



## **Global Covenant of Mayors Common Reporting Framework**

**Version 6.1**

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## **1. Introduction**

### **1.1. About the Global Covenant of Mayors**

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The Global Covenant of Mayors for Climate & Energy<sup>1</sup> (GCoM) is the world's largest alliance of cities and local governments with a shared long-term vision of promoting and supporting voluntary action to combat climate change and move to a low emission, climate resilient future. This coalition gathers thousands of cities of all sizes across 6 continents and more than 120 countries, representing almost 10% of the world's population.

Through the GCoM, cities and local governments are voluntarily committing to fight climate change, mirroring the commitments their national governments have set to ensure the goals of the Paris Agreement are met. It is a commitment to not only take bold local action but to also work side-by-side with peers around the world to share innovative solutions that enable mayors to do more, faster. GCoM cities connect and exchange knowledge and ideas, supported by relevant regional stakeholders.

More information: [www.globalcovenantofmayors.org](http://www.globalcovenantofmayors.org).

### **1.2. About the Regional Covenants**

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Regional and National Covenants already exist or are being developed with the aim of supporting cities and local governments in different regions all around the world, operating under the shared vision of the GCoM and principles and methods that best suit each region.

A Regional/National Covenant consists of all relevant local, regional and national partners and city networks that support and contribute to the implementation of the mission and vision of the Global Covenant of Mayors for Climate and Energy in a given geographic area. Regional/National Covenants tailor the GCoM to regional realities, ensuring effective implementation that is in line with regional or national priorities.

### **1.3. About the GCoM common reporting framework**

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Local governments committed to GCoM pledge to implement policies and undertake measures to: (i) reduce/limit greenhouse gas emissions, (ii) prepare for the impacts of climate change, (iii) increase access to sustainable energy, and (iv) track progress toward these objectives.

In order to ensure solid climate action planning, implementation and monitoring phases, as well as streamline measurement and reporting procedures, a set of new global recommendations were developed with the intention to be flexible to meet specific local or regional circumstances while also allowing for global aggregation and comparison of data. Together, the GCoM movement will be able to showcase achievements and track progress transparently – and thus advocate with cities and city networks in the various regions and nations for better multilevel governance of climate and energy issues with decision makers at all levels of government, and for improved technical and financial support. A common reporting language of the Global Covenant of Mayors will unite local voices and raise the bar, also for other climate stakeholders.

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<sup>1</sup> GCoM formally brings together the European Covenant of Mayors and the Compact of Mayors, the world's two primary initiatives of cities and local governments, to advance their transition to a low emission and climate resilient economy.

The following recommendations have been developed by a team of multi-disciplinary experts from GCoM partners (see list in **Annex A**) with the aim of providing a harmonized definition of a common reporting framework. They have been designed considering local governments' needs and a step-wise approach on meeting GCoM commitments and are built upon already existing and broadly used frameworks for reporting on climate change: the Compact of Mayors and the European Covenant of Mayors (e.g. regional versions developed in Europe and Eastern Europe), merging common elements that can serve the efforts of GCoM-committed local governments around the globe in achieving their objectives, and considering national and regional contexts.

### **1.3. About the consultation process**

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After in-depth discussions among experts, a draft version was open for stakeholders' review and comments in the period 30 April – 21 June 2018. This period of consultation with cities and local stakeholders in all regions refined the proposed reporting framework in order to ensure it well embraces the vast variety of realities and effectively supports local efforts to take climate action.

The following sections present the reporting frameworks for the following topic areas: (i) greenhouse gas emissions inventory; (ii) target setting; (iii) risk and vulnerability assessment; and (iv) climate action and energy access planning.

### **1.4. Next steps**

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The present recommendations were refined based on the outcomes of the consultation process to ensure they best meet local governments' needs and finalized as the common global reporting framework. From this point, the framework can then be adapted to suit each regional context (if needed).

