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ONE PLANET CITY CHALLENGE

ASSESSMENT FRAMEWORK

Technical Document 2025

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THE OPCC IN A NUTSHELL

The One Planet City Challenge (OPCC) is a global program designed by WWF to help cities increase their resilience through integrated and ambitious climate action. It aims to develop and disseminate participant cities' best climate mitigation and adaptation practices, while publicly recognizing the most ambitious leaders in the field.

WWF reviews cities' plans against good-practice, climate-action-planning criteria. Each participant receives a feedback report with the results of our assessment. This includes information on whether submitted targets align with the Paris Agreement goal of limiting global warming to a maximum of 1.5 °C. We further review whether the climate action plans are well-balanced towards the goal, and provide high level guidance on the most effective actions to meet these targets.

Participating cities can access capacity building webinars organized by WWF along with specific local programs and events run by local WWF offices. These may include specific topics such as food, nature-based solutions, adaptation, plastic waste or transportation.

WWF profiles climate leaders as an inspiration for others to follow suit. Cities with the most robust and credible reporting are acknowledged as finalists, and ultimately winners in various categories. Finalists are invited to participate in our global public engagement campaign We Love Cities, designed to raise awareness for cities' climate action, and to evoke support and feedback from citizens.

To participate in the OPCC, cities report their climate actions, strategies and data on CDP-ICLEI Track using the 2025 CDP-ICLEI Track and States & Regions Questionnaire. CDP-ICLEI Track is the world's leading climate progress accountability mechanism for cities - tracking nearly 1,000 cities' climate action in 2024 - supported by partnerships with other global organisations such as C40, the Global Covenant of Mayors, and WWF.

The OPCC strives to maximize the benefits for participating cities by aligning with multiple city initiatives, thereby minimizing their reporting workload. The OPCC data requirements are aligned with the Common Reporting Framework (CRF) of the Global Covenant of Mayors for Climate and Energy (GCoM).

The CRF is structured around three key pillars: adaptation, mitigation, and access to clean and affordable energy, providing a comprehensive approach to climate action1. This set of global recommendations ensures robust planning, implementation, monitoring, and reporting of climate initiatives. Public disclosure through the CRF promotes transparency and accountability, while international reporting amplifies cities' commitment to advancing climate action.

The OPCC has grown steadily since its inception in 2011. At this point, 900 cities in over 70 countries on 6 continents have taken part at least once in the OPCC.

1 Mitigation, adaptation, and energy access and energy poverty alleviation are the three core pillars of climate and energy action addressed in the Common Global Reporting Framework of the Global Covenant of Mayors for Climate and Energy (GCoM). Read more about the framework here.

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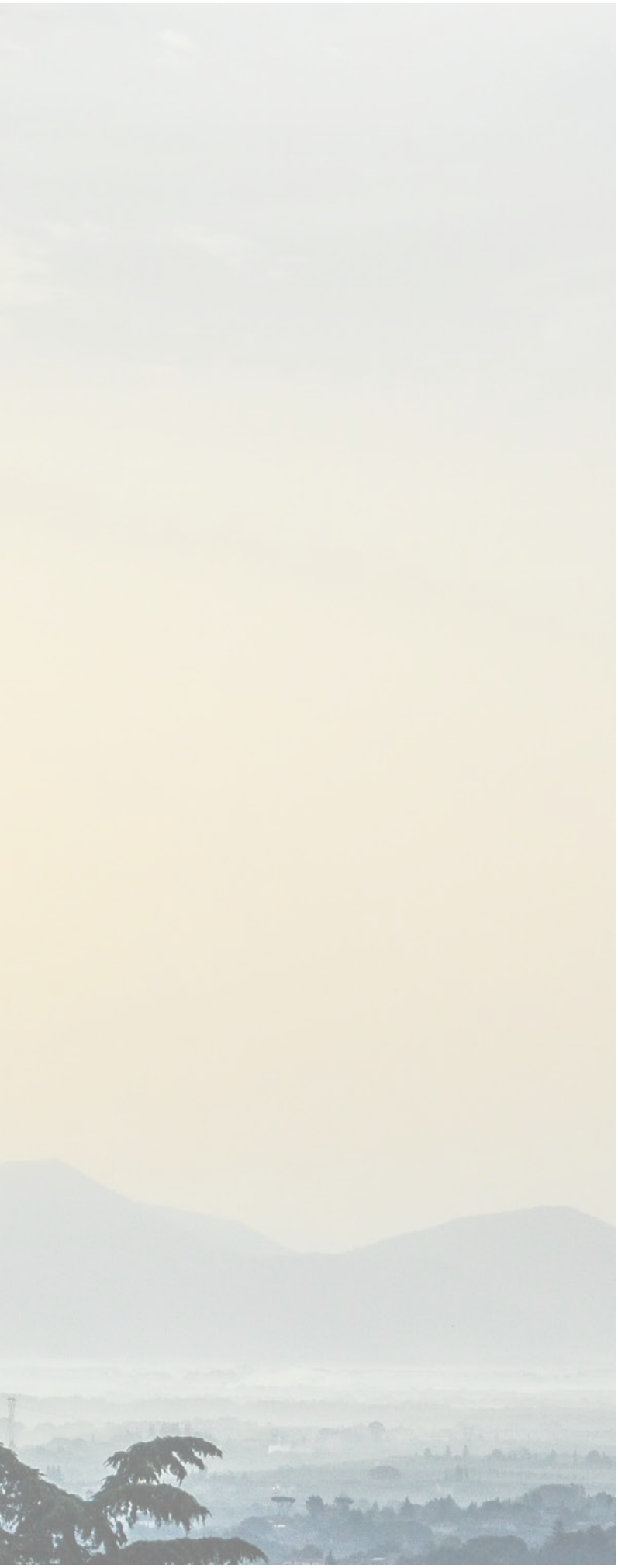

