
Net Zero Finance Tracker Methodology – 2.0

November 2023



CLIMATE
POLICY
INITIATIVE

AUTHORS

Valerio Micale

Nikita Marini

Jake Connolly

Pedro de Aragão Fernandes

ACKNOWLEDGMENTS

The authors wish to thank the following people for their review and guidance, listed in alphabetical order: Angela Pastor, Baysa Naran, Barbara Buchner, Bella Tonkonogy, Caroline Dreyer, Dharshan Wignarajah, Josh Wheeling, Kirsty Taylor, Lea Faucheux, Luke Patience, Nicole Pinko, Matthew Solomon, Rob Kahn, Shengzi Li, Sherin Tan, and Tinglu Zhang.

We would also like to thank the following for their helpful comments, listed by organization in alphabetical order: Alex Clark (Asset Impact), Amy Owens (CarbonTracker), Farheen Altaf and Manveer Gill (CDP), Holly Li (Ceres), Kenix Lee (CoLC), Ronan Hodge (GFANZ), Daan Van Acker (InfluenceMap), Andrew Wells, Mark Connelly, Martin Stavenhagen (PRI), Pdraig Oliver (UNFCCC), Louis Worthington (UK CCC).

This work would have not been possible without the support of the Hewlett Foundation.

ABOUT CLIMATE POLICY INITIATIVE

Climate Policy Initiative (CPI) is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, India, Indonesia, the United Kingdom, and the United States.

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DESCRIPTORS

KEYWORDS

Net Zero, Paris Agreement, Sustainable Finance, Integrity

RELATED CPI WORKS

Net Zero Finance Tracker (UK Beta Version)

[Framework for Sustainable Finance Integrity](#)

[Paris Misaligned? An Assessment of Global Power Sector Investment](#)

[Global Landscape of Climate Finance](#)

CONTACT

Valerio Micale: valerio.micale@cpiglobal.org

RECOMMENDED CITATION

Micale V., N. Marini, J. Connolly, P. Fernandes. 2023. "Net Zero Finance Tracker Methodology – 2.0." Climate Policy Initiative, London. Available at: <https://netzerofinancetracker.climatepolicyinitiative.org>

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1. GLOSSARY AND DEFINITIONS OF TERMS

Term	Definition
Carbon neutrality or net zero	Refers to the balance between the amount of greenhouse gases (GHGs) emitted into the atmosphere and the amount removed or offset (e.g., through reforestation or carbon capture), resulting in no net increase in atmospheric GHG concentrations.
Divestment from high-emissions activities	The act of selling or disposing of financial assets, such as stocks, bonds, or investments, in companies or industries involved in activities harmful to the climate (e.g., fossil fuels). It is often used as a strategy by organizations to reduce their exposure to risks deriving from potential policy responses to climate change. Divestment can also have an impact on the real economy by affecting cost of capital for carbon-intensive activities, adding social pressure to companies, influencing adoption of norms, though this is generally disregarded as primary strategy for decarbonization (e.g., compared to shareholder engagement). ¹
Green finance / investment / bonds	Green finance, investment, and bonds all pertain to financial instruments and practices aimed at funding environmentally sustainable projects or initiatives such as renewable energy, clean technology, and conservation efforts.
Mitigation and adaptation finance	<ul style="list-style-type: none"> • Mitigation finance involves funding and investments directed at reducing GHG emissions. • Adaptation finance supports initiatives and projects that help communities and ecosystems adapt to the impacts of climate change, such as rising sea levels and extreme weather events.
Paris Agreement alignment and misalignment	<ul style="list-style-type: none"> • Paris Agreement alignment indicates that an organization is consistent with the goals and targets outlined in the Paris Agreement, aimed at limiting global warming to well below 2°C above pre-industrial levels.² • Misalignment refers to situations where actions or policies are not in line with the objectives set by the agreement.
Policy Engagement	For the purposes of this report "policy engagement" refers to engagement with government and industry representatives on climate change in a way that encourages, and does not oppose, the climate transition.
Shareholder and client engagement	Refers to active client or shareholder engagement with portfolio companies on climate action, in ways that encourage, and do not oppose, the transition.
Short-, near-, intermediate and long-term targets	These timeframes refer to the specific periods for which emissions reduction or climate action goals are set. In this dashboard we refer to: <ul style="list-style-type: none"> • 2030 short-/near-term and intermediate targets • 2050 long-term targets.
Target, implementation, impact	These terms are often used in the context of climate action planning: <ul style="list-style-type: none"> • Target refers to a specific goal or objective for financial institutions, such as reducing emissions by a certain percentage by a particular year, or increasing green investment levels. • Implementation involves the steps and strategies that financial institutions are putting in place to achieve the target. • Impact measures the real-world effects and outcomes resulting from the implementation of climate actions and the achievement of targets by financial institutions.

