Methodology

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FTSE Climate Collective Transition Assessment Methodology

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Section 1

Introduction

1. Introduction

1.1 FTSE Climate Collective Transition Assessment Methodology – Foundations

The FTSE Climate Collective Transition Assessment Methodology (CCTAM) is a relative scoring model that evaluates sovereign exposure to climate transition risks. Utilizing the framework of Assessing Sovereign Climate-related Opportunities and Risks (ASCOR), it aims to highlight countries' performance and alignment with the transition to a low-carbon economy and the Paris Agreement objectives.

This model, exclusively employed by FTSE Russell for this index, was developed in collaboration with ING and Robeco.

1.2 FTSE Climate Collective Transition Assessment Methodology – Introduction

The CCTAM is a tailored quantitative assessment that evaluates countries' climate change exposure and resilience through three pillars: Ambition, Policy, and Evidence. Data is sourced from the ASCOR project, which is led by asset owners, managers, and investor networks under the academic guidance of the Transition Pathway Initiative (TPI) Centre, to provide an objective evaluation of countries' targets, policies, and performance.

The methodology assesses all the countries assessed by the ASCOR project and uses 51indicators and metrics[1]. Each metric or indicator is selected for its relevance and is transformed statistically to produce indicator scores, which are then aggregated at the pillar level.

Indicators and metrics are mapped to the Ambition, Policy, and Evidence pillars using a rules-based approach. A score is calculated annually for each indicator, based on the latest available assessment year of data.

[1] ASCOR makes a distinction between indicators and metrics. Indicators represent metrics in Yes/No/Partial or Yes/No formats while metrics represent data points which are continuous. Indicators provide reporting information while metrics provide measurement information.

Section 2

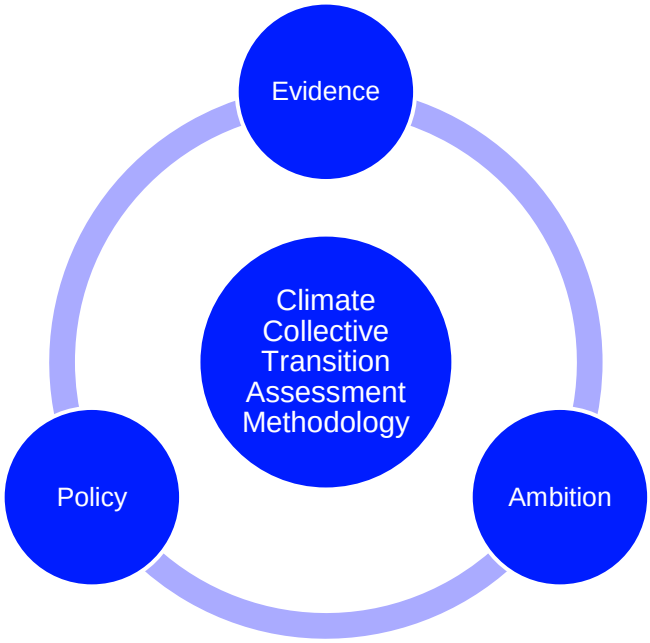
Scoring Framework

2. Structure & Approach

2.1 FTSE Climate Collective Transition Assessment Methodology – Overall framework

The FTSE Climate Collective Transition Assessment Methodology uses 51 indicators, quantitative and qualitative, from the latest yearly available data across three pillars for all the countries assessed by the ASCOR project. Figure 1 provides a brief overview of the methodology.

Figure 1. FTSE Climate Collective Transition Assessment Methodology in a nutshell



From the ASCOR tool's comprehensive set of metrics, indicators and data points related to GHG emission performance, the methodology selects 51 indicators. 6 of these are mapped to the Evidence pillar, 11 to the Ambition pillar and 34 to the Policy pillar. To ensure fair treatment, the methodology calculates area and pillar scores using weighted averages, with all indicators and metrics equally weighted within each area.

The CCTAM calculates scores for all countries provisioned by the ASCOR tool. The addition of new countries by the data provider[2] would not impact the scoring framework and would result in the creation of scores for new constituents, too.

[2] As of December 2024, the coverage of the ASCOR tool is 70 countries. Their plan is to expand further in 2025 and 2026. For more information, please refer to the ASCOR Project.

2.2 FTSE Climate Collective Transition Assessment Methodology – Inputs

CCTAM scores are derived from assessments across the three above-mentioned pillars. Each pillar contains multiple underlying indicators and metrics, which are detailed in Table 1.

2.2.1 The ASCOR Framework

ASCOR is an investor-led project to develop a free and publicly available tool to assess the progress made by countries in managing the low-carbon transition and the impacts of climate change. ASCOR facilitates the engagement and dialogue between issuers and investors. It supports the former to showcase improvements and drive financing for climate change mitigation and adaptation and facilitates the latter's decision-making on sovereign bonds when a climate change consideration is concerned.

ASCOR focuses on data which is:

(i) Publicly available,

(ii) Easily interpretable and comparable. It prioritises "Yes" or "No" indicators and includes quantitative metrics where relevant,

(iii) Related to sovereign management of climate risk and opportunities, where factors which are outside of government decision-making are not accounted for (i.e. climate hazards).