More information will follow on: (i) guidance and technical tools to support local governments and cities in planning and achieving their climate goals; (ii) technical assistance and capacity development for local governments; (iii) updates on reporting platforms for 2019 as well as (iv) procedures related to data collection, data management (and access), data validation, analysis and dissemination.

Further guidance and technical tools will be provided in the implementation phase.

## 2. Definitions

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The terms “cities” and “local governments” are used throughout this document, understanding that the geo-political institutions of local governments may vary from country to country and terminology used may differ. In this document, a **city** refers to a geographical subnational jurisdiction (“territory”) such as a community, a town, or a city that is governed by a **local government** as the legal entity of public administration. The term “city boundary” refers to a local government’s administration boundary.

### 2.1. Proposed reporting levels

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This reporting framework uses precise language to indicate which provisions are requirements and which are optional, as follows:

- The term “**shall**” is used to indicate what is **required** (indicated as “**mandatory**” in the annexes).
- The term “**should**” is used to indicate a **strongly advised recommendation**, so is not a requirement (indicated as “**recommended**” in the annexes”).
- The term “**may**” is used to indicate an **option** that is permissible or allowable that local governments may choose to follow (indicated as “**optional**” in the annexes).

Flexibility has been built into this reporting framework to accommodate limitations in data availability and differences in emission sources between local governments (see section 3.2. on **notation keys**).

### 2.2. General Principles

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The **general principles** below are applicable to all topic areas presented in this document:

- The reporting framework allows **flexibility** to suit differentiated local circumstances and needs, such as: (i) the use of different methodologies under the IPCC framework, (ii) varied access to necessary and quality data, (iii) recognizing that local governments of smaller communities may have less capacity, and (iv) relevance to all geographical locations.
- The reporting framework allows for **consistency with national and/or sub-national requirements** for local governments within their own national contexts. It is also designed specifically to consider the UNFCCC’s framework for reporting under the Paris Agreement (work in progress on enhanced framework) and, as such, ensure overall consistency with the IPCC framework.
- Greenhouse gas (GHG) emissions inventories, risk and vulnerability assessments, target(s) and goal(s), identifying hazards, climate and energy access plans should be **relevant to the local and regional situation**, reflecting the specific activities, capacity and regulatory context of the local government.
- The proposed framework allows for the **continuation of the reporting requirements** by current European Covenant- and Compact-committed cities and local governments.

- Local governments may develop **joint GHG inventories, targets, and/or action plans** with the neighbouring community(ies).
- Local governments **shall** report in a way that enables meaningful comparison and aggregation with other cities.

### 3. Greenhouse Gas Emissions Inventory

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The following GHG reporting framework is built upon the Emission Inventory Guidance, used by the European Covenant of Mayors and the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC), used by the Compact of Mayors. Both refer to the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories<sup>2</sup>.

Local governments **shall** submit their greenhouse gas emissions inventory to GCoM<sup>3</sup> within two years upon joining GCoM. Every subsequent two years, or as set by regional GCoM offices, a more recent greenhouse gas emissions inventory **shall** be submitted to GCoM. Greenhouse gas emissions inventories **shall** cover a consecutive period of 12 months.

#### 3.1. GHG Accounting Principles

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In addition to the general reporting principles mentioned in section 2.2 above, local governments **shall** follow the GHG accounting principles outlined below:

- The inventory shall be relevant to the local and regional (where relevant) situation: reflecting the specific activities and policy-making needs of the city; taking into account its capacity and regulatory context.
- Local governments **shall** consider all categories of emission sources and report all emissions that are significant. Exclusion of emission sources **shall** be disclosed and justified, using the notation keys<sup>4</sup> in the reporting template.
- Local governments **shall** compile GHG inventories on a regular basis, to enable monitoring and tracking the impact of climate actions, also to ensure continuous improvement in data quality, resulting in a clearly defined inventory boundary, improved data sources and defined methodologies that **shall** be consistent through the years (e.g., clarify where there is an evolution, e.g. population growth), so that differences in the results between years reflect real differences in emissions and mitigation efforts by the local government and the city.
- Local governments **shall** ensure sufficient accuracy to give local decision makers and the public reasonable assurance of the integrity of emissions reported. Efforts **shall** be made to reduce uncertainties and make improvements over time.

