

Assessing the climate consistency of finance

Exploring data, metrics and methodologies for tracking progress towards Article 2.1c of the Paris Agreement



Our work programme and mission

A range of OECD work supports efforts to mobilise and redirect finance to achieve climate policy goals. The work presented in this brochure more specifically aims to inform efforts on [tracking and assessing progress towards Article 2.1c](#) of the Paris Agreement.

Article 2.1c of the Paris Agreement:

“Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development”

Tracking progress on aligning finance with the Paris Agreement requires the development of relevant finance-related assessments and indicators. However, significant data, methodological and knowledge gaps remain. In this context, the work presented in this brochure [explores and tests data availability and sources, possible metrics and underlying methods](#). It does so through:

- Analytical outputs (in-depth analyses, conceptual framing, pilot studies)
- Providing a convening- and knowledge-sharing platform (workshops, webinars)
- Collaborating with stakeholders and engaging in international policy processes and discussions across the climate and financial policy communities

Such work contributes to bridging coordination and knowledge gaps between [policymakers, financial market stakeholders, and researchers](#), with the aim to help inform improved:

- Assessments of progress towards climate policy goals
- Investment and financing decisions
- Policy making to support the alignment of finance with the Paris Agreement

Article 2.1c has an [all-encompassing scope covering the financial system, real-economy investments, and policies driving \(in\)consistency](#). To the extent made possible by data availability, our work seeks to address data, metrics and methods needed for each of these three dimensions as well as their interlinkages, for both the mitigation- and resilience-related provision of Article 2.1c of the Paris Agreement.

Pilot studies to assess the climate **consistency of real-economy investments**, sources of finance, and their interlinkages

Metrics and methodologies to assess the climate **consistency of the financial system**, at various levels of aggregation

Indicators and assessment of **finance-related policies and enabling environment** driving the climate (in)consistency of finance

Comprehensive tracking frameworks, metrics, and indicators to assess progress on Article 2.1c of the Paris Agreement



Selected events and outreach

- 2023-11: OECD COP28 Virtual Pavilion on [Scenarios for net zero: From global consistency to sectoral and geographical circumstances](#)
- 2023-10: Sessions at the OECD Forum on Green Finance and Investment on [the use of climate change mitigation scenarios in the financial sector](#) and on [net-zero metrics](#)
- 2023-04: Workshop on [Metrics for Climate Transition and Net-Zero GHGs in Finance: Supporting climate policy goals and avoiding greenwashing](#) ([slides](#) and [summary](#) available)
- 2022-11: OECD COP27 Virtual Pavilion on [Finance for climate transition and climate alignment](#)
- 2022-10: Sessions at the OECD Forum on Green Finance and Investment on [Connecting business and financial sector climate commitments to policy: Assessing alignment with climate mitigation policy goals](#)
- 2021-10: Sessions at the OECD Forum on Green Finance and Investment [From transition to climate-aligned finance: Key measurement issues and challenges](#)
- 2020-10: Workshop on [Measuring the alignment of investments and financing with climate objectives](#)



Publications to date

OECD (2023) [Assessing net-zero metrics for financial institutions: Supporting the monitoring of financial institutions' commitments](#). OECD Business and Finance Policy Papers, No. 37.

Noels, J.; Pouille, C.; Jachnik, R.; and M. Rocha (2023), [Climate change mitigation scenarios for financial sector target setting and alignment Assessment: A stocktake and analysis of their Paris consistency, practicality, and assumptions](#), OECD Environment Working Papers, No. 223.

Pouille, C., Rocha, M.; Noels, J.; and R. Jachnik (2023). [Paris-consistent climate change mitigation scenarios: A framework for emissions pathway classification in line with global mitigation objectives](#). OECD Environment Working Papers, No. 222.

Gardes-Landolfini, C.; Prasad, A.; Stewart, S.; Gardiner, L.; Levine, A.; Patalano, Patalano.; and Jolien Noels (2023), [Activating alignment: Applying the G-20 Principles for Sustainable Finance Alignment with a Focus on Climate Change Mitigation](#).

Noels, J. and R. Jachnik (2022), [Assessing the climate consistency of finance: Taking stock of methodologies and their links to climate mitigation policy objectives](#), OECD Environment Working Papers, No. 200.

Jachnik, R. and A. Dobrinevski (2021), [Measuring the alignment of real economy investments with climate mitigation objectives: The United Kingdom's buildings sector](#), OECD Environment Working Papers, No. 172.

Dobrinevski, A. and R. Jachnik (2020), [Exploring options to measure the climate consistency of real economy investments: The transport sector in Latvia](#), OECD Environment Working Papers, No. 163.