The ASCOR framework is based on the following hierarchy:

(i) *Metrics*, which provide context for indicators

(ii) *Indicators*, measured as binary questions stating whether a country has taken a specific action

(iii) *Area*, based on themes of climate performance

(iv) *Pillars*, covering broad ASCOR subject matters. These, however, are not relevant to the CCTAM.

For more information, please refer to ASCOR's methodology note. The appendix includes an overview of the framework.

2.2.2 CCTAM's pillars

The ASCOR tool's indicators and metrics have been used as the foundations for the CCTAM scoring framework. According to the definitions explained below, they have been mapped to three pillars of assessment: Ambition, Policy, and Evidence.

2.2.3 Ambition Pillar

The Ambition pillar focuses on future targets or commitments that have yet to be realized. These can include both 'outcome measures' like targeted emission reductions and 'input measures' such as climate finance contributions. This pillar is crucial for understanding the goals and aspirations set by entities to address climate change and their commitment to achieving these outcomes.

2.2.4 Policy Pillar

The Policy pillar examines input measures, such as green jobs strategies, that have already been implemented. These measures can be directly influenced by the government and have a tangible impact on the real economy. By analysing these policies, we can assess the steps taken to foster the transition to a low carbon economy.

2.2.5 Evidence Pillar

The Evidence pillar evaluates current or past performance through "outcome measures" such as emissions and energy intensity. These indicators reflect the results of policies and cannot be directly influenced but can be shaped indirectly through policy implementation. By assessing these measures, it is possible to gain insights into the effectiveness of past and present policies in achieving desired environmental outcomes.

2.2.5.1 Emissions

Indicators EP.1.a.i and EP.1.a.ii (please refer to Table 1) measure countries' most recent emission level and countries' most recent emission trend and ASCOR offers nine options to assess these dimensions. In accordance with the Partnership for Carbon Accounting Financials (PCAF)'s Global GHG Accounting and Reporting Standards, both consumption and production-based emissions are selected to produce a balanced emission assessment. Emissions selected are absolute, measured in per capita terms and exclude Land Use, Land Use Change and Forestry (LULUCF), due to the latter's volatility. Produced emissions account for all greenhouse gases while consumed emissions only account for carbon dioxide[3].

On emission trends, consumed and produced emissions are measured using the compound 5-year annual growth rate, rather than a year-on-year or a 3-year annual growth rate. A 5-year measure better reflects a country's efforts and whether these have been persistent. As a result, this measure is less subject to volatility than year-on-year calculations (such as the dip in emissions during the Covid-19 pandemic).

[3] Produced emissions are often measured in carbon dioxide equivalent and account for all greenhouse gases, however, this is not the case for consumed emissions where data is incomplete due to complexity of measurement. For this reason, consumption emissions have been selected and thus only account for carbon dioxide emissions.

Table 1. FTSE Climate Collective Transition Assessment Methodology pillars and indicators

Pillar	Hierarchy	Indicator code	Indicator name	Area
Ambition	indicator	EP.2.a	Has the country set a 2030 emissions reduction target?	2030 Targets
Ambition	metric	EP.2.a.i	What is the targeted reduction relative to 2019 emissions?	2030 Targets
Ambition	indicator	EP.2.b	Does the country specify whether and how much carbon credits may contribute to its 2030 target?	2030 Targets
Ambition	metric	EP.2.c.i	What is the degree of alignment with its 1.5°C benchmark?	2030 Targets
Ambition	metric	EP.2.d.i	What is the degree of alignment with its 1.5°C fair share?	2030 Targets
Ambition	metric	EP.3.a.i	In what year is the net zero CO_2 target set?	Net Zero Targets
Ambition	indicator	EP.3.b	Is the country's net zero CO_2 target aligned with a global 1.5°C scenario?	Net Zero Targets
Ambition	indicator	EP.3.c	Is the country's net zero CO_2 target aligned with an accelerated deadline for high-income countries?	Net Zero Targets
Ambition	metric	CP.3.a.i	By what year has the country committed to phase out fossil fuel subsidies?	Fossil Fuels
Ambition	indicator	CP.4.d	Has the country set a net zero electricity target aligned with 1.5°C?	Sectoral Transitions
Ambition	metric	CF.1.b.i	What is the country's targeted level of international climate finance contributions as a % of GDP?	International Climate Finance
Evidence	metric	EP.1.a.i	What is the country's most recent emissions level?	Emissions Trends
Evidence	metric	EP.1.a.ii	What is the country's most recent emissions trend?	Emissions Trends
Evidence	indicator	EP.1.b	Is the most recent 5-year trend aligned with meeting the country's 1.5°C benchmark?	Emissions Trends
Evidence	indicator	EP.1.c	Is the most recent 5-year trend aligned with meeting the country's 1.5°C fair share?	Emissions Trends
Evidence	metric	CP.4.b.i	What is the country's energy intensity of primary energy?	Sectoral Transitions
Evidence	metric	CP.4.d.i	What percentage of the country's electricity generation is from low-carbon sources?	Sectoral Transitions
Policy	metric	CF.1.a.i	What is the country's 3-year average climate finance contribution as a % of GDP?	International Climate Finance