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ONE PLANET CITY CHALLENGE

This document provides in-depth methodological guidance on the 2025 version of the One Planet City Challenge (OPCC) Assessment Framework for participating cities. It also offers complementary support, aligned with the information available in the Information for Cities section of the OPCC website and the CDP-ICLEI webpage (Disclosure Cycle 2025 - CDP).

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1. INTRODUCTION

The OPCC Assessment Framework consists of the criteria and methods by which we evaluate and assess a city's climate journey. It frames our assessment of how well a city's targets and actions align with the most effective, science-based practices in climate action planning, while also providing strategic guidance to enhance their impact and effectiveness.

The Assessment Framework focuses on climate data and information publicly disclosed by cities[2] that follow the Common Reporting Framework of the Global Covenant of Mayors (GCoM). It is structured around three core elements:

- **Scoring Criteria:** A set of indicators that result in an aggregated score, reflecting a city's ability to steer toward and achieve success in climate adaptation and mitigation, as well as in energy access and energy poverty alleviation. Further details are available in the Indicator Cards compilation, provided as a supplementary document.
- **Complementary Feedback Forecasting:** A group of three methods that assess the alignment of a city's emissions reduction target with the 1.5°C pathway, and the effectiveness of its reported climate actions, based on city characteristics and the latest evidence-based approaches. Further details are available in Appendix A – HIMA Method and Appendix B – HPAA Method (available as supplementary documents).
- **Data Integrity Diagnosis:** A set of rules and standards used to evaluate the quality of a city's disclosed data, ensuring a robust and reliable assessment. Further details are available in Appendix C – DID Method (available as a supplementary document).

This document presents the 2025 version of the OPCC Assessment Framework, offering an overview of its structure, characteristics, and application throughout the 2025-2026 OPCC cycle.

2 For evaluation purposes, the OPCC assesses climate related data and information publicly disclosed by cities to CDP-ICLEI Track, using the 2025 CDP-ICLEI Track and States & Regions Questionnaire. For more information, please contact cities@cdp.net.

2. SCORING CRITERIA

The OPCC participant cities' climate journeys are evaluated through a set of scoring criteria, with the goal of encouraging continuous progress and higher ambition. The assessment is based entirely on data submitted by the organizations, ensuring that the evaluation reflects each city's own reporting and planning efforts.

The scoring criteria evaluate cities' efforts in climate mitigation and adaptation, as well as related to energy access and poverty. A total of 55 scoring indicators[3] are used in the assessment, which are aggregated into two high-level scoring dimensions:

- 'Vision': Reflects a city's commitment and capacity to drive change. This includes assessment of climate risks and energy access/poverty, emissions inventories, climate and energy targets, and systems for monitoring and reporting.
- 'Impact': Measures the potential and effectiveness of a city's current actions. It focuses on the quality and implementation of climate and energy plans.

To organize the indicators, the OPCC scoring method groups them into five thematic areas that reflect key steps in a city's climate journey[4]:

- GHG Emissions and Risks Assessment
- Climate Targets & Goals
- Climate Action Plans
- Strategy Implementation
- Results Monitoring

The indicators reflect climate best practices and serve not only as assessment tools but also as a guide for cities to identify strengths and areas for improvement. Table 1, presented below, lists the five thematic areas with its corresponding maximum score.

Table 1: OPCC total aggregated scores (maximum).

THEME	MAXIMUM SCORE
GHG Emissions and Risks Assessment	30
Climate Targets & Goals	22.5
Climate Action Plans	33
Strategy Implementation	42
Results Monitoring	22.5
MAX TOTAL SCORE	**150**

3 The OPCC also includes 12 informational indicators that are not scored but provide valuable context for internal analysis. For more details, see Indicator Cards (supplementary document).

4 This structure is based on the City Journey by the Global Covenant of Mayors for Climate and Energy (GCoM), a step-by-step guide that supports cities in turning climate ambition into action, covering stages from commitment to monitoring and reporting. Read more about the City Journey here.

The two tables below present all the OPCC indicators, for Vision (Table 2) and Impact (Table 3), organized by thematic area. Each indicator includes title, code, description, scoring criteria, maximum score, and the related question from the 2025 CDP-ICLEI Track and States & Regions Questionnaire, all of which are provided in the tables. See Indicator Cards (supplementary document) for details.

Table 2: OPCC scoring criteria for the *Vision* dimension.