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<sup>2</sup> Considering that the IPCC is busy revisiting the 2006 IPCC Guidelines, changes will also be studied and accommodated for the GCoM, as relevant.

<sup>3</sup> Inventory should be submitted to the GCoM secretariat where a Regional or National Covenant does not exist.

<sup>4</sup> Notation keys should be used when an emission source is not occurring, included elsewhere, not estimated, or confidential.

- To the extent possible, all relevant activity data<sup>5</sup>, data sources, methodologies, assumptions, exclusions and deviations **shall** be documented and reported, to allow for review, replication of good practice, and tackling challenges identified (e.g., lack of access to data in country X).

### 3.2. Notation Keys

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Notation keys **may** be used to accommodate limitations in data availability and differences in emission sources between local governments. Where notation keys are used, an accompanying explanation **shall** be provided.

The following are the descriptions on how to use the notation keys:

- **“NO”** (not occurring): An activity or process does not occur or exist within the city. This notation key may also be used for insignificant sources.
- **“IE”** (included elsewhere): GHG emissions for this activity are estimated and presented in another category in the same inventory, stating where it is added. This notation key may be used where it is difficult to disaggregate data into multiple sub-sectors.
- **“NE”** (not estimated): GHG emissions occur but have not been estimated or reported, with a justification why.
- **“C”** (confidential): GHG emissions which could lead to the disclosure of confidential information, and as such are not reported publicly.

Further guidance on the use and application of notation keys will be provided in the implementation phase.

### 3.3. Emission Sources

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Local governments **shall** report GHG emissions from at least three main sectors, namely stationary energy, transportation, and waste. The detailed reporting requirements are described in the following subsections.

Local governments **should** also report GHG emissions from Industrial Processes and Product Use (IPPU) and Agriculture, Forestry and Other Land Use (AFOLU) sectors<sup>6</sup> where these are significant.

Additionally, local governments **may** report GHG emissions from upstream activities, such as material extraction, or other out-of-boundary sources.

Further guidance on the reporting of emissions from IPPU, AFOLU and other sources will be provided in the implementation phase.

#### (1) Stationary energy

- All GHG emissions from fuel combustion and the consumption of grid-supplied energy, in stationary sources within the city boundary **shall** be reported.

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<sup>5</sup> Activity data is a quantitative measure of a level of activity that results in GHG emissions taking place during a given period of time (e.g., volume of gas used, kilometres driven, tons of solid waste sent to landfill, etc.).

<sup>6</sup> Please refer to 2006 IPCC Guidelines for National Greenhouse Gas Inventories for more details on these sectors.

- The emissions data **shall** be disaggregated by residential buildings, commercial buildings and facilities, institutional buildings and facilities, industry<sup>7</sup> and agriculture, forestry, and fisheries.
- GHG emissions from sources covered by a regional or national emissions trading scheme (ETS), or similar, **should** be identified.
- All fugitive emissions within the city boundary **shall** be reported.

## (2) Transportation

- All GHG emissions from fuel combustion and use of grid-supplied energy for transportation within the city boundary **shall** be reported and disaggregated by mode: on-road, rail, waterborne navigation, aviation, and off-road.
- Waterborne navigation, aviation, and off-road are unlikely to occur or be significant in most cities. Where they are significant sources, GHG emissions **shall** be included, unless they occur as part of transboundary journeys, in which case the notation key "Included Elsewhere" (IE) may be used (see below for more details). Where these sources do not occur, the notation key "Not Occurring" (NO) **shall** be used; where they are not significant, the notation key "NO" **may** be used (see section 3.2. for more details on the notation keys).
- Local governments **should** further disaggregate road and rail travel by fleet type: municipal fleets, public, private and commercial transport.
- Local governments **may** use the fuel sales, geographic (territorial), resident activity and city-induced methodologies<sup>8</sup> to estimate activity. They **should** identify the methodology used. Depending on the methodology used, data availability, and where such activities occur, local governments **may** choose to report GHG emissions from the inboundary component of domestic and/or international waterborne navigation and aviation (such as the landing and take-off cycle for aviation), or assume these are all out of boundary emissions and use the notation key "Included Elsewhere" (IE, see section 3.2) instead.