Pillar	Hierarchy	Indicator code	Indicator name	Area
Policy	metric	CP.3.b.i	How much is spent annually on explicit fossil fuel subsidies as a percentage of GDP?	Fossil Fuels
Policy	indicator	CP.1.a	Does the country have a framework climate law or equivalent?	Climate Legislation
Policy	indicator	CP.1.b	Does the country's framework climate law specify key accountability elements?	Climate Legislation
Policy	indicator	CP.2.a	Does the country have a carbon pricing system?	Carbon Pricing
Policy	metric	CP.2.b.i	What percentage of national greenhouse gas emissions is covered by an explicit carbon price?	Carbon Pricing
Policy	indicator	CP.2.c	Is the carbon price at least at the floor of a global carbon price corridor aligned with the Paris Agreement?	Carbon Pricing
Policy	metric	CP.2.c.i	What is the country's most recent explicit carbon price?	Carbon Pricing
Policy	indicator	CP.3.b	Does the country publish an inventory of explicit fossil fuel subsidies?	Fossil Fuels
Policy	indicator	CP.3.c	Has the country committed not to approve new coal mines?	Fossil Fuels
Policy	indicator	CP.3.d	Has the country committed not to approve new long-lead-time upstream oil and gas projects?	Fossil Fuels
Policy	indicator	CP.4.a	Does the country have a multi-sector climate strategy?	Sectoral Transitions
Policy	indicator	CP.4.b	Does the country have a law and target on energy efficiency?	Sectoral Transitions
Policy	indicator	CP.4.c	Has the country established mandatory climate-related disclosure?	Sectoral Transitions
Policy	indicator	CP.4.e	Has the country increased its protected areas as a percentage of total land area over the last 5 years?	Sectoral Transitions
Policy	metric	CP.4.e.i	What is the amount of protected area in the country as a percentage of total land area?	Sectoral Transitions
Policy	indicator	CP.5.a	Has the country published a National Adaptation Plan?	Adaptation
Policy	indicator	CP.5.b	Does the country regularly publish national climate risk assessments?	Adaptation
Policy	indicator	CP.5.c	Has the country published a Monitoring & Evaluation report on implementing adaptation?	Adaptation
Policy	indicator	CP.5.d	Does the country have a multi-hazard early warning system?	Adaptation

Pillar	Hierarchy	Indicator code	Indicator name	Area
Policy	indicator	CP.5.e	Is the country part of a sovereign catastrophe risk pool?	Adaptation
Policy	indicator	CP.6.a	Has the country ratified fundamental human, labour, and Indigenous rights conventions?	Just Transition
Policy	metric	CP.6.a.i	At what percentile is the country's Voice and Accountability estimate?	Just Transition
Policy	indicator	CP.6.b	Does the country have an inclusive and institutionalised approach on the just transition?	Just Transition
Policy	indicator	CP.6.c	Does the country have a green jobs strategy?	Just Transition
Policy	indicator	CP.6.d	Does the country integrate just transition into its carbon pricing?	Just Transition
Policy	indicator	CF.2.a	Has the country disclosed a transparent breakdown of the costs of implementing its Nationally Determined Contribution?	Transparency in Climate Costing
Policy	indicator	CF.2.b	Has the country disclosed a transparent breakdown of the costs of implementing its National Adaptation Plan?	Transparency in Climate Costing
Policy	indicator	CF.3.a	Has the country disclosed its climate-related expenditure?	Transparency in Climate Spending
Policy	indicator	CF.3.b	Does the country apply climate budget tagging?	Transparency in Climate Spending
Policy	metric	CF.4.i	What is the country's prospective solar energy capacity?*	Renewable Energy Opportunities
Policy	metric	CF.4.ii	What is the country’s prospective wind energy capacity?*	Renewable Energy Opportunities
Policy	metric	CF.4.iii	What is the country’s prospective geothermal energy capacity?*	Renewable Energy Opportunities
Policy	metric	CF.4.iv	What is the country’s prospective hydroelectric energy capacity?*	Renewable Energy Opportunities

Note: Indicators labelled with (*) imply that these have been summed together to create a new indicator named “Total prospective renewable energy”.