Dobrinevski, A. and R. Jachnik (2020), [Exploring options to measure the climate consistency of real economy investments: The manufacturing industries of Norway](#), OECD Environment Working Papers, No. 159.

Jachnik, R., M. Mirabile and A. Dobrinevski (2019), [Tracking finance flows towards assessing their consistency with climate objectives](#), OECD Environment Working Papers, No. 146.

Funders



Summary of selected publications

The next pages provide brief summary infographics of published analysis by the Research Collaborative on Tracking Finance for Climate Action.





Assessing net-zero metrics for financial institutions

Supporting the monitoring of financial institutions' commitments

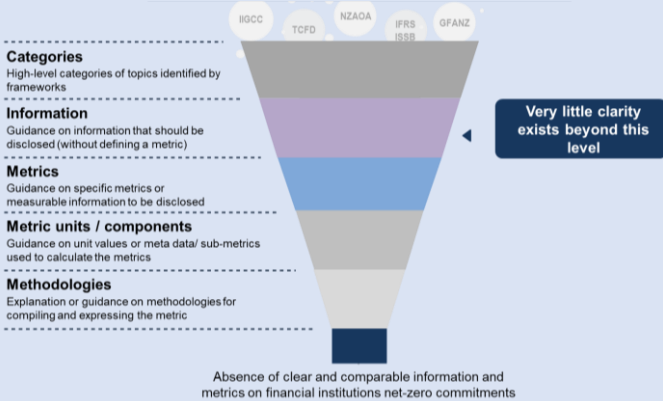


A clear set of comparable, credible and transparent net-zero metrics is needed to **assess progress on net-zero commitments by financial institutions**.

Frameworks currently propose **more qualitative text-based information points** than quantitative unit-based metrics. There is **limited consistency** in the language used to refer to the same information points and metrics. When quantitative metrics are proposed, there is a **lack of explicit guidance on underlying calculation methodologies**. These factors contribute to **incomparable information and data** across financial institutions

Given **gaps in metrics**, there is a need for **complementary metrics**, while limiting the disclosure burden. The lack of methodologically mature metrics, and consensus thereon, **challenges metric prioritisation**.

Further specificity needed for comparable net-zero metrics for financial institutions



Frameworks agree on categories of information, but inconsistencies, ambiguities, and gaps remain for proposed metrics

	M*	Proposed metric with calculation method				
	M	Proposed metric				
	I	Proposed information				
	N	No information or metric proposed				
	GFANZ	IFRS ISSB	IIGCC	NZAOA	TCFD	
GHG emission metrics						
Historic and current GHG emissions	M	M*	M	M*	M*	
GHG emission targets (short, medium and long term)	M	M	M	M	I	
Alignment assessment with a benchmark, inc. Paris Agreement	N	N	M	M*	M	
Use of offsets (current and future)	N	I	N	N	N	
Portfolio composition metrics						
Portfolio share in low GHG assets and climate solutions	M	I	M*	M*	N	
Portfolio share in assets consistent with net zero, or with targets based on an alignment assessment	M	N	M*	M	M	
Portfolio share in carbon-intensive assets and assets exposed to transition risks and phase-out	M	M	M	N	M	
Investment allocation practices driving GHG emission reductions	M	N	I	N	M	
Overall portfolio composition and sector coverage	I	I	I	I	I	
Other	M	M	I	N	M	
Engagement metrics						
General engagement/stewardship practices	M	I	M	I	I	
Voting procedures and practices	M	M	I	I	N	
Engagement escalation process	M	I	I	I	N	
Collaborations and alliance engagements	M	N	I	I	N	
Advocacy-based activities	M	N	I	I	N	
Strategy and governance metrics						
Remuneration linked to climate performance	M	M	N	N	M	
Management/Board oversight and accountability	M	I	I	N	M	
Integration of climate considerations in internal reporting and analytical processes	M	I	I	N	I	
Integration of climate considerations in strategic decision-making and investment strategies	N	I	I	I	I	
General strategy on climate goals and transition plans	N	I	I	I	I	
Other	M	M	I	I	I	

Policy considerations:

- ✓ Supporting the identification of pertinent sets of core yet complementary metrics to credibly assess financial institutions' progress against their net-zero commitments
- ✓ Consider ways to address data gaps by encouraging both the further development of quantitative metrics and of data disclosures on such metrics
- ✓ Encourage framework providers to transparently define or refer to specific methodologies for such metrics
- ✓ Enhance coordination across providers of frameworks, methodologies and data to improve comparability and transparency



Assessing the climate consistency of finance

Taking stock of methodologies and their links to climate mitigation policy objectives



Article 2.1c of the Paris Agreement contributed to the development of the concept of climate alignment of finance to assess progress toward climate goals.