¹ Täger M., K. Dittrich, J. Kob. "A call for clarity: what is finance's theory of (climate) change?" Blog: The Climate Finance Dispatch. Available at:

<https://warwick.ac.uk/fac/soc/wbs/research/ikon/research/climate-finance/blog/#issue8>

² Other interpretations exist of the term which associate Paris alignment with consistency with Nationally Determined Contributions (NDCs) or aggregate NDCs goals. These are not included in the tracker given that NDC aggregates are not in line with the Paris temperature goal.

2. INTRODUCTION

Since the adoption of the Paris Agreement in 2015, multiple public and private sector initiatives have been launched to galvanize action on alignment with its goals. Related actions include the adoption of mitigation and investment targets, net zero integrity standards, information disclosure, net zero pathway assessments, and portfolio temperature assessments. However, there is currently no comprehensive tracking of progress of the financial system's alignment with Paris goals.

The Net Zero Finance Tracker (NZFT), developed by CPI, is an interactive platform that provides a comprehensive assessment of the alignment of public and private finance institutions with net zero goals. It tracks how organizations are responding to the ambitions of the Paris Agreement at strategic and operational levels, and whether this response is translating into Paris-aligned capital allocations, and changes in the real economy.

This document outlines the methodological foundations of the NZFT platform. This is the result of CPI's assessment of what Paris alignment and net zero represent, reviewed and refined in light of what currently available data reveal in terms of trends and progress.

This living methodology will be continuously updated and improved upon – in consultation with data providers and end users of the dashboard – as new data become available, and as Paris alignment and Net Zero frameworks evolve over time.

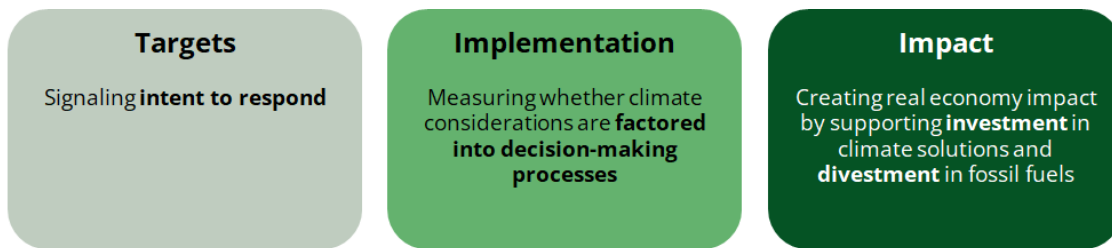
3. DIMENSIONS OF PROGRESS

From the perspective of financial institutions (FIs), Paris alignment relates to the “**holistic commitment** to make investments and overall organizational practices consistent with the achievement of the Paris goals ... through the integration of Paris-aligned targets across the **investment decision chain**, from strategy and sourcing through to due diligence. Institutional engagement must be comprehensive across multiple business areas, able to deliver on a long-term horizon, and ambitious in the scale of action taken. Ultimately, action should to the extent possible translate to **changes in the real economy** – through the realignment of portfolios and investments with temperature trajectories compatible with Paris”.³

The NZFT aims to map the progress of private FIs towards alignment with the Paris Agreement goals. It does so using a set of indicators that track how FIs are moving from intentions to actions and results.

The “Institution Data” view of the dashboard shows what targets and strategies have been set, how these translate into incentives, and how they are integrated into due diligence and internal processes and operations to drive investment decisions. We use three dimensions to organize measurement of progress, each with supporting indicators determined through a literature review and in consideration of data availability.

³ Micale et al. 2020. “A Proposed Method for Measuring Paris Alignment of New Investment.” CPI. Available at: <https://www.climatepolicyinitiative.org/wp-content/uploads/2020/12/2.-A-Proposed-Method-for-Measuring-Paris-Alignment-of-New-Investment-3.pdf>



Targets

Signaling **intent to respond**

TARGET INDICATORS

- Adoption of a mitigation target
- Adoption of climate finance goals
- Adoption of divestment goals

Implementation

Measuring whether climate considerations are **factored into decision-making processes**

IMPLEMENTATION INDICATORS

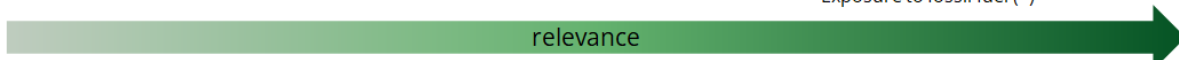
- Internal accountability frameworks
- Shareholder and client engagement
- Policy engagement
- Climate risk strategy
- Climate risk due diligence
- Disclosure of emissions data
- Disclosure of investment data
- Disclosure of climate risk

Impact

Creating real economy impact by supporting **investment** in climate solutions and **divestment** in fossil fuels

IMPACT INDICATORS

- Real Economy Investments
- Project-level Clean Energy Financing
 - Project-level Fossil Fuel Financing
 - Corporate-level Green Lending
- Transition Risk
- Portfolio emissions (*)
 - Exposure to misaligned assets (*)
 - Exposure to fossil fuel (*)



Note: Due to data limitations regarding coverage and comparability, the current version of the dashboard provides information only at the individual entity level for indicators followed by an asterisk (*). Aggregated indicators will be included in the next version of the dashboard.