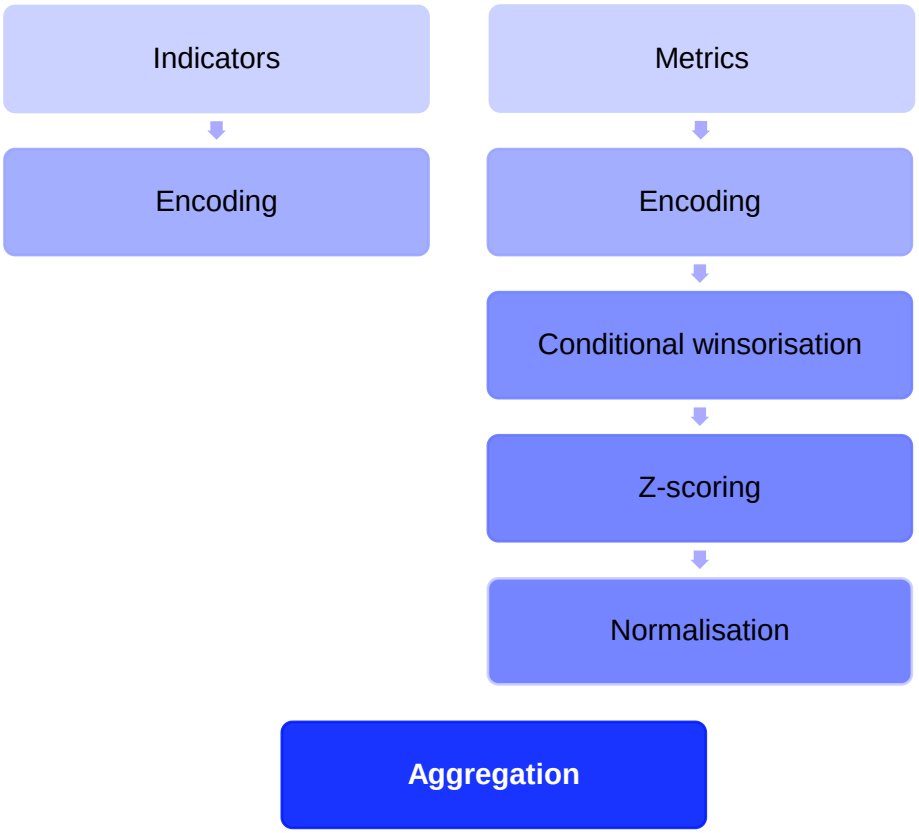
3. Scoring methodology

Raw data inputs for a total of 51 indicators are transformed statistically into scores. In this way, all countries can be compared fairly. Indicator scores range between 0 and 1, where higher scores signify better performance. Using the ASCOR tool's areas, we weigh indicators and metrics equally, producing aggregated pillar scores (i.e., Ambition, Policy, and Evidence). This process is explained below and illustrated in Figure 2.

As can be observed in Figure 2, all statistical transformations are applied to the metrics, (i.e., to continuous variables). Indicators, which are measured as categories, are encoded, as explained in section 3.3.1[4]. These data points are not transformed, as relativizing categorical data lacks statistical validity. Instead, they are preserved in their original form until the aggregation phase.

As explained in Section 2, indicators EP.1.a.i and EP.1.a.ii are based on four sub-indicators. These are also treated according to the process explained in Figure 2. However, this is done independently and at the beginning of the application of the methodology. As 4 sub-indicators are used to produce 2 indicators, the averaging procedure must be applied to statistically transformed indicators, so the raw input distributions are not distorted. In turn, the two final emissions indicators will be introduced into the methodology once the aggregation phase starts.

Figure 2. FTSE Climate Collective Transition Assessment Methodology scoring framework



Source: FTSE Russell.

[4] The coding rules for these are also defined in the appendix.

3.1.1 Encoding

Transformation of categorical indicators to numerical indicators:

(i) As categorical data cannot be utilized in sovereign methodological applications, indicators with Yes/No/Partial or Yes/No responses must be converted into integer values. Specifically, Yes becomes 1, No becomes 0, and Partial becomes 0.5. There are no instances where Yes is considered a negative response.

(ii) Some indicators provide years as responses, which cannot be handled as integer values. Instead, each year is assigned a value ranging from 0 to 1, with values closer to the current year receiving higher scores.

Handling of Exceptions:

For categorical indicators marked as "No or unsuitable disclosure," a value of 0 is applied, equating to a "No." Exceptions exist (e.g., EP.2.a.i, EP.2.d.i, EP.2.c.i) where continuous data is present, and assigning a 0 would be flawed. In these cases, the maximum value of the distribution is assigned, as these indicators have minimum optimization rules for the normalization step (explained in section 5).

Handling of Skewed Distributions:

(i) Metric CP.3.b.i is categorized as it exhibits a skewed distribution. In turn, it is treated as "Yes/No/Partial" response based on its distribution. Values below the first quartile (Q1) are assigned a 1, values between quartiles Q1 and Q3 are assigned a 0.5, and values above the third quartile (Q3) are assigned a 0.

(ii) Indicators CF.4.i, CF.4.ii, CF.4.iii, and CF.4.iv contain information that is dependent on country geography and exhibit skewness and numerous missing values. As a result, the four indicators are aggregated to create a new indicator, "CF.4.i_iv," representing total prospective energy capacity. This aggregation mitigates geographical and geological biases, allowing the indicator to be treated as any other continuous indicator.

3.1.2 Conditional winsorisation

To handle outliers, an initial test is put in place to analyse the distribution and detect whether for a given indicator, a country is found to have a data point above or below three standard deviations from the average. If this is the case, according to the country's position in the distribution, the country will be attributed the maximum value or the minimum value, respectively. If no country is detected as an outlier, then no winsorisation will be applied for the indicator. This rule is set to avoid the loss of valuable information.

3.1.3 Standardisation

This is the first step towards the harmonisation of the data. For every indicator and for the last assessment year, country z-scores[5] are produced. This allows us to assess the relative risk linked to the initial data and corrects for data scaling.