Growing landscape of finance initiatives supporting net-zero GHGs

Classifying initiatives to clarify their purpose and role

Coalitions Frameworks Methodologies

Climate-alignment assessment methodologies provide a detailed approach for calculating the degree of alignment or misalignment of a financial asset with the Paris Agreement.

Methodological choices across 4 dimensions:

- ① Asset class coverage
- ② Choice of emissions performance metrics
- ③ Selection of climate mitigation scenarios
- ④ Portfolio aggregation approach

Need for a more comprehensive asset class coverage

Coverage of alignment methodologies

● Covered ● Developing ● Underdeveloped



Methodologies agree on high level of misalignment, but different perspectives lead to different alignment metrics and climate ratings

Company	Provider 1	Provider 2	Provider 3	Provider 5	Provider 4
Company A	Not aligned	Not aligned	Not available	2 Degrees	Not aligned
Company B	Not aligned	Not aligned	1.5 Degrees	Not aligned	Not aligned
Company C	Not aligned	Not aligned	Not aligned	Not aligned	2 Degrees
Company D	1.5 Degrees	2 Degrees	Not aligned	Not aligned	Not aligned
Company E	1.5 Degrees	2 Degrees	Not aligned	Not aligned	Not aligned
Company G	1.5 Degrees	2 Degrees	Not aligned	Not aligned	Not aligned
Company F	Not aligned	1.5 Degrees	Not aligned	Not aligned	Not aligned
Company H	Not aligned	Not available	Not available	Not aligned	Not aligned
Company I	Not aligned	1.5 Degrees	Not available	Not aligned	Not available
Company J	Not aligned	2 Degrees	Not available	2 Degrees	Not available
Company K	Not aligned	Not aligned	Not available	2 Degrees	Not aligned
Company L	Not aligned	2 Degrees	Not aligned	Not aligned	Not aligned
Company M	Not aligned	Not available	Not available	Not available	Not aligned
Company N	Not aligned	Not available	Not aligned	Not aligned	Not aligned
Company O	Not aligned	Not available	Not aligned	Not aligned	Not aligned
Company P	Not aligned	2 Degrees	Not available	Not available	2 Degrees
Company Q	2 Degrees	2 Degrees	Not available	Not aligned	Not aligned
Company R	Not aligned	Not aligned	Not available	Not aligned	Not aligned
Company S	Not available	Not aligned	Not available	Not available	Not aligned
Company T	Not aligned	2 Degrees	Not available	Not aligned	Not aligned
Company U	Not aligned	Not aligned	Not available	Not aligned	Not available
Company V	2 Degrees	Not aligned	2 Degrees	Not available	Not aligned
Company W	Not aligned	1.5 Degrees	Not aligned	Not available	2 Degrees
Company X	2 Degrees	Not aligned	Not aligned	Not available	Not aligned

Selected methodological challenges:

- No agreed approach to disaggregate Paris Agreement temperature goal and downscale scenarios
- Temporal coverage is a strong driver of rating variations
- Lack of clarity and data on use of offsets
- Limited number of scenario sources

Policy recommendations to support improved climate alignment assessment methodologies:

1. Support further development of methodologies for a broader range of financial asset classes and for aggregation approaches for portfolio assessments
2. Provide clear guidance on the use of offsets
3. Develop scenarios and reference points that are more relevant for the use in the corporate and financial sector analysis
4. Encourage communication of assumptions within assessments, such as scenario likelihoods of reaching a certain temperature goal
5. Use a range of complementary metrics for a comprehensive view of alignment



Climate change mitigation scenarios for financial sector target setting and alignment assessment

Financial sector stakeholders are increasingly relying on climate change mitigation scenarios for target setting and alignment assessments.

Are climate change mitigation scenarios consistent with the Paris Agreement?

	<div></div> Consistent (stringent)	<div></div> Consistent (less stringent)	<div></div> Not consistent	<div></div> Insufficient information						
Criteria	Scenarios									
	IEA NZE	UTS-ISF NZE	JRC GECO 1.5°C	NGFS3 NZE 2050			NGFS3 DIV NZE			
				G	M	R	G	M	R	
Criterion 1: 1.5°C in 2100										
Criterion 2: limited overshoot of 1.5°C										
Criterion 3: well-below 2°C										
Criterion 4: early peak GHG emissions										
Criterion 5: net-zero GHG emissions										

- ✓ Policymakers could promote standardised disclosure of climate outcomes in scenario-based targets and assessments, based on harmonised disclosure of climate outcomes of scenarios
- ✓ The financial sector should select high-ambition scenarios based on more transparent and comparable scenario outcome data

Are climate change mitigation scenarios fit-for-purpose for use in the financial sector?