4. SCORING APPROACH

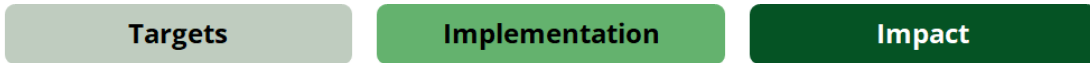
4.1 SCORING INDICATORS

Targets and Implementation are assessed qualitatively, while Impact is assessed using quantitative methods. Targets and Implementation indicators are scored using a tiered badge system, which assesses tracked actions against those considered necessary for a net zero transition, drawing on existing literature and CPI's work on sustainable finance integrity.⁴ This enables assessment of FIs' efforts to meet net zero, and how far they have integrated climate concerns into their operations. Responses are ranked on credibility, based on the following principles:

- **Transparency:** ranging from non-transparent to transparent
- **Concreteness:** ranging from commitment to action
- **Comprehensiveness:** from incomplete/sectoral/partial to comprehensive
- **Ambition:** ranging from low to high

Impact is assessed using quantitative indicators relating to activities that either support a net zero transition (e.g., green bonds and new project-level investment in climate solutions), or detract from it (e.g., new project-level fossil fuel finance). Transition risk management is measured by exposure to misaligned assets, and portfolio emissions. For all indicators, location is attributed by the source of flows, rather than their destination.

⁴ Pinko et al. 2021. "Framework for Sustainable Finance Integrity." Available at: <https://www.climatepolicyinitiative.org/publication/framework-for-sustainable-finance-integrity/>



Credibility assessment

What should the institution be doing?

Qualitative indicators using tiered 'badge' system based on the necessary actions (e.g. from Framework for Sustainable Finance Integrity or other NZ initiatives)

"Badge"	Definition
Full response	Indicator meets all "full alignment" requirements/thresholds
Partial response	Indicator meets all "partial alignment" requirements/thresholds
Initial response	Actions have been taken within the indicator, but do not meet minimum alignment requirement.
Planned response	There is evidence that the organization plans to act.
No action	There is no evidence of action, or plans regarding the indicator.

Progress assessment

How far is the institution from where it should be?

Quantitative Outcome indicators

The table below summarizes the actions and metrics tracked by each indicator, and how they are assessed. Further details on the scoring approach and underlying data are [available online](#).

Targets

	Standard actions/metrics tracked	Assessment
Adoption of a mitigation target	<ul style="list-style-type: none"> • Percentage of relevant portfolio covered • Short-ter/near-term net zero target adopted • Validated near-term target (2025-30) • Validated long-term target (2030-50) • Net zero target or long-term target adopted • Disclosure of the temperature alignment of activities • Has carbon neutrality target • Long-term target adopted • Short-term target adopted • Has active portfolio/investment emission target • Has other active climate-related targets • Communicates methodology used for targets • Has committed to adopt a mitigation target • Has committed to adopt an intermediate target • Has committed to adopt Paris-aligned targets • Has committed to adopt short-term, long-term, and intermediate targets 	<ul style="list-style-type: none"> • Full response - Externally validated aligned long-term and near-term targets, covering the entirety of the relevant portfolio • Partial response - Transparently assessed aligned long-term and near-term targets, covering a portion of the institution's relevant portfolio • Initial response - Target adopted but it is partial, or information is incomplete • Planned response - Has committed to adopt a target • No response - No evidence of target

	Standard actions/metrics tracked	Assessment
Adoption of a climate finance target	<ul style="list-style-type: none"> • Quantified target disclosed • Timeline specified • Investment target adopted 	<ul style="list-style-type: none"> • Full response - Quantified target disclosed, with a timeline • Partial response - Quantified target disclosed • Initial response - Target adopted but information is incomplete • Planned response - Has committed to adopt a target • No response - No evidence of target
Adoption of a divestment and fossil fuel exclusion target	<ul style="list-style-type: none"> • Extent of divestment target • Fossil fuel exclusion policy • Has policy on coal and other fossil fuel investments • Policy framework includes exclusion policies 	<ul style="list-style-type: none"> • Full response - Target for comprehensive fossil fuel divestment • Partial response - Target for partial fossil fuel divestment, or comprehensive fossil fuel exclusion policy • Initial response - Partial fossil fuel exclusion policy, or information on target is incomplete. • Planned response - Has committed to adopting a target • No response - No evidence of target