3.1.4 Normalisation

The z-scores are transformed into continuous scores on an interval, ranging from 0 to 1, in accordance with the cumulative distribution of a standard normal distribution (see Figure 3 for more details) – with 0 representing the worst score and 1 the best. Two different cases have to be taken into account:

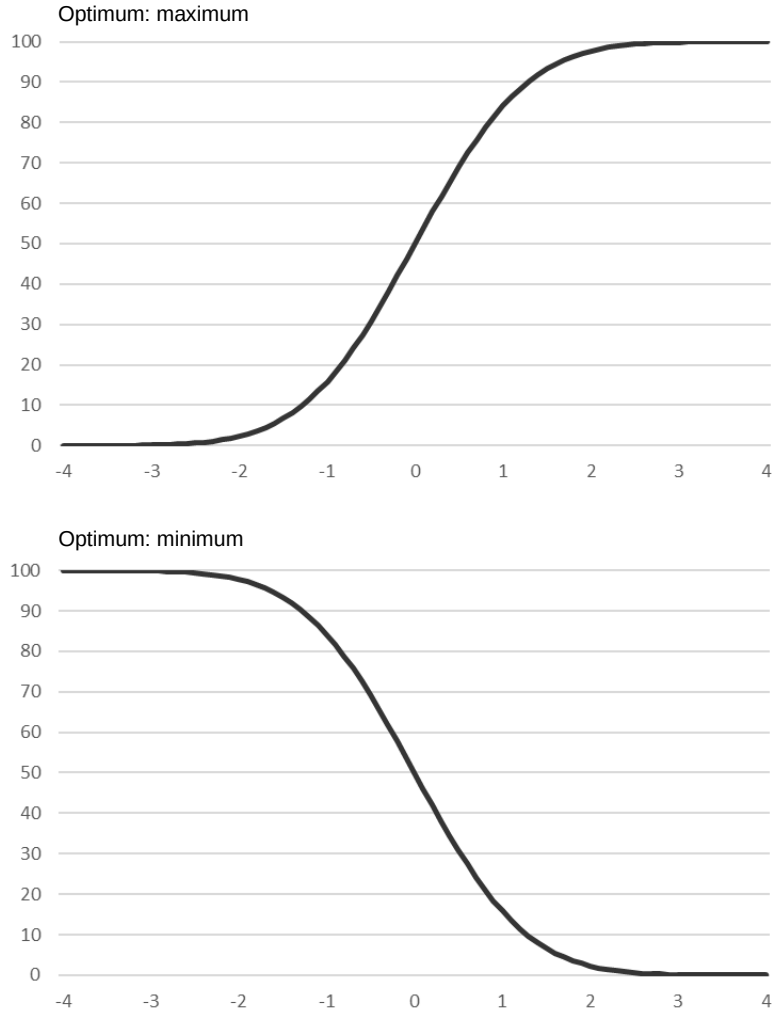
(i) When the optimum is a maximum, the higher the value, the higher the value of the corresponding z-score and the higher the indicator. This is the case for most indicators.

(ii) When the optimum is a minimum, the lower the value, the lower the value of the corresponding z-score and the higher the indicator.-This is the case for indicators such as CP.3.b.i (i.e., How much is spent annually on

[5] For a raw datum denoted $X_{i,t}$ with i the country and t the date, $z\text{-}score_{X_{i,t}} = \frac{X_{i,t} - \overline{X_t}}{\sigma_{X_t}}$ with $\overline{X_t} = n^{-1}\sum_{j=1}^{n} X_t$ and $\sigma_{X_t} = \sqrt{(n-1)^{-1}\sum_{j=1}^{n}\left(X_j - \overline{X_t}\right)^2}$.

explicit fossil fuel subsidies as a percentage of GDP?), where a higher expenditure on fossil fuel subsidies would result in a lower score.

Figure 3. Standard Normal Cumulative Distribution Function (x axis: z-scores; y axis: scores)



Source: FTSE Russell

3.1.5 Aggregation

The CCTAM scoring framework calculates weighted averages for each indicator and country to produce aggregated pillar-level scores (as outlined in Table 1). Aggregation is performed only for the selected indicators of interest, which are listed in the Appendix under the 'included' column.

The weighting sets are defined using the equation below:

$$Aggregation\ weights = \frac{(1/\#\ of\ indicators_{area})}{\sum indicator\ weights_{pillar}}$$

The numerator is the reciprocal of the total number of indicators in a given area. Areas, defined by the ASCOR tool, represent groups of indicators under the same theme (see the Appendix). For example, the Net Zero target area score is derived from the average of three indicators: EP.3.a.i, EP.3.b and EP.3.c. Most areas have at least two indicators; the exception is the Renewable Energy Opportunities area, which is based on the indicator CF.4.i_iv, comprising the sum of indicators CF.4.i, CF.4.ii, CF.4.iii and CF.4.iv.

The denominator represents the sum of all individual weights assigned to the indicators in each pillar. These weighting sets help determine the relative importance or contribution of each indicator within the context of the area and pillar. Additionally, the ASCOR tool exempts some middle and low-income countries from more ambitious indicators, allowing the equation to adapt to the count of available indicators at each area level, ensuring these countries are not penalised.