Further guidance on the use and application of transport system data collection methodologies will be provided in the implementation phase.

## (3) Waste

- All GHG emissions from disposal and treatment of waste and wastewater generated within the city boundary **shall** be reported and disaggregated by treatment type.
- Where waste is used for energy generation<sup>9</sup>, GHG emissions do not need to be reported. Instead, the notation key IE **should** be used (see **section 3.2.** for more details on the notation keys). Instead, these GHG emissions will be captured in the inventory through the use of heat or electricity generated from the treatment of waste.

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<sup>7</sup> This includes all emissions from energy use in industrial facilities, construction activities, and energy industries, except emissions from the generation of energy for grid-distributed electricity, steam, heat and cooling.

<sup>8</sup> Please refer to the *Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC)* or the *European CoM Guidebook* for further details on these methodological approaches.

<sup>9</sup> For example, household waste sent for incineration; or sludge from wastewater.

### 3.4. Energy generation

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Additionally, local governments **shall** report GHG emissions from energy generation activities. To avoid double counting, these **shall** not form part of the GHG emissions inventory total, and will be reported under an “Energy Generation” sector, where:

- All GHG emissions from generation of grid-supplied energy within the city boundary, and all GHG emissions from generation of grid-supplied energy by facilities owned (full or partial) by the local government outside the city boundary **shall** be reported and disaggregated by electricity-only, combined heat and power (CHP), and heat/cold production plants.
- GHG emissions from sources covered by a regional or national emissions trading scheme (ETS), or similar, **should** be identified.
- In addition, local governments **should** report all activity data for distributed local renewable energy generation.

### 3.5. Activity Data and Emission Factors

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In addition to GHG data, the reporting framework requires local governments to report activity data and emission factors as follow:

- Local governments **shall** report activity data (in MWh, PJ, etc.) and emission factors for all sources of emissions, disaggregated by activity/fuel type.
- Local governments **should** use activity-based emission factors (also referred to as IPCC emission factors), though **may** use Life-Cycle Analysis (LCA) based emission factors where this is required for GHG emissions reporting at the national level. Where local governments use LCA emission factors, they **shall** also consent to GCoM recalculating and reporting their inventory using standard activity-based emission factors to enable the comparability and aggregation of city inventories. Local governments **shall** specify whether the emission factor used to estimate GHG emissions from the consumption of grid-supplied electricity is locally estimated or covers a regional, national or supranational grid. In all cases, the emission factor used **shall** be fully referenced.
- Local governments **shall** account for emissions of the following gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O)<sup>10</sup>.
- GHG emissions **shall** be reported in metric tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e)<sup>11</sup>. Where possible, local governments **should** report CO<sub>2</sub>e emissions by individual GHG.
- Emissions from biogenic carbon are not required to be reported. Where they are reported, this **shall** be categorized separately and will not be counted in emissions totals.

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<sup>10</sup> When reporting IPPU, it will include hydro fluoro carbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>).

<sup>11</sup> CO<sub>2</sub> equivalent can be determined by multiplying each gas by its respective global warming potential (GWP). The IPCC Assessment Report used for the GWP factors should be clearly referenced (i.e. FAR; SAR; TAR; AR4; AR5).

## 4. Target Setting

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All local governments and cities are required to set and report city-wide emissions reduction targets. The GCoM defines eight categories of requirements for target setting, as explained below.

Local governments **shall** submit their greenhouse gas emissions reduction target(s) to GCoM within two years upon joining GCoM.