THEME	INDICATOR (CODE)	DESCRIPTION	SCORING CRITERIA	CITIES QUESTION-NAIRE 2025	MAX SCORE
GHG Emissions & Risks Assessment	GHG Inventory Submission (AM1)	Checks for the presence of an emissions inventory	Attachment and/or unrestricted access provided (1.3 pts)	3.1.1	1.3
	Inventory Date (AM2)	Checks for the date of creation of the emissions inventory	Emissions inventory within last year (0.4 pts), within last 6 years (0.3 pts), older than 6 years (0.1 pts)	3.1.1	0.4
	Emissions Scope (AM3)	Checks for the scope or nature of emissions considered in the city inventory, under the chosen framework	A combination of fixed and additive scores, capped to 2.6 pts, based on the level of detail and coverage of reported emissions. More detailed and comprehensive reporting scores higher	3.1.2/ 3.1.3/ 3.1.4	2.6
	Sector Coverage (AM4)	Checks for the sector (energy, transport, waste, IPPU, and AFOLU) of emissions considered in the city inventory, under the chosen framework	A combination of fixed and additive scores, capped to 2.6 pts, based on the level of detail and coverage of reported emissions. More detailed and comprehensive reporting scores higher	3.1.2/ 3.1.3/ 3.1.4	2.6
	Data Quality (AM5)	Checks the quality of "Activity data" and "Emissions factors" on the city inventory	Additive score capped to 1.7 points. High data quality (0.85 pt), medium data quality (0.5 pts), low data quality (0.2 pts)	3.1.1	1.7
	Inventory Boundary (AM6)	Checks for the boundary of the emissions inventory	Boundary of inventory relative to jurisdiction boundary: same (1.7 pts), smaller (0.5 pts), larger (1.7 pts), or partial (0.85 pts) than city boundary	3.1.1	1.7
	GHG Coverage (AM7)	Checks for the number of GHG covered by the emissions inventory	Gases: all options (1.3 pts), 3 options (1.1 pts), 2 options (0.6 pts), 1 option (0.4 pts)	3.1.1	1.3
	Consumption-Based Inventory (AM8)	Checks whether the city has a Consumption- Based Inventory	Response: yes (0.4 pts); in progress and to be complete next year (0.2 pts); no, but intending to in the next two years (0.1 pts)	3.2	0.4
	Climate Risk Assessment (AA1)	Checks whether the city has named and attached a Climate Risk and Vulnerability Assessment	Assessment status: yes (1.2 pts); in progress and to be complete next year (0.8 pts); no, but intending in the next two years (0.4 pts)	2.1	1.2
	Assessment Boundary (AA2)	Checks for the boundary of the Climate Risk and Vulnerability Assessment	Boundary of assessment relative to jurisdiction boundary: same (2.2 pts), smaller (0.5 pts), larger (2.2 pts), or partial (1.6 pts) than city boundary	2.1.1	2.2
	Risk Factors (AA3)	Checks the number of factors considered in the Climate Risk and Vulnerability Assessment	Factors: all factors covered/ considered (2.6 pts), between six and nine (1.6 pts), between one and five (0.6 pt)	2.1.1	2.6
	Hazard Reporting (AA4)	Checks for the completeness of information provided for the hazards covered by the Climate Risk and Vulnerability Assessment	One fully reported hazard (3 pts), additional fully reported hazards (0.75 pts); capped to 4.5 pts. One partially reported hazard (1.5 pts), additional partially reported hazards (0.4 pts); capped to 3 pts	2.2	4.5
	Energy Access & Poverty (AE1)	Checks whether the city has reported an energy access and poverty assessment that considers sustainability, security and affordability	Additive scoring capped to 7.5 pts. The reported energy-related assessment(s) consider(s): sustainable energy (3.75 pts), energy security (3.75 pts) and/or affordable energy (3.75 pts).	4.1	7.5