Implementation

	Standard actions/metrics tracked	Assessment
Internal Accountability Frameworks	<ul style="list-style-type: none"> • Has dedicated responsible investment staff • Board is accountable for climate change • C-suite level staff are accountable for climate change • Business-level staff are accountable for climate change • Provides incentives on the management of climate-related issues • Has committed to integrating sustainability principles in governance 	<ul style="list-style-type: none"> • Full response - Dedicated responsible investment staff, and evidence that whole organization is accountable for climate change • Partial response - Dedicated responsible investment staff, and evidence that part of the organization is accountable for climate change • Initial response - First measures introduced to increase accountability • Planned response - Has committed to adopting measures to increase accountability • No response - No evidence of action
Shareholder and Client Engagement	<ul style="list-style-type: none"> • Successful climate-related engagement with some stakeholders/clients • Indications of climate-related engagement with some stakeholders/clients • Has committed to engage on climate change or sustainable practices 	<ul style="list-style-type: none"> • Full response - Indications of positive engagement and no negative action • Initial response - First steps taken to engage • Planned response - Has committed to engage • No response - No evidence of action
Policy Engagement	<ul style="list-style-type: none"> • Indications of direct policy engagement on government reforms and regulations • Indications of policy engagement on the use of standards and taxonomies • Indications of policy engagement for integration of ESG into investment management • Indications of indirect policy engagement for government reforms and regulations • Has committed to working with business partners on ESG • Has committed to working with government on ESG • Has committed to working with industry on responsible investment • Has committed to working with industry on a sustainable economy • Has committed to influence climate policy • Has committed to working with governments on NZ transition • Has committed to working with governments and industry on net zero transition • Has committed to conduct engagement activities in line with Paris Agreement goals 	<ul style="list-style-type: none"> • Full response - Indications of positive engagement and no negative action • Initial response - Has taken first steps to engage • Planned response - Has committed to engage • No response - No evidence of action
Climate Risk Strategy	<ul style="list-style-type: none"> • Considers the impact of climate risks and opportunities in strategy • Uses climate scenarios to inform strategy • Assesses climate risks and opportunities for different time horizons • Provides temperature trajectories for the scenarios examined • Uses reputable energy transition scenarios • Uses reputable physical climate risk scenarios • Has committed to assess climate risks 	<ul style="list-style-type: none"> • Full response - Assesses climate risks, and scenarios and incorporates them in strategy, using various timeframes and reputable climate scenarios • Partial response - Assesses climate in strategy, with some degree of transparency • Initial response - First steps at developing a climate risk strategy • Planned response - Has committed to adopt a climate risk strategy • No response - No evidence of action

	Standard actions/metrics tracked	Assessment
Climate Risk Management	<ul style="list-style-type: none"> • Has a process to assess climate risk • Has a process to manage climate risk • Has a process to assess and manage climate risk • Integrates climate into overall risk management • Uses tools to manage climate-related risks and opportunities • Coverage in the use of tools • Has committed to manage climate risks • Has committed to adopt a carbon price 	<ul style="list-style-type: none"> • Full response - Evaluates and manages climate-related risks, comprehensively using appropriate tools • Partial response - Evaluates and manages climate-related risks with the support of tools • Initial response - First steps at managing climate risk • Planned response - Has committed to manage climate risk • No response - No evidence of action
Disclosure of Climate Risk	<ul style="list-style-type: none"> • Publishes TCFD disclosures • Requests that external managers and/or service providers incorporate TCFD into reporting • Has committed to engage for corporate TCFD disclosures • Has committed to TCFD reporting 	<ul style="list-style-type: none"> • Full response - Publishes TCFD disclosures and actively urges external managers and/or service providers to include TCFD principles in their reporting • Partial response - Publishes TCFD disclosures or actively urges external managers and/or service providers to include TCFD principles in their reporting • Initial response - Has taken first steps on disclosing climate risk • Planned response - Has committed to disclose climate risks • No response - No evidence of action
Disclosure of Investment data	<ul style="list-style-type: none"> • Reporting system for investment data in place • Plans to disclose investment data 	<ul style="list-style-type: none"> • Full response - Evidence of reporting system for investment data. • Initial response - Has taken first steps at disclosing investment data • Planned response - Has committed to disclose investment data • No response - No evidence of action
Disclosure of Emissions Data	<ul style="list-style-type: none"> • Financed emissions disclosed • Portfolio emissions disclosed • Portfolio emissions tracked • Coverage of portfolio emissions tracked • Scope 3 emissions disclosed • Scope 1 and/or 2 emissions disclosed • Baseline emissions disclosed • External verification of disclosed emissions • Some level of emissions is tracked • Has committed to track and disclose emissions 	<ul style="list-style-type: none"> • Full response - All financed emissions or portfolio emissions have been disclosed • Partial response - Some or unspecified portfolio emissions are tracked or disclosed • Initial response - Has taken first steps on emissions disclosure • Planned response - Has committed to disclose emissions • No response - No evidence of action