While the CCTI methodology uses different pillars than the ASCOR tool, some areas are repeated across the three pillars. This repetition does not affect the final pillar score, as areas provide intermediary aggregation for indicators and metrics of similar themes, enhancing the understanding of their relevance. The ultimate goal is to map indicators to the final pillars, rather than the areas themselves.

3.1.6 Handling exemptions

For missing values and field values labelled as “Not Applicable,” “Exempt,” or “No data,” as opposed to “No or unsuitable disclosure” where the country has shown no commitment, countries with these outlined values will be excluded from aggregation for the given indicator. This means that when calculating an area score, only the indicators with available data will be considered.

Appendix A

CCTAM inclusion rules

Indicator code	Indicator name	CCTI Model Inclusion
EP.2.b.i	What percentage of the 2030 target will be met using carbon credits?	No
EP.2.c	Is the country's 2030 target aligned with its 1.5°C benchmark?	No
EP.2.d	Is the country's 2030 target aligned with its 1.5°C fair share?	No
EP.3.a	Has the country set a net zero CO_2 target?	No
CP.3.a	Has the country committed to a deadline by which to phase out fossil fuel subsidies?	No
CF.1.b	Does the country's targeted climate finance contribution represent at least a proportional share of the $100 billion commitment?	No
EP.2.a	Has the country set a 2030 emissions reduction target?	Yes
EP.2.a.i	What is the targeted reduction relative to 2019 emissions?	Yes
EP.2.b	Does the country specify whether and how much carbon credits may contribute to its 2030 target?	Yes
EP.2.c.i	What is the degree of alignment with its 1.5°C benchmark?	Yes
EP.2.d.i	What is the degree of alignment with its 1.5°C fair share?	Yes
EP.3.a.i	In what year is the net zero CO_2 target set?	Yes
EP.3.b	Is the country's net zero CO_2 target aligned with a global 1.5°C scenario?	Yes
EP.3.c	Is the country's net zero CO_2 target aligned with an accelerated deadline for high-income countries?	Yes
CP.3.a.i	By what year has the country committed to phase out fossil fuel subsidies?	Yes
CP.4.d	Has the country set a net zero electricity target aligned with 1.5°C?	Yes
CF.1.b.i	What is the country's targeted level of international climate finance contributions as a % of GDP?	Yes
EP.1.a	Has the country improved its emissions profile over the past 5 years?	No
CP.3.c.i	What is the level of coal rents in the country as a percentage of GDP?	No
CP.3.d.i	What is the level of oil rents in the country as a percentage of GDP?	No
CP.3.d.ii	What is the level of natural gas rents in the country as a percentage of GDP?	No
CF.1.a	Does the country contribute at least a proportional share of the $100 billion commitment to climate finance?	No
EP.1.a.i	What is the country's most recent emissions level?	Yes
EP.1.a.ii	What is the country's most recent emissions trend?	Yes
EP.1.b	Is the most recent 5-year trend aligned with meeting the country's 1.5°C benchmark?	Yes
EP.1.c	Is the most recent 5-year trend aligned with meeting the country's 1.5°C fair share?	Yes
CP.4.b.i	What is the country's energy intensity of primary energy?	Yes
CP.4.d.i	What percentage of the country's electricity generation is from low-carbon sources?	Yes
CP.2.b	Does the country's carbon pricing system cover at least 50% of national greenhouse gas emissions?	No
CP.1.a	Does the country have a framework climate law or equivalent?	Yes
CP.1.b	Does the country's framework climate law specify key accountability elements?	Yes

Indicator code	Indicator name	CCTI Model Inclusion
CP.2.a	Does the country have a carbon pricing system?	Yes
CP.2.b.i	What percentage of national greenhouse gas emissions is covered by an explicit carbon price?	Yes
CP.2.c	Is the carbon price at least at the floor of a global carbon price corridor aligned with the Paris Agreement?	Yes
CP.2.c.i	What is the country's most recent explicit carbon price?	Yes
CP.3.b	Does the country publish an inventory of explicit fossil fuel subsidies?	Yes
CP.3.b.i	How much is spent annually on explicit fossil fuel subsidies as a percentage of GDP?	Yes
CP.3.c	Has the country committed not to approve new coal mines?	Yes
CP.3.d	Has the country committed not to approve new long-lead-time upstream oil and gas projects?	Yes
CP.4.a	Does the country have a multi-sector climate strategy?	Yes
CP.4.b	Does the country have a law and target on energy efficiency?	Yes
CP.4.c	Has the country established mandatory climate-related disclosure?	Yes
CP.4.e	Has the country increased its protected areas as a percentage of total land area over the last 5 years?	Yes
CP.4.e.i	What is the amount of protected area in the country as a percentage of total land area?	Yes
CP.5.a	Has the country published a National Adaptation Plan?	Yes
CP.5.b	Does the country regularly publish national climate risk assessments?	Yes
CP.5.c	Has the country published a Monitoring & Evaluation report on implementing adaptation?	Yes
CP.5.d	Does the country have a multi-hazard early warning system?	Yes
CP.5.e	Is the country part of a sovereign catastrophe risk pool?	Yes
CP.6.a	Has the country ratified fundamental human, labour, and Indigenous rights conventions?	Yes
CP.6.a.i	At what percentile is the country's Voice and Accountability estimate?	Yes
CP.6.b	Does the country have an inclusive and institutionalised approach on the just transition?	Yes
CP.6.c	Does the country have a green jobs strategy?	Yes
CP.6.d	Does the country integrate just transition into its carbon pricing?	Yes
CF.1.a.i	What is the country’s 3-year average climate finance contribution as a % of GDP?	Yes
CF.2.a	Has the country disclosed a transparent breakdown of the costs of implementing its Nationally Determined Contribution?	Yes
CF.2.b	Has the country disclosed a transparent breakdown of the costs of implementing its National Adaptation Plan?	Yes
CF.3.a	Has the country disclosed its climate-related expenditure?	Yes
CF.3.b	Does the country apply climate budget tagging?	Yes
CF.4.i	What is the country's prospective solar energy capacity?	Yes
CF.4.ii	What is the country’s prospective wind energy capacity?	Yes
CF.4.iii	What is the country’s prospective geothermal energy capacity?	Yes
CF.4.iv	What is the country’s prospective hydroelectric energy capacity?	Yes
CF.4	Renewable Energy Opportunities	Used as an aggregation aid
EP	Emissions Pathways	No