THEME	INDICATOR (CODE)	DESCRIPTION	SCORING CRITERIA	CITIES QUESTION-NAIRE 2025	MAX SCORE
Climate Targets & Goals	City-Wide Emissions Target (TM1)	Checks for the boundary of the city-wide/sectoral emissions reduction target	Boundary of target relative to jurisdiction (city-wide/ sectoral): same or larger (0.7 pt/ 0.25 pts) than city boundary, smaller or partial (0.35 pts/ 0.15 pts), government operations only (0.15 pts/ 0.1 pts)	6.1.1	0.7
	Science-Based Target (SBT) (TM2)	Checks whether the city's emissions reduction target follows a recognized SBT methodology	SBT alignment (city-wide/ sectoral): target is an SBT AND the OPCC methodology is selected (0.7 pts/ 0.3 pts), target is an SBT, AND any OTHER methodology is selected (0.5 pt/ 0.15 pts), target is NOT an SBT, BUT another reported target is OR the city is committed to setting one in the next two years (0.3 pts/ 0.1 pts)	6.1.1	0.7
	Net-Zero & Reduction Targets (TM3.1)	Checks the city's emissions reduction target regarding the achievement of net-zero emissions (city-wide)	Net-zero emissions target (same or larger/ smaller or partial or government operations only): within the next 10 years (2.4 pts/ 1.6 pts), by 2040 (2.2 pts/ 1.3 pts), by 2050 (1.5 pts/ 0.8 pts), after 2050 (0.8 pts/ 0.5 pts)	6.1.1	2.4
	Near-term Reduction Targets (TM3.2)	Checks the city's emissions reduction target(s) (excepting net-zero targets) in line with the OPCC 1.5 °C Alignment Method (city-wide)	Target options (same or larger/ smaller or partial or government operations only): target aligned with a 1.5 °C trajectory by 2030 (1.35 pts/ 0.6 pts), target aligned by 2040 (0.7 pts/ 0.4 pts), target aligned by 2050 (0.4 pts/ 0.3 pts), target NOT aligned with a 1.5 °C trajectory for any year (0.2 pts/ 0.1 pts)	6.1.1	1.35
	Sectoral Reduction Targets (TM3.3)	Checks the city's emissions reduction target regarding sectoral targets	Additive score capped to 1.0 point. Every sector that is covered by a sectoral target (same or larger/ smaller or partial or government operations only) with target year > current year (0.3 pts/ 1.5 pts)	6.1.1	1.0
	Renewable Energy Targets (TM4)	Checks for renewable energy/ electricity target(s)	Score is proportional to the growth/reduction in renewable energy/ electricity level in the target year compared to the base year (same or larger/ smaller or partial or government operations only): All energy types (max. 0.8 pts/ 0.5 pts), renewable electricity (max. 0.4 pts/ 0.25 pts), renewable heating and/ or cooling (max. 0.25 pts/ 0.15 pts)	7.1	0.8
	Energy Efficiency Targets (TM5)	Checks for energy conservation and energy efficiency target(s)	Additive scores, capped to 0.8 pts. Targets types (same or larger/ smaller or partial or government operations only): Reduce energy consumption jurisdiction-wide (0.5 pts/ 0.25 pts), increase energy efficiency jurisdiction-wide or all buildings (0.3 pts/ 0.2 pts), any other energy efficiency target (0.15 pts/ 0.1 pts)	7.1	0.8
	GHG Coverage in Targets (TM6)	Checks for the number of GHG covered by the city's emissions reduction target(s)	Gases: all options (1.25 pts), 3 options (1 pt), 2 options (0.5 pts), 1 option (0.35 pts)	6.1.1	1.25
	Adaptation Timeline (TA1)	Checks for the presence of adaptation goal(s) and their timeline - whether they are short, medium or long-term	Additive score capped to 4.1 pts. Goal period is: for 2050 onwards (4.1 pts), between 2028 and 2050 (2.5 pts), between present and 2027 (1.6 pts), older than present time but no older than 5 years (0.9 pts), 6 years or older (0 pts)	5.1.1	4.1
	Hazard Coverage (TA2)	Checks whether the city's adaptation goal(s) cover the most significant hazards faced by the jurisdiction	Proportional score capped to 4.15 points for alignment of hazards covered by adaptation goal(s) with most significant hazards reported by the jurisdiction	5.1.1	4.15
	Energy Access & Poverty Goals (TE1)	Checks for the presence of energy related target(s) and their timeline - whether they are short, medium or long-term	Additive score capped to 5.25 ps. Goal period is: between present and 2030 (5.25 pts), between 2031 and 2040 (3.15 pts), for 2041 onwards (2.1 pts), older than present time but no older than 5 years (1 pt), 6 years or older (0 pts)	7.1	5.25

THEME	INDICATOR (CODE)	DESCRIPTION	SCORING CRITERIA	CITIES QUESTION-NAIRE 2025	MAX SCORE
Results Monitoring	Monitoring and Evaluation of Mitigation Plans (MM1)	Checks whether processes for monitoring, evaluation and updating have been established	Additive score capped to 7.2 points. Monitoring, evaluation and updating processes: annually (3 pts), every 1-3 years (2 pts), every 3-5 years or every 5+ years (1 pt)	8.1.1	7.2
	Monitoring and Evaluation of Adaptation Plans (MA1)	Checks whether processes for monitoring, evaluation and updating have been established	Additive score capped to 6.3 points. Monitoring, evaluation and updating processes: annually (2.6 pts), every 1-3 years (1.6 pts), every 3-5 years or every 5+ years (0.6 pt)	8.1.1	6.3
	Monitoring and Evaluation of Energy Plans (ME1)	Checks whether processes for monitoring, evaluation and updating have been established	Additive score capped to 4.5 points. Monitoring, evaluation and updating processes: annually (2 pts), every 1-3 years (1.2 pts), every 3-5 years or every 5+ years (0.6 pt)	8.1.1	4.5
	Oversight of Climate Risks and Opportunities (MI1)	Checks whether the city actively oversees climate-related risks and opportunities	Additive score capped to 4.5 points based on mechanisms to inform, consider, and assign responsibilities on climate related issues	1.3	4.5

Table 3: OPCC scoring criteria for the *Impact* dimension.