Impact

	Metrics tracked
Project-level Clean Energy Financing	<p>This indicator measures how entities have directly contributed to funding of new clean energy projects via direct/primary investment (currently focused on power sector investment only). Figures are broken down to track USDm investment in the following subsectors:</p> <ul style="list-style-type: none"> • Biofuel/Biomass • Hydroelectric Energy • Solar Energy • Wind Energy • Waste-to-Energy • Power Grids • Nuclear Energy • Carbon Capture and Storage • Energy Storage • Other Climate <p>Categories are based on CPI's Global Landscape of Climate Finance taxonomies of low-carbon activities for the power sector.</p>
Project-level Fossil Fuel Financing	<p>This indicator measures how entities have directly contributed to the funding of new fossil fuel projects via direct/primary investment. The current update focuses on power sector investment only. Figures are broken down to track USDm investment in the following subsectors:</p> <ul style="list-style-type: none"> • Oil and Gas Supply Chain • Coal mining • Oil-Powered Energy Production • Gas-Powered Energy Production • Coal-Powered Energy Production
Corporate-level Green Lending	<p>This indicator tracks loans and bonds made available for green projects as defined according to Green Loan Principles and Green Bond Principles (in USDm).</p> <p>The eligible projects under the Green Bond Principles and the Green Loan Principles are not explicitly defined, but the principles provide guidance on the process and disclosure for issuers. Some examples of projects financed through green bonds include solar and wind electricity plants, energy-efficient buildings, sustainable water management systems, and clean transportation infrastructure.</p>
Exposure to Misaligned Assets	<p>This indicator measures whether portfolio composition is misaligned with Paris agreement mitigation targets. Misaligned assets are reported both as a share of total portfolio value (USDm), and as a share of assets examined in depth (e.g., assets in traditionally emission intensive sectors).</p> <ul style="list-style-type: none"> • Total Portfolio Value • Misaligned Paris Agreement Capital Transition Assessment (PACTA) Assets • Other PACTA Assets • Other Examined Assets
Exposure to Fossil Fuels	<p>This indicator measures entities' material exposure to fossil fuel investments (USDm). Exposure is examined for a subset of the institution's portfolio for which information exists on exposure to companies of which the primary sector of operations is in, or uniquely associated with, upstream or midstream oil and gas and coal mining sectors.</p> <ul style="list-style-type: none"> • Total Portfolio Value • Fossil Fuel Assets • Other Examined Assets
Portfolio Emissions	<p>This indicator measures the level of financed emissions reported by the FIs. Specifically, we track information on either Scope 3 – Category 15 (Investments) emissions and Portfolio emissions. In the absence of comparable emissions between various years within the same institution, latest emissions are considered, and past ones are estimated.</p> <ul style="list-style-type: none"> • Disclosed Portfolio Emissions (tCO₂e)

4.2 SCORING DIMENSIONS

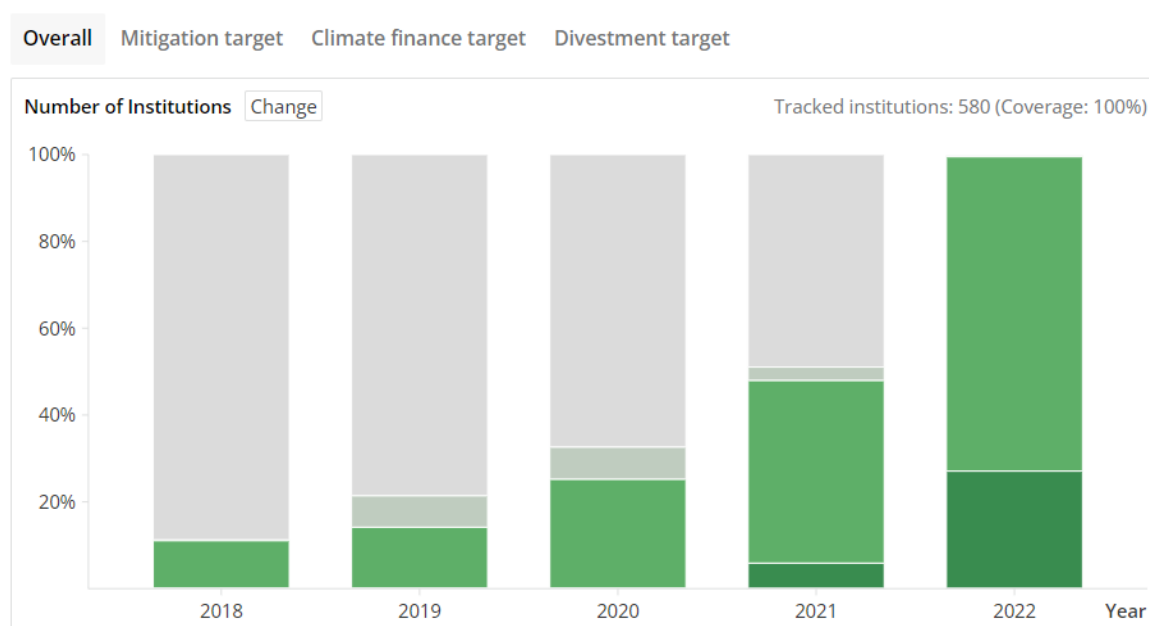
Once indicators have been assessed, qualitative methods are used to score the Targets and Implementation dimensions, using the following approach.