### (1) Boundary (geographic coverage, sectors, and GHGs)

The target boundary<sup>12</sup> **shall** be consistent with all emissions sources included in the GHG emissions inventory, with the possibility to exclude sources that are not controlled by the local government. In case that the target boundary does not align with the inventory boundary, any additions or exclusions **shall** be specified and justified. All exclusions **shall** be indicated by the notation key “Included Elsewhere” (IE), along with clear justification.<sup>13</sup> Local governments are **recommended** to report any sector-level targets alongside their city-wide target(s).

### (2) Target type

Local governments **shall** use one of the following four target types: base year emissions target, base year intensity target, baseline scenario target, or fixed level target<sup>14</sup>. For a baseline scenario target, the modelling methodologies, and parameters **shall** be transparently described.

**Base year emissions target:** Reduce, or control the increase of, emissions by a specified quantity relative to a base year. For example, a 25% reduction from 1990 levels by 2030.

**Base year intensity target:** Reduce emissions intensity (emissions per unit of another variable, typically GDP or capital Gross Domestic Product – GDP or per capita) by a specified quantity relative to a base year. For example, a 40% reduction from 1990 base year intensity by 2030.

**Baseline scenario target:** Reduce emissions by a specified quantity relative to a projected emissions baseline scenario. A Business as Usual (BaU) baseline scenario is a reference case that represents future events or conditions most likely to occur in the absence of activities taken to meet the mitigation target. For example, a 30% reduction from baseline scenario emissions in 2030.

**Fixed-level target:** Reduce, or control the increase of, emissions to an absolute emissions level in a target year. One type of fixed-level target is a carbon neutrality target, which is designed to reach zero net emissions by a certain date (e.g. 2050).

*(Source: Greenhouse Gas Protocol Mitigation Goal Standard)*

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<sup>12</sup> Please note that the local government’s administrative boundary may go beyond to the city’s geographic boundary. According to the GCoM all the emission within the “city boundary”, even beyond the geographic boundary, shall be reported to the GCoM.

<sup>13</sup> For example, some European cities’ targets do not include emissions sources that are already included in the EU Emissions Trading Scheme.

<sup>14</sup> Please refer to the [Greenhouse Gas Protocol Mitigation Goal Standard](#) for more details on these target types.

### **(3) Target year**

The target year **shall** be the same as, or later than, the target year adopted in the Nationally Determined Contribution (NDC<sup>15</sup>) or as set by Regional/National Covenants. Cities that set a target year beyond 2030 **shall** also include an interim target between now and 2030.

If the NDC target is before 2030, cities **should** additionally set a target for 2030.

### **(4) Base year** (only for base year emissions target and base year intensity target)

The base year should be the same as the base year used in the NDC or as set by Regional/National Covenants. Where the base year is different from the NDC (e.g. where a city has previously adopted another base year or due to a lack of data availability), this **shall** be explained.

### **(5) Ambition**

At a minimum, the target **shall** be as ambitious as the unconditional components<sup>16</sup> of the NDC (see also footnote 15). Local governments **should** set targets that are more ambitious than the NDC. When a national government increases their NDC, local governments **shall** have a maximum of five years to ensure their target remains as ambitious as the unconditional components of the NDC.

Where target (and base/scenario) years are different between the local government and NDC, GCoM will apply linear interpolation to both targets to determine whether the above requirement is met.

### **(6) Units**

Targets **shall** be reported as a percentage (%) reduction from the base year or scenario year (for base year emissions, base year intensity and baseline scenario targets). The absolute emissions in the target year(s) in metric tonnes CO<sub>2</sub>e **shall** also be reported for all target types.

If possible, the same approach should be chosen as is the case for the NDC target.

### **(7) Use of transferable emissions**

The use of transferable emissions units<sup>17</sup> is only permissible when a local government's target ambition exceeds the unconditional components of the NDC. Where this is the case, the local government **shall** report the target, with and without the transferable emissions units, as well as identify the source of the transferable emissions units. Further guidance on the use of transferable emissions will be provided in the implementation phase.