THEME	INDICATOR (CODE)	DESCRIPTION	SCORING CRITERIA	CITIES QUESTION-NAIRE 2025	MAX SCORE
Assessed GHG emissions and risks from climate change	City Mitigation Plan (PM1)	Checks whether the city has attached a climate change mitigation plan	Plan status: yes (integrated or standalone plan + same or larger/ smaller or partial or government operations only) (1.95 pts/ 1.2 pts); in progress and to be complete next year (0.7 pts); no, but intending to in two years (0.5 pts)	8.1	1.95
	Mitigation Plan Coverage (PM2)	Checks the alignment of action plan sectors with emissions inventory sectors and IPCC strategies[5]	Proportional score capped to 3.5 pts for alignment of action plan sectors with inventory sectors and 1.1 pts for alignment with IPCC strategies	9.2	4.6
	Mitigation Action Completeness (PM3)	Checks for the data completeness of mitigation actions reported	One fully reported action (1.7 pts), one partially reported action (1 pts), no reported actions (0 pts). For every additional fully/ partial reported action (0.4/ 0.3 pts)	9.2	4.6
	Co-Benefits of Mitigation Actions (PM4)	Checks whether the city has identified co-benefits against its mitigation actions	Identified two or more co-benefits for all reported actions (0.85 pts), for at least half of reported actions (0.4 pts)	9.2	0.85
	City Adaptation Plan (PA1)	Checks whether the city has attached a climate adaptation plan	Plan status: yes (integrated or standalone plan) (0.95 pts); in progress and to be complete next year (0.5 pt); no, but intending to in the next two years (0.25 pts)	8.1	0.95
	Adaptation Plan Coverage (PA2)	Checks for boundary of adaptation plan	Boundary of adaptation plan (integrated or standalone plan) relative to jurisdiction boundary: same or larger (0.95 pts) than city boundary, partial (0.6 pt), smaller (0.3 pts)	8.1.1	0.95
	Adaptation Actions for Key Risks (PA3)	Checks the alignment of adaptation actions with most significant climate hazards reported	Proportional score for every hazard covered by adaptation actions. Capped to 3.5 points	9.1	3.5
	Co-Benefits of Adaptation Actions (PA4)	Checks whether the city has identified co-benefits against its adaptation actions	Identified two or more co-benefit for all reported actions (1.25 pts), for at least half of reported actions (0.6 pt)	9.1	1.25
	Adaptation Action Completeness (PA5)	Checks for the data completeness of adaptation actions reported	One fully reported action (1.2 pts), one partially reported action (0.7 pts), no reported actions (0 pts). For every additional fully/ partial reported action (0.3/ 0.2 pts)	9.1	3.1
	City Energy Plan (PE1)	Checks whether the city has attached an energy-related plan	Plan status: yes (integrated or standalone plan) (3.4 pts), in progress and to be complete next year (1.8 pt), no but intending to in the next two years (0.9 pts)	8.1	3.4
	Energy Plan Coverage (PE2)	Checks for boundary of energy-related plan	Boundary of energy-related plan (integrated or standalone plan) relative to jurisdiction boundary: same or larger (3.35 pts) than city boundary, partial (2.2 pts), smaller (1.3 pts)	8.1.1	3.35
	Synergies in Action Plans (PI1)	Checks whether the actions within the city's plan(s) have positive synergy	Additive score capped to 1.5 pts. Actions synergy: plan assess synergies (0.5 pts), at least one adaptation action contributes to energy-related objectives (0.5 pts), at least one mitigation action contributes to energy-related objectives (0.5 pts)	8.1.1, 9.1, 9.2	1.5
	Community Engagement (P12)	Checks for community engagement in planning, particularly of marginalized and frontline population groups	Additive score capped to 3 points. Engaged groups: at least three groups (2.3 pts), less than three groups (1.5 pts). Additional scores if city has engaged: vulnerable groups (0.35 pts), indigenous peoples (0.35 pts)	8.1.1	3

5 Based on the OPCC High Impact Mitigation Actions Method (HIMAM), which identifies city-specific priority actions with the greatest emissions reduction potential and co-benefits.For more information, see section 3.2.1 in this document.

THEME	INDICATOR (CODE)	DESCRIPTION	SCORING CRITERIA	CITIES QUESTION-NAIRE 2025	MAX SCORE
Strategy Implemen-tation	Mitigation Action Progress (IM1)	Checks the implementation status of the reported mitigation actions	More than 7 actions in implementation stages (16.2 pts), between 4 and 7 actions in implementation stages (12.5 pts), between 1 and 3 actions in implementation stages (6.3 pts)	9.2	16.2
	Adaptation Action Progress (IA1)	Checks the implementation status of the reported adaptation actions	More than 7 actions in implementation stages (13.2 pts), between 4 and 7 actions in implementation stages (10.2 pts), between 1 and 3 actions in implementation stages (5.1 pts)	9.1	13.2
	Equitable Climate Action (II1)	Checks whether the city actively ensures the equitable distribution of climate action opportunities and benefits	Proportional score capped to 7 pts based on opportunities assessment, data collection, community engagement, actions design/ implementation addressing frontline communities' needs, and wider benefits and/or equity assessment for its climate actions	1.4	7
	Collaboration on Climate Action (II2)	Checks whether the city actively collaborates on climate-related issues	Engagement: collaboration with at least 3 stakeholders (5.6 pts), collaboration with 1 or 2 stakeholders (2.8 pts)	1.6	5.6

3. COMPLEMENTARY FEEDBACK

The OPCC provides each participant with strategic guidance on how their climate targets align to 1.5 °C and what big-win actions are needed to ensure an effective climate action package. Since 2018, the OPCC has followed a complementary forecasting methodology to achieve this purpose. The methodology comprises three methods:

- OPCC 1.5 °C Alignment Method
- OPCC High Impact Mitigation Actions Method
- OPCC High Potential Adaptation Actions Method

The first assesses whether a city's emissions reduction target aligns with a fair share of limiting global warming to 1.5 ˚C in the mid-term, or net-zero (by 2050 at the latest). The other two methods are used to review the alignment of cities' reported action plans with an evidence-based assessment of what the most effective climate action planning would be, given the city's characteristics.