	Scope	Granularity
Sectoral	Only AFOLU is missing in some cases	Often emissions pathways are provided for less than 15 sub-sectors
Geographical	All analysed scenarios are global	Geographical granularity is often limited, especially for EMDEs
Emissions	Some non-CO ₂ GHGs are missing in some cases	Not always provided separately for sectors with high non-CO ₂ GHGs
Temporal	Scenarios typically run until 2100	Typically 5 to 10 year intervals

- ✓ Scenario providers can increase granularity and resolution of scenarios, recognizing trade-offs between uncertainty and practicality
- ✓ Climate policymakers can support improved availability of granular input data for scenarios

What are the characteristics of mitigation strategies and assumptions of climate change mitigation scenarios?

Mitigation strategies

Energy supply decarbonisation

Demand-side mitigation

Reliance on carbon dioxide removal

Land emissions reductions

Underlying assumptions

Input assumptions:

- Socio-economic
- Technological
- Policy

Modelling assumptions

Scenarios follow different mitigation strategies

Different mitigation strategies face different feasibility concerns

Harmonised narratives only exist for socio-economic assumptions

Limited understanding of uncertainties in assumptions

- ✓ The financial sector can consider relying on multiple scenarios to better reflect diversity and uncertainty in scenario assumptions
- ✓ Scenario providers could propose harmonised narratives of scenario assumption
- ✓ Policymakers and the financial sector should apply scenarios taking into account design limitations, assumption uncertainties and narratives



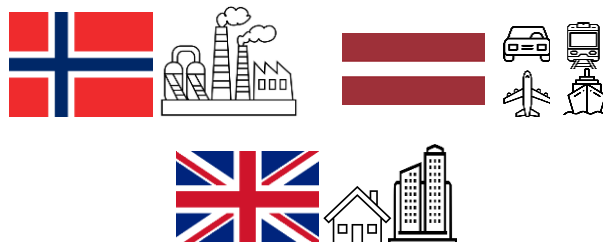
Measuring the climate change alignment of real-economy investments



Aligning financial flows with climate policy goals, as called for in Article 2.1c of the Paris Agreement, requires **aligning underlying real-economy investments**, both existing stocks and new flows.

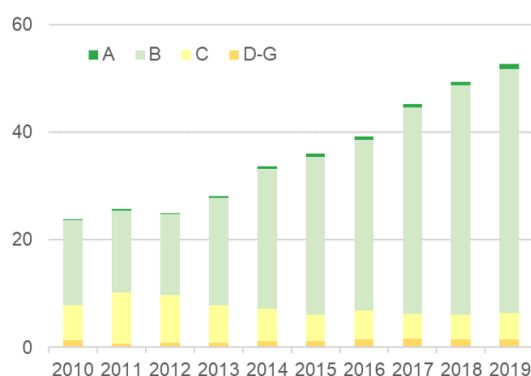
- Pilot studies can **test data** availability, explore reference points, and identify steps for scaling up **approaches** to track the alignment of investments with the Paris Agreement mitigation goals.
- Investments in **physical assets** are closely connected to GHG emissions
- Many initiatives look at the alignment of financial assets but **less focus on real-economy investments**

3 pilot studies across different countries and sectors:



Real-economy investments can only be considered aligned with climate change mitigation policy objectives in very limited cases

Investments in newly-built residential buildings, by Energy Performance Certificate band, 2010-2019 (GBP billion)



Total investments in new built residential buildings 360

Investments in new built residential buildings in EPC A 5

Investments in new built residential buildings in EPC A with low-carbon heat 1.5

Taking investments in the UK building sector as an example, less than 1% of new construction investments in residential buildings between 2010 and 2019 could be considered consistent with net-zero objectives (i.e. EPC band A).

Steps towards comprehensive analysis of climate alignment of economy-wide investments

1. Collect granular investment data
 - Aggregate investment data
 - Primary data collection
2. Collect granular climate performance data
 - GHG emissions
 - Asset-level data
3. Choose suitable reference points
 - Trade-offs between granularity and aggregation

Lessons learnt from pilot studies

Different reference points lead to varying results

Challenging to link financing sources and intermediaries

Granular data needs: targets and pathways, GHG performance of assets, corporate and household investments, financing resources

Trade-off between granularity (evaluating individual investments) and aggregation (connecting to carbon budgets and global policy objectives)

For more information:

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