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<sup>15</sup> See e.g. [UNFCCC NDC List](#), [Climate Tracker](#), [CLIMATEWATCH](#)

<sup>16</sup> Many countries have submitted two sets of NDC targets: unconditional targets, to be implemented without any explicit external support; and conditional targets. The latter are more ambitious than unconditional targets and require external support for their fulfilment. This includes financial support, and policies or action in other countries which support or facilitate a given country's mitigation policy (e.g. adoption of carbon taxes in a particular country may be conditional on the widespread use of carbon taxes in other countries, to ensure that domestic industry is not unduly impacted).

<sup>17</sup> These are emissions allowances and offset credits from market mechanisms outside the target boundary that are used toward meeting a target. Please refer to the Greenhouse Gas Protocol Mitigation Goal Standard for more details.

## **(8) Conditionality**

The use of conditional components is only permissible when a local government's target ambition exceeds the unconditional components of the NDC. Any conditional components included in the target **shall** be identified and, where possible, the conditional components **should** also be quantified. Conditional components include where cities set a stretch target, or where actions are identified for other key stakeholders beyond that which they have committed to themselves (for example, where a local government assumes a more ambitious reduction in the carbon-intensity of the national electricity grid than that committed to in the NDC or official government policy).

## 5. Risk and Vulnerability Assessment

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The following reporting framework for risk and vulnerability assessments is built upon the reporting guidance used by the Compact of Mayors and the European Covenant of Mayors. This section provides requirements for risk and vulnerability assessments that form part of the climate change adaptation (resilience) plans, also understanding hazards and the adaptive capacity of the local government and community. Please refer to **Annex D: Risk and Vulnerability Assessment Reporting Framework** for further details.

### 5.1. Climate Risk and Vulnerability Assessment

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The local government **shall** prepare and submit climate risk and vulnerability assessment within two years after committing to the GCoM.

The assessment **shall** include the following information:

- Boundary of assessment (boundary of assessment **shall** be equal to or greater than the city boundary), including the local government(s) name(s)
- Year of approval from local government
- Data sources
- A glossary of key terms and definitions
- Leading/coordinating team in the city

Terminologies and definitions used in the reports **shall** be consistent with those used in the IPCC Fifth Assessment Report (AR5) or any update following the AR5 as well as with national frameworks/requirements.

### 5.2. Climate Hazards

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The local government **shall** identify the most significant climate hazards faced by the community. For each identified climate hazard, the local government **shall** report the following information:

- Current risk level (probability x consequence) of the hazard
- Description of expected future impacts
- Expected intensity, frequency, and timescale of the hazard
- All relevant sectors, assets, or services that are expected to be most impacted by the hazard in future and the magnitude of the impact for each of them

Furthermore, the local government **should** provide information on vulnerable population groups (e.g. poor, elderly, youth, people with chronic disease, unemployed, etc.) that are expected to be most affected by future hazards; this information can help the local government in having a better understanding of the vulnerability dimension of risks and in prioritizing their adaptation actions.

See Annex D, Table 1 for further details.

### 5.3. Adaptive Capacity

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The local government **shall** identify factors that will most greatly affect its own and the city's adaptive capacity and enhance climate resilience. For each factor, the local government **shall** report the following information:

- Description of the factor as it relates to (supporting or challenging) the adaptive capacity
- Degree to which the factor challenges (as opposed to supports) the adaptive capacity and obstructs enhanced climate resilience

See Annex D, Table 2 for further details.

### 5.4. Major Climate Hazards Occurred in the Past Years

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Besides the assessment of future hazards, the local government **shall** report the following information about major hazards that occurred in the past years:

- Scale of the hazard, including loss of human lives, economic losses (direct and indirect, if possible), environmental and other impacts
- Current risk level of the hazards (probability X consequence)
- Intensity and frequency of the hazard
- All relevant sectors, assets, or services most impacted by the hazard and the magnitude of impact for each of them
- Vulnerable population groups most affected by the hazard (if available)

## 6. Climate Action and Energy Access Plan(s)

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This section includes two elements, namely climate action plans and energy access plans. The climate action plan requirements outlined in this section are applicable to both mitigation and adaptation plans (or integrated plans). The energy access plan can be submitted in the same document as the climate action plan(s) or in a separate document.