3.1 OPCC 1.5 °C ALIGNMENT METHOD

The OPCC 1.5 °C Alignment Method is based on data from the IPCC's Special Report on Global Warming of 1.5 °C (2018). The approach incorporates considerations of fair emissions budget allocation, aligning with the objective of limiting global warming to 1.5 °C. The method is suitable for any type of city that reports in line with GCoM's Common Reporting Framework. The method has been applied to 359 cities participating in OPCC's 2023-2024 cycle.

3.1.1 DESCRIPTION

Building on the regional models presented in the IPCC Special Report, the OPCC requires cities to have city-wide[6] mid-term and long-term targets for Scope 1 and 2 emissions:

- 2030: Reduce per capita GHG emissions in line with a global reduction of 50%; and,
- 2050: Reduce total GHG emissions to net-zero.

Since the IPCC models are applied on a regional scale, the OPCC adds an additional layer of equity and fairness by applying the Human Development Index (HDI). This national adjustment is used to require faster decarbonization from cities in more developed countries. The HDI factor does this by modifying the midterm target, providing per capita emission reduction targets ranging between 25-65 %.

6 I.e., covering the entire city and nothing else.

3.1.2 DATA POINTS REQUIRED

The method uses the following key data points[7]:

- National HDI / Global average HDI for year 2018
- City-wide (total Scope 1 and 2) emissions baseline in 2018
- Population data for year 2018
- Population prognosis for year 2030

3.1.3 CALCULATION

The following steps are required to calculate the level of emissions reduction a target should achieve to comply with the OPCC 1.5 °C Alignment Method's 2030 interim target:

1. Gather 2018 Scope 1 and Scope 2 city-wide GHG emissions and divide by 2018 population to obtain baseline per capita emissions. We recommend estimating baseline emissions using the Global Protocol for Community-Scale GHG Emissions Inventory (GPC), but other methods can also be used[8].

2. Use the Human Development Index (HDI) to estimate a reduction target, from 2018 levels that reflect a fair share[9] of the 50 % global emissions reduction by 2030 identified in the IPCC Special Report on Global Warming of 1.5 °C. Find a country's HDI here[10]. Use the following formula:

   $$\textit{Reduction target} = 0.5 \times (\textit{HDI correction factor})$$

   where

   $$\textit{HDI correction factor} = \frac{HDI_{Country}}{HDI_{Global\ average}}$$

3. Translate the 2030 reduction target (Step 2) to a reduced per capita emissions value using baseline emissions (Step 1). Use the following formula:

   $$\textit{Emissions in } 2030_{Per\ capita} = (1\text{-Reduction target}) \times \textit{Baseline emissions in } 2018_{Per\ capita}$$

4. To estimate the absolute emissions level to be reached by 2030 in line with the OPCC 1.5 °C Alignment Method, multiply the emissions per capita estimated in Step 3 by the forecasted population by 2030 of the city.

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7 For methodological coherence, we recommend using documented or estimated data for 2018. However, data from other years can be used as a proxy. Note that the closer the data is to 2018, the more methodologically coherent the estimates will be.

8 It is recommended that, regardless of the method used, emissions inventories are verified in accordance with recognized verification standards.

9 Climate fair-share refers to the approach taken to define the level of emissions reduction effort that should be embraced based on historical responsibilities, capacities and intergenerational justice. For more information, see SBTN's Guide for Cities (November 2020).

10 An alternative to the use of national level HDI is the use of sub-national level HDI. Using the latter can better reflect the structural conditions of cities and thus make the target calculation more representative. The Global Data Lab (GDL) publishes a list of estimated sub-national HDIs for various countries and regions that can be used as an alternative to national HDI. For more information on sub-national HDI and its limitations, visit the GDL's website here.

3.2 OPCC HIGH IMPACT MITIGATION ACTIONS METHOD

The OPCC High Impact Mitigation Actions Method (HIMAM) provides cities with strategic guidance on climate mitigation, emphasizing the relevance of urban form and growth dynamics. Rather than focusing purely on generic recommendations, the method highlights how cities can leverage their unique characteristics to maximize climate impact. This approach helps identify where action can deliver the most meaningful results — both in cutting emissions and generating wider co-benefits — inspiring forward-looking, innovation-driven urban climate action.

3.2.1 UNDERSTANDING MITIGATION STRATEGIES FOR CITIES

Urban climate mitigation approaches can be categorized into three overarching strategies: 'Spatial Planning, Urban Form, and Infrastructure', 'Electrification and Net-Zero Emissions Resources', and 'Urban Green and Blue Infrastructure'. A fourth, cross-cutting strategy—'Socio-Behavioural Change'—influences energy demand directly or emerges in response to the implementation of the primary strategies.

Mitigation actions aligned with these approaches can drive systemic transformations in urban systems, enabling long-term decarbonisation (Lwasa et al., 2022).

Each strategy addresses a distinct yet interconnected dimension of urban sustainability. Together, they provide an integrated framework for reducing emissions while enhancing livability and resilience. The sections that follow outline how each contributes to long-term climate mitigation.