Indicator code	Indicator name	CCTI Model Inclusion
CP	Climate Policies	No
CF	Climate Finance	No
EP.1	Emissions Trends	Used as an aggregation aid
EP.2	2030 Targets	Used as an aggregation aid
EP.3	Net Zero Targets	Used as an aggregation aid
CP.1	Climate Legislation	Used as an aggregation aid
CP.2	Carbon Pricing	Used as an aggregation aid
CP.3	Fossil Fuels	Used as an aggregation aid
CP.4	Sectoral Transitions	Used as an aggregation aid
CP.5	Adaptation	Used as an aggregation aid
CP.6	Just Transition	Used as an aggregation aid
CF.1	International Climate Finance	Used as an aggregation aid
CF.2	Transparency in Climate Costing	Used as an aggregation aid
CF.3	Transparency in Climate Spending	Used as an aggregation aid

Appendix B

CCTAM Encoding rules

Indicator code	Encoding
EP.2.a, EP.2.b, EP.2.c, EP.2.d, EP.3.a, EP.3.b, EP.3.c, CP.3.a, CP.4.d, CF.1.b, EP.1.a, EP.1.b, EP.1.c, CF.1.a, CP.1.a, CP.1.b, CP.2.a, CP.2.b, CP.2.c, CP.3.b, CP.3.c, CP.3.d, CP.4.a, CP.4.b, CP.4.c, CP.4.e, CP.5.a, CP.5.b, CP.5.c, CP.5.d, CP.5.e, CP.6.a, CP.6.b, CP.6.c, CP.6.d, CF.2.a, CF.2.b, CF.3.a, CF.3.b	Yes: 1 Partial: 0.5 No: 0
E.P.3.a.i	2050: 0.6 2040: 0.8 2060: 0.4 2030: 1 2045: 0.7 2035: 0.9 2070: 0.2 2053: 0.54 No or unsuitable disclosure: 0
CP.3.a.i	2030: 0.5 2023: 1 2025: 1 2010: 1 2015: 1 No or unsuitable disclosure: 0
CF.4.i, CF.4.ii, CF.4.iii, CF.4.iv	CF.4.i_iv = CF.4.i + CF.4.ii + CF.4.iii + CF.4.iv
CP.3.b.i	<Q1: 0 Between Q1 and Q3: 0.5 >Q3: 1
EP.2.a.i, EP.2.d.i, EP.2.c.i,	Standard treatment except for “No or unsuitable disclosure”, where these are attributed the maximum value of the distribution for the respective indicator.