### 6.1. Climate Action Plans

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Local governments **shall** develop plans for both climate change mitigation and adaptation (climate resilience), which **may** be presented in separate plans or an integrated plan. The plans **should** be in an official language used by the local government. Local governments **shall** submit their climate action plans to GCoM within three years upon joining GCoM (see section 7).

All action plan(s) **shall** include the following information for both mitigation and adaptation actions:

- Description of the stakeholder engagement processes

- Mitigation target(s) and/or adaptation / climate resilience goal(s); including (if available) sectoral targets
- All actions of priority sectors (identified from GHG emissions inventories and risk/vulnerability assessments)
- Descriptions for each action
- The local government(s) which formally adopted the plan and the date of adoption
- Synergies, trade-offs, and co-benefits of mitigation and adaptation actions
- Lead author team/Action Plan responsible/coordination team in the local governments

The mitigation target(s) **shall** be in line with requirements outlined in section 4 above. For adaptation goals, local governments **shall** report the goal descriptions (**shall** be aligned with the risks identified in the risk and vulnerability assessment (see section 5)), delivery date, and baseline year. Local government **should** also report the metric (or key performance index) for tracking the progress and monitoring plans.

For each action/action area/sector, the action plans **shall** provide the following information:

- Brief description of the action/action area/sector
- Assessment of energy saving, renewable energy production, and GHG emissions reduction by action, action area or sector (only applicable to mitigation actions).

For each action/action area/sector, the action plans **should** provide the following information:

- Financial strategy for implementing the action/action area/sector<sup>18</sup>
- Implementation status, cost and timeframe
- Implementing agency(ies)
- Stakeholders involved in planning and implementation

In addition, local governments **should** also provide the following information in the action plans:

- Prioritization of actions
- Policy instrument(s) to implement the actions

Local governments are encouraged to report actions in as much detail as possible.

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<sup>18</sup> Cities require massive and targeted investment in order to deliver low carbon and resilient infrastructure for their populations. Through partnerships with the EIB, EBRD, World Bank and other IFIs, GCoM is helping to fill the existing urban financing gap by providing cities with new levels of access to investments, technical assistance and advice and new partnerships are under developments. Disclosure of projects contained in Climate Action Plans with the related financial information is critical to better evaluate what new levels of access to investments, advice and financing are critical and additional to existing efforts to realizing cities' ambitious climate commitments. Such disclosure and transparency increases investors' confidence on the city's ability to deliver with accountability and good governance. Further guidance on project development and financing will be provided alongside these recommendations.

## 6.2 Monitoring

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The local government **shall** submit monitoring reports every two years after submitting the action plan(s). The monitoring reports **shall** provide information about the implementation status of each action/action area/sector contained in the action plan, helping to monitor progress made. The local government **shall** update and resubmit the action plan(s) when there are significant changes to the existing plan(s). The local government **should** also report the implementation cost for each action/action area/sector.

Further details on the reporting requirements and frequency can be found in section 7 and Annexes B-E.

## 6.3 Energy Access Plan

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All local governments **shall** report their energy access plans. However, at this stage, the detailed reporting framework is still being defined by the GCoM. Further consultation will be carried out before local governments are required to submit their energy access plans (which may be already a component of their Climate Action Plans).

In general, energy access refers to “access to secure, sustainable and affordable energy”. It is in line with the Sustainable Development Goals (SDG), in particular SDG 7 “Access to affordable, reliable, sustainable and modern energy for all”, and the Sustainable Energy For All (SEforALL) Initiative, which aims to ensure universal access to modern energy services.

An energy access plan typically includes three components:

### (1) Access to *secure* energy

- Reduce energy demand (i.e. energy efficiency and energy management).
- Diversify energy mix, including the biggest possible share of diverse renewable energy (also considering locally available RE sources).
- Lower dependence from imported energy and diversify sources of supply.