- **Spatial Planning, Urban Form, and Infrastructure:** Reducing emissions through the physical shaping of cities, this approach emphasizes compact, mixed-use development, dense zoning near employment centers, and well-connected street networks. By promoting transit-oriented design and walkability, it addresses structural determinants of long-term energy and transport patterns.
- **Electrification and Net-Zero Emissions Resources:** Through the electrification of transport, buildings, and industry, this strategy focuses on replacing fossil fuel-based energy systems with electric or zero-emission alternatives powered by clean energy sources like solar or wind. When paired with smart grids and storage technologies, electrification not only cuts emissions but also enhances air quality and energy efficiency in urban environments.
- **Urban Green and Blue Infrastructure:** Integrating nature-based solutions—such as green roofs, urban forests, and water-sensitive design—this strategy supports carbon sequestration, moderates urban heat, and manages stormwater. It fosters resilience, biodiversity, and well-being, aligning ecological restoration with urban sustainability and climate adaptation goals.
- **Socio-Behavioural Change:** Acknowledging the influence of urban systems on individual and collective behavior, this strategy targets the drivers of consumption and emissions. Infrastructure, city design, and policy shape daily choices—whether walking instead of driving, using public transport, or separating waste. Promoting low-carbon lifestyles requires both enabling environments and active public engagement.

Mitigation strategies differ in relevance and impact across cities. Using them as entry-points for cities, depending on their urban form and growth typologies, offers a practical framework for designing targeted, context-specific interventions.

3.2.2 METHODOLOGICAL DESCRIPTION

The HIMAM method systematically analyses commonly reported urban mitigation actions to pinpoint those with the highest potential for impact, based on a city's spatial development and growth patterns. Grounded in both regional insights and global evidence, it prioritizes overarching strategies proven to reduce emissions and prevent future increases while amplifying positive cascading effects (Lwasa et al, 2022). The method's tailored feedback not only highlights key opportunities for action but also supports cities in advancing effective planning, design, and implementation measures aimed at achieving deeper, more sustained emissions reductions.

3.2.2.1 Considerations

- **City Typologies:** The spatial configuration (urban form) and physical development (urban growth) of cities significantly influence the potential pathways for achieving systemic transformation across urban form, infrastructure, energy systems, and supply chains. Together, urban form (compact and walkable; dispersed and auto-centric) and urban growth (established; rapidly growing; emerging) characteristics result in six unique city typologies (Lwasa et al, 2022). Determining a city's typology can help identify the mitigation opportunities most suited to local conditions. For a detailed description of the city typologies, see Appendix A (provided as a supplementary document).
- **Geographic regions:** The method follows the regional classification used in the IPCC Sixth Assessment Report—Working Group II (IPCC, 2022), which includes seven global regions and 45 climate-defined sub-regions (e.g., Central America, Western Europe, Southern Africa, etc). Countries with diverse climatic zones, such as Mexico, Brazil, or the United States, were assigned to multiple sub-regions to better reflect their geographic variation. These sub-regional groupings were then aligned with the six city typologies to identify frequently reported mitigation measures across similar contexts.

This classification enables the OPCC to recommend context-sensitive, actionable mitigation strategies for each participating city. While the method does not measure the effectiveness of each action, it prioritizes those most frequently implemented in comparable settings—indicating high feasibility and greater potential for uptake.

3.2.2.2 Allocation of Mitigation Actions

To assign the most relevant mitigation actions per mitigation strategy, the OPCC applies a stepwise selection process. The goal is to provide each city with three distinct, non-repeating HIMAs per mitigation strategy based on cities' typologies.

The process begins by mapping each country to its respective sub-region(s). For each city typology, strategy and priority level, the most frequently reported action in that sub-region is selected. If there are ties or data gaps, the system falls back on broader regional or global data grouping[11]. This ensures that every city,

11 If there are ties or data gaps, the system falls back on broader regional or global data grouping in the following order: (1) "Region + typology"; (2) "Region"; (3) "Typology"; (4) Entire database (regardless of region and typology).

regardless of data availability, receives a complete and contextually relevant set of recommendations.

A uniqueness rule is applied to prevent duplicate actions for the same strategy. If a high-priority action has already been assigned, it is skipped in favour of the next valid option. Additionally, only meaningful, descriptive actions are included. Placeholders or vague entries are excluded through quality control filters.

This structured but flexible approach allows the OPCC to offer cities a replicable method for identifying practical mitigation options. While it cannot fully capture every local nuance, it provides a valuable baseline for cities to explore, refine, and customize their climate mitigation strategies.

For a complete list of mitigation action recommendations by strategy, city typology and region (and sub-region), see Appendix A (provided as a supplementary document).

3.3 OPCC HIGH POTENTIAL ADAPTATION ACTIONS METHOD

The OPCC High Potential Adaptation Actions Method (HPAAM) provides strategic, forward-looking advice to participating cities by identifying specific adaptation actions with the greatest potential to reduce their climate-related risks. By analysing commonly reported hazards and actions, the method offers tailored suggestions grounded in regional and global evidence. These suggestions serve as entry points for planning effective, locally relevant climate resilience strategies.

3.3.1 UNDERSTANDING MAIN CLIMATE HAZARDS IN CITIES

Urban areas face growing risks from four major climate-related hazards: extreme heat, urban flooding (including sea level rise), water scarcity, and other location-specific risks. These hazard types are widely documented across cities and regions, although their distribution and intensity vary based on geography, socio-economic conditions, and urban form (Dodman et al., 2022).

