the impacts of economic activities on people and planet. Only in this way can they support the allocation of capital to sectors and activities that support the transition.

▼ Facilitate and speed up the ecological transition.

In all sectors, CDP analysis consistently shows that opportunities created by transition-aligned activities vastly outweigh the cost of the actions that need to be taken to seize them. Moreover, the cost of inaction is many times higher than that of acting. For financial institutions alone, the opportunities of financing the transition to a low carbon, deforestation-free, water-secure future amount to US\$2.9 trillion. Further analysis shows that, for the whole economy, water-related opportunities amount to US\$711 billion, with the costs of inaction being over five times higher than the costs of action⁹³. The same can be said for forest-related activities. Here, the financial impact of risks from deforestation was estimated at US\$53.1 billion while the cost of responding to all risks was just over US\$6.6 billion⁹⁴.

This should be achieved by engaging with private sector and capital markets actors to facilitate the shift of private capital toward sustainable activities. This should be done through a mix of regulatory requirements, but also by highlighting the opportunities that the transition presents.

93. CDP (2021) 'A wave of change: the role of companies in building a water-secure world'. <https://www.cdp.net/en/research/global-reports/global-water-report-2020>

94. CDP, (2021) 'The collective effort to end deforestation'. https://6f6fcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssf.cf3.rackcdn.com/cms/reports/documents/000/005/630/original/CDP_Forests_analysis_report_2020.pdf?1616334771

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About CDP

CDP is a global non-profit that drives companies and governments to reduce their greenhouse gas emissions, safeguard water resources and protect forests. Voted number one climate research provider by investors and working with institutional investors with assets of over US\$106 trillion, we leverage investor and buyer power to motivate companies to disclose and manage their environmental impacts. Over 9,600 companies with over 50% of global market capitalization disclosed environmental data through CDP in 2020. This is in addition to the hundreds of cities, states and regions who disclosed, making CDP's platform one of the richest sources of information globally on how companies and governments are driving environmental change. CDP is a founding member of the We Mean Business Coalition.

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