Badge	Approach	Targets	Implementation
Full response	Applied if all indicators in the dimension are scored as 'Full response'	Entities disclosed validated short-term and long-term mitigation targets covering most of their portfolio, adopted full fossil fuel divestment goals, and disclosed climate solution investment goals with a precise timeline.	Entities have a climate change lead and internal incentive systems. They engage with policymakers, clients, and shareholders, following TCFD guidelines for climate risk strategy and disclosure.
Partial response	Applied if at least 50% of all indicators in the dimension are scored as either 'Full response' or 'Partial response'.	The majority of the minimum conditions for targets are met, but some aspects are not fully validated or quantified.	The majority of the minimum conditions are met, including multi-level incentive systems, engagement with policymakers and stakeholders, adherence to most TCFD guidelines, and disclosure of progress.
Initial response	Applied if at least one indicator in the dimension is scored as 'Early response' or higher.	Targets are adopted, but advanced response requirements are not yet met.	Some action has been taken, but advanced response requirements are not yet met.
Planned response	Applied if at least one indicator in the dimension is scored as 'Planned response'.	Institutions are planning to adopt targets.	Institutions are planning to implement response measures.
No action	Applied if 'No action' is observed in all of the indicators.	No evidence of any action on targets is available.	No evidence of any implementation action is available.

4.3 HOW QUALITATIVE INFORMATION IS DISPLAYED FOR “TARGETS” AND “IMPLEMENTATION”

To display qualitative information at an aggregate level, i.e., to gauge the overall progress made by the institutions tracked at once, we show how their scores are distributed in a given year. We have a series of options to aggregate results.

Aggregation by nr of institution - The most immediate form of aggregation – and the default one displayed on the web dashboard upon loading – consists in merely a distribution of the number of institutions falling in each scoring category, for all the years tracked by the datasets. For a given indicator or dimension, the weight attributed to each score X (“No action” all the way to “Full response”) is therefore determined by the number of institutions in a given year, which our methodology has scored with score X, divided by the total number of institutions tracked in that same year. An example of the aggregation method by nr of institutions is provided below.



Aggregation by financial metrics - The aggregation presented above, albeit intuitive, foregoes a key element, that of the importance within the financial system of the institutions tracked, measured by institutions' financial metrics. The aggregation methods used are:

- Assets Under Management (AUM), defined as the market value of the entirety of the investments controlled by a financial entity (typically, an asset manager) on behalf of its investors.
- Total Assets, i.e., the sum of all the assets the FIs owns or has a claim to, as reported on the balance sheet. It may consist of both tangible (cash, property, investments, etc.) and intangible assets (such as intellectual property).
- Revenue, i.e., the total amount of goods and services sold by a company, multiplied by the respective price of each of these goods and services. It is a measure of the amount of money that the company has generated in a given reporting year.
- AUM or Total Assets: a combination of the first two measures presented above. When Assets Under Management are reported for the year of interest, this measure is used, alternatively, Total Assets are used as a proxy for AUM. This measure, computed internally, is introduced to remedy the lower coverage of each of the two individual measures.

Financial data is currently gathered from S&P Capital IQ and the distribution of scores is computed by dividing the sum of the financial measure chosen (AUM, Revenue, etc.) for all the entities falling within a scoring category, by the total sum of that same financial measure across the whole dataset, in the relevant year.

Note that, due to the incompleteness of the dataset(s) used to extract this type of information (primarily derived by the fact that not all institutions tracked are public institutions which are required to disclose these figures), these distributions are in fact a sample of the population's distribution, biased towards public institutions.⁵

Our tracker provides the percentage of institutions covered by the aggregation method chosen.

⁵ The coverage of the aggregation method selected is displayed at the top right corner of each of the graphs in the "Aggregate Data" section of the dashboard, and is calculated as the share of institutions for which this information was made available in the last year tracked over the total number of institutions tracked in that same year.