Appendix C

ASCOR Framework

Type	Code	Text
pillar	**EP**	**Emissions Pathways**
area	EP.1	Emissions Trends
indicator	EP.1.a	Has the country improved its emissions profile over the past 5 years?
metric	EP.1.a.i	What is the country's most recent emissions level?
metric	EP.1.a.ii	What is the country's most recent emissions trend?
indicator	EP.1.b	Is the most recent 5-year trend aligned with meeting the country's 1.5°C benchmark?
indicator	EP.1.c	Is the most recent 5-year trend aligned with meeting the country's 1.5°C fair share?
area	EP.2	2030 Targets
indicator	EP.2.a	Has the country set a 2030 emissions reduction target?
metric	EP.2.a.i	What is the targeted reduction relative to 2019 emissions?
indicator	EP.2.b	Does the country specify whether and how much carbon credits may contribute to its 2030 target?
metric	EP.2.b.i	What percentage of the 2030 target will be met using carbon credits?
indicator	EP.2.c	Is the country's 2030 target aligned with its 1.5°C benchmark?
metric	EP.2.c.i	What is the degree of alignment with its 1.5°C benchmark?
indicator	EP.2.d	Is the country's 2030 target aligned with its 1.5°C fair share?
metric	EP.2.d.i	What is the degree of alignment with its 1.5°C fair share?
area	EP.3	Net Zero Targets
indicator	EP.3.a	Has the country set a net zero CO_2 target?
metric	EP.3.a.i	In what year is the net zero CO_2 target set?
indicator	EP.3.b	Is the country's net zero CO_2 target aligned with a global 1.5°C scenario?
indicator	EP.3.c	Is the country's net zero CO_2 target aligned with an accelerated deadline for high-income countries?
pillar	**CP**	**Climate Policies**
area	CP.1	Climate Legislation
indicator	CP.1.a	Does the country have a framework climate law or equivalent?
indicator	CP.1.b	Does the country's framework climate law specify key accountability elements?
area	CP.2	Carbon Pricing
indicator	CP.2.a	Does the country have a carbon pricing system?
indicator	CP.2.b	Does the country's carbon pricing system cover at least 50% of national greenhouse gas emissions?
metric	CP.2.b.i	What percentage of national greenhouse gas emissions is covered by an explicit carbon price?
indicator	CP.2.c	Is the carbon price at least at the floor of a global carbon price corridor aligned with the Paris Agreement?
metric	CP.2.c.i	What is the country's most recent explicit carbon price?

Type	Code	Text
area	CP.3	Fossil Fuels
indicator	CP.3.a	Has the country committed to a deadline by which to phase out fossil fuel subsidies?
metric	CP.3.a.i	By what year has the country committed to phase out fossil fuel subsidies?
indicator	CP.3.b	Does the country publish an inventory of explicit fossil fuel subsidies?
metric	CP.3.b.i	How much is spent annually on explicit fossil fuel subsidies as a percentage of GDP?
indicator	CP.3.c	Has the country committed not to approve new coal mines?
metric	CP.3.c.i	What is the level of coal rents in the country as a percentage of GDP?
indicator	CP.3.d	Has the country committed not to approve new long-lead-time upstream oil and gas projects?
metric	CP.3.d.i	What is the level of oil rents in the country as a percentage of GDP?
metric	CP.3.d.ii	What is the level of natural gas rents in the country as a percentage of GDP?
area	CP.4	Sectoral Transitions
indicator	CP.4.a	Does the country have a multi-sector climate strategy?
indicator	CP.4.b	Does the country have a law and target on energy efficiency?
metric	CP.4.b.i	What is the country's energy intensity of primary energy?
indicator	CP.4.c	Has the country established mandatory climate-related disclosure?
metric	CP.4.d.i	What percentage of the country’s electricity generation is from low-carbon sources?
indicator	CP.4.d	Has the country set a net zero electricity target aligned with 1.5°C?
indicator	CP.4.e	Has the country increased its protected areas as a percentage of total land area over the last 5 years?
metric	CP.4.e.i	What is the amount of protected area in the country as a percentage of total land area?
area	CP.5	Adaptation
indicator	CP.5.a	Has the country published a National Adaptation Plan?
indicator	CP.5.b	Does the country regularly publish national climate risk assessments?
indicator	CP.5.c	Has the country published a Monitoring & Evaluation report on implementing adaptation?
indicator	CP.5.d	Does the country have a multi-hazard early warning system?
indicator	CP.5.e	Is the country part of a sovereign catastrophe risk pool?
area	CP.6	Just Transition
indicator	CP.6.a	Has the country ratified fundamental human, labour, and Indigenous rights conventions?
metric	CP.6.a.i	At what percentile is the country's Voice and Accountability estimate?
indicator	CP.6.b	Does the country have an inclusive and institutionalised approach on the just transition?
indicator	CP.6.c	Does the country have a green jobs strategy?
indicator	CP.6.d	Does the country integrate just transition into its carbon pricing?
pillar	**CF**	**Climate Finance**
area	CF.1	International Climate Finance
indicator	CF.1.a	Does the country contribute at least a proportional share of the $100 billion commitment to climate finance?
metric	CF.1.a.i	What is the country’s 3-year average climate finance contribution as a % of GDP?

Type	Code	Text
indicator	CF.1.b	Does the country’s targeted climate finance contribution represent at least a proportional share of the $100 billion commitment?
metric	CF.1.b.i	What is the country’s targeted level of international climate finance contributions as a % of GDP?
area	CF.2	Transparency in Climate Costing
indicator	CF.2.a	Has the country disclosed a transparent breakdown of the costs of implementing its Nationally Determined Contribution?
indicator	CF.2.b	Has the country disclosed a transparent breakdown of the costs of implementing its National Adaptation Plan?
area	CF.3	Transparency in Climate Spending
indicator	CF.3.a	Has the country disclosed its climate-related expenditure?
indicator	CF.3.b	Does the country apply climate budget tagging?
area	CF.4	Renewable Energy Opportunities
metric	CF.4.i	What is the country's prospective solar energy capacity?
metric	CF.4.ii	What is the country’s prospective wind energy capacity?
metric	CF.4.iii	What is the country’s prospective geothermal energy capacity?
metric	CF.4.iv	What is the country’s prospective hydroelectric energy capacity?

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