- **Extreme heat (Temperature and the Urban Heat Island):** Urban heat is intensified by the built environment and anthropogenic activity. Vulnerable populations—including the elderly, children, and low-income residents—are disproportionately affected, particularly in tropical and coastal cities where temperatures are expected to rise further.
- **Urban flooding (including sea level rise):** Flooding in cities results from heavy rainfall, sea level rise, and inadequate drainage, often worsened by rapid, unplanned urban expansion. Low-lying and informal settlements face heightened exposure to pluvial, fluvial, and coastal flooding, with cascading effects on health, housing, and infrastructure.
- **Water scarcity and security:** Climate change alters rainfall patterns and intensifies droughts, straining urban water systems. Demand from growing populations, degraded ecosystems, and inefficient infrastructure compounds these challenges, with the poorest communities facing the greatest access and quality risks.
- **Location-specific and compound hazards (Dynamic Interactions):** Landslides, fires, windstorms, and air pollution are less commonly reported but can be significant in particular contexts. These complex, interacting hazards require integrated, multi-hazard strategies that account for local vulnerabilities and cascading effects.

Hazard categories differ in relevance and impact across cities and are further complicated by data and knowledge gaps—especially in low-income or smaller settlements. These gaps obscure not only the presence and characteristics of hazards but also how their interactions amplify risks for vulnerable groups. Despite these limitations, hazard grouping offers a practical framework for identifying minimum resilience thresholds and designing targeted, context-specific interventions.

3.3.2 METHODOLOGICAL DESCRIPTION

Participating cities report their most significant climate hazards along with corresponding adaptation actions. While the specific risks differ across contexts, cities exposed to similar hazards—particularly within comparable climate zones—tend to adopt similar types of responses. To identify these shared patterns, the OPCC analysed adaptation disclosures submitted in 2023 and 2024 by cities in approximately 90 countries[12], using data available through CDP's Open Data Portal (CDP, 2025).

The analysis followed the regional classification used in the IPCC Sixth Assessment Report—Working Group II (IPCC, 2022), which includes seven global regions and 35 climate-defined sub-regions (e.g., Central America, Western Europe, Southern Africa, etc). Countries with diverse climatic zones, such as Mexico, Brazil, or the United States, were assigned to multiple sub-regions to better reflect their geographic variation. These sub-regional groupings were then aligned with the four primary urban hazard categories to identify frequently reported adaptation measures across similar contexts.

This classification enables the OPCC to recommend context-sensitive, actionable adaptation responses for each participating city. While the method does not measure the effectiveness of each action, it prioritizes those most frequently implemented in comparable settings—indicating high feasibility and greater potential for uptake.

3.3.3 ALLOCATION OF ADAPTATION ACTIONS

To assign the most relevant adaptation actions per hazard, the OPCC applies a stepwise selection process. The goal is to provide each country with five distinct, non-repeating HPAAs per hazard type. These are ranked by priority, from highest (1) to lowest (5).

The process begins by mapping each country to its respective sub-region(s). For each hazard and priority level, the most frequently reported action in that sub-region is selected. If there are ties or data gaps, the system falls back on broader regional or global data grouping. This ensures that every country, regardless of data availability, receives a complete and contextually relevant set of recommendations.

A uniqueness rule is applied to prevent duplicate actions for the same hazard. If a high-priority action has already been assigned, it is skipped in favour of the next valid option. Additionally, only meaningful, descriptive actions are included - placeholders or vague entries are excluded through quality control filters.

12 The assessment draws on over 9,000 adaptation actions reported by approximately 1,000 cities participating in the CDP-ICLEI Track public disclosure in 2023 and 2024.

This structured but flexible approach allows the OPCC to offer cities a replicable method for identifying practical adaptation options. While it cannot fully capture every local nuance, it provides a valuable baseline for cities to explore, refine, and customize their climate resilience strategies.

For a complete list of adaptation action recommendations by hazard and region (and sub-region), see Appendix B (provided as a supplementary document).

4. DATA INTEGRITY DIAGNOSIS

Reliable data inputs are the backbone of effective climate action monitoring and evaluation. To ensure this, the OPCC applies the Data Integrity Diagnosis (DID) as a systematic check on the inputs to the OPCC Assessment Framework — assessing their completeness, consistency, and suitability for a credible and robust application of the framework. By testing inputs against verifiable benchmarks, the DID provides guidance on the validity of assessment results, highlighting how complete and consistent data underpin reliable outcomes — while gaps or weaknesses in data may compromise the robustness of the assessment.

The DID applies a structured set of verification checks to selected questions in the 2025 CDP-ICLEI Track and States & Regions Questionnaire, using predefined rules, thresholds, and logical criteria to assess whether data submissions meet expected standards. These checks include validation of jurisdiction boundaries, plausible ranges for key figures such as emissions, population, and targets, as well as coherence between related data points.

While the DID process relies on automated logic-based checks, it also accommodates regional and sectoral differences by adjusting ranges and expectations accordingly. Rather than serving as a strict compliance mechanism, the DID aims to help cities identify potential data gaps or inconsistencies. The results, presented in the OPCC Gaps Report[13], offer practical insights for refining data quality and improving the overall credibility of city reporting — ultimately supporting a more effective use of the OPCC Assessment Framework.

For a full list of verification checks used in the DID, see Appendix C (available as a supplementary document).

13 Gaps Report" refers to the feedback document each OPCC participant receives, summarizing the results of the data evaluation. It highlights gaps in completeness and quality, and offers guidance on how to strengthen future disclosures.

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