5. INSTITUTIONS COVERED AND ATTRIBUTION OF ACTIONS

5.1 INSTITUTIONS COVERED

The sample covered by the NZFT 2.0 includes all members of the Glasgow Financial Alliance for Net Zero (GFANZ) – as of December 2022 this totalled 553 institutions with tracked combined owned assets and assets under management (AUM) of USD 85 trillion. By focusing on GFANZ institutions, the study serves as a valuable indicator of action taken by FIs that have joined the alliance and are committed to achieving net-zero greenhouse gas (GHG) emissions.

The NZFT does not currently provide a comprehensive overview of the entire financial sector's efforts towards net zero. We aim to gradually expand coverage of FIs to achieve a comprehensive view of ongoing efforts.

5.2 INSTITUTION TYPES

The following categories of private FIs are currently included in the NZFT dashboard, organized into two levels of analysis.

Level 1 (Sectors):

- Asset Owners
- Asset Managers
- Insurance
- PE, VC, and hedge funds
- Banks

Level 2 (Subsectors):

- Foundations & Endowments
- Family offices
- Sovereign Wealth Fund
- REITs
- Pension Funds
- Asset Management
- Insurance
- PE&VC
- Hedge Fund Manager
- Global Banks
- Retail banks
- Commercial Banks
- Investment banks

Certain categories of institution will be more influential than others in the greening of the financial system. For example, despite having huge assets to deploy, a private asset manager investing in public markets in adherence with a client mandate may be less able to affect change than a quasi-public development finance institution that can provide risk capital to nascent businesses and may have influence over government policy and own investment targets.

Similarly, different institution categories' investment considerations also play a role. For example, a regulated asset manager for which liquidity and client mandates are key considerations may not be well placed to invest in wind farm development, while a lightly regulated private equity fund with a high-risk appetite and lower liquidity requirements could be.

5.3 ACTION ATTRIBUTION

One critical step of the process is the initial attribution of actions to the various uniquely identified entities. The proposed approach for the NZFT dashboard is to attribute the net zero action of each entity exclusively at the level reported by the original data source, whether the entity is a local division, subsidiary, or a global or entity headquarters.

The attribution of each action to a unique entity means that an action attributed to a subsidiary does not contribute to the score of its headquarters, and vice versa. For example, an action attributed to "HSBC UK" does not alter the score of its parent entity, "HSBC". Similarly, an action attributed to "HSBC Asset Management" will only contribute to that entity's score and not to any other division belonging to the same parent company, or to the parent company itself. Accordingly, an action attributed to the entity "HSBC" will only affect the score for "HSBC" itself, and not that of its divisions or subsidiaries.

6. DATA SOURCES

Information is collected from various **publicly and privately available sources** at the level of individual FIs. Sources to date include about 30 data providers, with our main data partners being CDP, the Principles of Responsible Investment (PRI), and FinanceMap.

Our sources are listed in alphabetical order below. Details on all derived datasets are available in the metadata file “NZFT 2.0 - Metadata”, [accessible online](#).

<ul style="list-style-type: none"> • Banking Environment Initiative (BEI) • Bloomberg New Energy Finance (BNEF) • Climate Action 100+ (CA 100+) • Climate Action in Financial Institutions (CAFI) • Climate Bonds Initiative (CBI) • CDP • Carbon Pricing Leadership Coalition (CPLC) • CPI's Global Landscape of Climate Finance • ESG Book • FinanceMap/InfluenceMap (FM) • Fossil Free Divestment (FFD) 	<ul style="list-style-type: none"> • Global Climate Action Portal (GCAP) • IJ Global • Investor Agenda (IA) • Net Zero Asset Managers initiative (NZAM) • Net-Zero Asset Owner Alliance (NZAOA) • Net Zero Banking Alliance (NZBA) • Net Zero Insurance Alliance (NZIA) • Observatoire de la finance durable • Paris Aligned Investment Initiative (PAII) • Partnership for Carbon Accounting Financials (PCAF) 	<ul style="list-style-type: none"> • Principles for Responsible Banking (PRB) • Principles of Responsible Investment (PRI) • Principles for Sustainable Insurance (PSI) • Race To Zero (RTZ) • Rainforest Action Network (RAN) • Science Based Targets (SBTI) • Task Force on Climate-Related Financial Disclosure (TCFD) • We Mean Business Coalition (WMB) • WRI's Green Targets
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From the above sources, we retrieved information on specific institutions' response to Paris alignment for all indicators under the three dimensions (Targets, Implementation, and Impact). We will work to progressively expand the range of datasets used for the dashboard. Understanding data gaps is critical to ensuring that this is done effectively.

The table below shows the current sources and datasets used, as well as their granularity and extent of coverage they provide for each attribute/indicator. The availability of data varies significantly between attributes/indicators; while information is good in understanding progress on the Adoption of mitigation targets and on tracking investment in climate solutions and high-emissions projects (although the latter assumes a good coverage of transaction from underlying independent/third party datasets), more data is needed on institutions' investment goals and how they are effectively tracking progress towards these goals, institutions' level of engagement with governments, as well as portfolio emissions and their alignment.

Table: Datasets and extent of coverage of attributes/indicators

Dimensions	Coverage*	Indicators
Targets	Good	● Adoption of Mitigation Target
Targets	Medium	● Adoption Divestment Target
Targets	Poor	● Adoption Climate Finance Target
Implementation	Medium	● Climate Risk Management
Implementation	Medium	● Internal Accountability Framework
Implementation	Medium	● Disclosure of emissions data
Implementation	Medium	● Shareholder and Client Engagement
Implementation	Medium	● Climate Risk Strategy
Implementation	Medium	● Disclosure of Climate Risk
Implementation	Poor	● Policy Engagement
Implementation	Poor	● Disclosure of Investment Data
Impact	Good	● Project-level investment in Climate Solutions
Impact	Good	● Project-level High-emissions financing
Impact	Good	● Green lending
Impact	Medium	● Exposure to fossil fuels
Impact	Poor	● Exposure to misaligned assets
Impact	Poor	● Portfolio Emissions

Note: (*) Coverage based on the sample of GFANZ institutions surveyed.

(**) Coverage evaluation assumes that investments in climate solutions and high-emissions physical assets investments are tracked comprehensively by independent third-party data providers.

7. DATA PROCESSING

Data processing for the NZFT has two main goals:

- A. **Collection and standardization of data from various sources.** Information is obtained from various formats of original data sources, including web pages, PDF files, reports, and files downloadable in csv format. Qualitative datasets, representing the larger share of datasets, usually consist of 1/0 true/false logical statements, answering specific questions related to climate action or Paris alignment (e.g., “Has the organization committed to mitigation targets?”, “Has the organization adopted a carbon price?”). A smaller share of datasets contain numeric values (e.g., USD millions invested in low-carbon climate resilient projects). Data collected covers from 2018 onwards.
- B. **Unique identification and categorization of FIs.** In parallel to Process A, reference tables are developed in which individual institutions or investor entities are uniquely identified. This aims to ensure that information on the same organization, which may be named differently in different datasets, is attributed to a single uniquely identified entity. These reference tables also include information such as country of the organization’s headquarters, AUM, total assets, capitalization, and revenue, which is used to present the distribution of the scores among the various institution types at the aggregate level.

Data processing is based on programming code – typically Python – while storage occurs in the cloud, organized in source-specific backend datasets. This develops automated data pipelines that will drastically decrease the time it will take to incorporate new data sources.

Updates will be much quicker to implement and easier to track, due to the relevant code being hosted in the same environment as the data, greatly improving internal visibility of the process. Specifically:

- Automation of the data extraction process enables the NZFT to be regularly updated with new additions to coalitions and organization announcements in a way that reduces the need for further human input. By using web scraping or AI techniques such as Natural Language Processing, which extracts relevant data from textual sources such as news articles or organization sustainability reports, data extraction can be automated – increasing our ability to collect the vast data required for the NZFT and the

relevance of our data as it can be published with shorter turnaround times and even on a near real-time basis.

- Once data have been retrieved, an updated data warehousing infrastructure allows for greater automation of the data transforming, joining, and scoring process. This involves storing all data, from ingestion of raw sources through to the final data set used in the interactive tool, in a single environment.

8. ADDITIONAL NOTES AND CAVEATS

Our analysis covers 562 GFANZ entities. Given the focus of this alliance on net zero commitments, this is where most related action happens in the financial sector. This means that we cannot derive universal conclusions from this analysis, which **should be interpreted as an optimistic view of the sector**. Over time, we will increase the number of organizations covered in this report.

Conclusions are also informed by data availability over time. As we go back in time, there are fewer initiatives that collect action from FIs, thus data on trends over time may be affected by **lack of early monitoring efforts**.

Our data reflects any type of commitment, action, and investment undertaken by the tracked institutions **as of December 31, 2022**, with datasets accessed at various points in 2023. Data from PRI currently covers actions tracked until 31/12/2020, with 2022 data still in the process of being integrated in the dashboard.

Information is primarily sourced from external data collection efforts and may reflect **possible lags in entity-level voluntary disclosures** to the original data providers, or **data gaps** derived by entities failing to systematically disclose their progress or failing to make it easily accessible in a machine-readable format. As standardized data becomes more readily available (e.g., in both existing and forthcoming datasets), we plan to gradually integrate it into the dashboard.