### (2) Access to *sustainable* energy

- The aim of the GCoM is that all energy used should become sustainable<sup>19</sup>, so whenever there is no access to energy in a location, renewable energy sources should be considered first, using energy efficient technologies.
- For access to electricity, renewable energy plays a growing role in both grid-based electrification and the expansion of decentralized technologies that are essential for rural areas.<sup>20</sup>

### (3) Access to *affordable* energy

- Energy affordability depends on many factors that typically go beyond the local government’s purview. For example, energy prices are usually addressed at the national level. However, the affordability of energy can be influenced by factors under the control of

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<sup>19</sup> For GCoM, nuclear energy is not considered “sustainable”.

<sup>20</sup> Energy Access Outlook 2017 “From Poverty to Prosperity”

the local government, such as local policies, energy management, the use of subsidies or other mechanisms like incentives to promote renewable energy systems or energy saving measures.

## 7. Overall Reporting Timelines

The reporting framework includes timelines for different elements of reporting. The following table shows the overall reporting time after joining GCoM.

Reporting Elements	Commit to join GCoM (Year 0)	Year 1	Year 2	Year 3	Year 4	Year 5
GHG emissions inventory	submit by year 2 at the latest				*	
Risk and vulnerability assessment	submit by year 2 at the latest					
Targets and goals (mitigation and adaptation)	submit by year 2 at the latest					
Climate action plan(s) (mitigation and adaptation, or integrated plan)	submit by year 3 at the latest					
Energy access plan	To be defined					
Progress report					*	

\* Every two years after submitting the climate action plan

Local governments may apply for an extension of reporting deadlines along with a clear justification.

## Annex A: Members of Data-TWG

Below are lists of the members of the Data-TWG main body, as well as the Emissions Inventory & Target Setting Subcommittee, the Risk and Vulnerability Assessment Subcommittee and the Climate Action and Energy Access Planning Subcommittee. An asterisk (\*) indicates membership in the main working group body. Dagger (‡) indicates membership in the subcommittee.

### D-TWG

Co-Chairs	
*‡Paolo Bertoldi	European Commission - DG Joint Research Centre
*‡Michael Doust	C40
Members	
*‡Albana Kona	European Commission - Joint Research Centre
*‡Silvia Rivas - Calvete	European Commission - DG Joint Research Centre
*‡Olav Berg	European Commission - DG ENER
*Joanna Ziecina	European Commission - DG ENER
*Eero Ailio	European Commission - DG ENER
*Alessandra Sgobbi	European Commission - DG CLIMA
*‡Cesar Carreño	ICLEI World Secretariat
* Maryke van Staden	ICLEI World Secretariat
*‡Miriam Badino	ICLEI World Secretariat
*‡Miguel Morcillo	CoM-IUC office/Climate Alliance
*‡Lucie Blondel	CoM-IUC office/Climate Alliance
*Mikaël Ange (new work assignment) – replaced by Alessandra Antonini	CoM-IUC office/Climate Alliance
*Frédéric Boyer	CoM-IUC office/Energy Cities
*‡Claire Markgraf	C40
*‡Fong Wee Kean	WRI
‡Carina Borgström -Hansson	WWF
*‡Shannon Mc Daniel	GCoM Secretariat

### Emissions Inventory and Target Setting Subcommittee

Chair	
Michael Doust	C40
Members	
Claire Markgraf	C40
Alessandra Sgobbi	European Commission - DG CLIMA
Olav Berg	European Commission - DG ENER
Albana Kona	European Commission - DG JRC

Cesar Carreño	ICLEI World Secretariat
Carina Borgstrom – Hansom	WWF
Miguel Morcillo	CoM-IUC office/Climate Alliance
Wee Kean Fong	WRI
Shannon Mc Daniel	GCoM Secretariat

### **Risk and Vulnerability Assessment Subcommittee**

Co-Chairs	
Paulo Barbosa	European Commission - DG Joint Research Centre
Laura Kavanaugh ( <i>until 28 FEB 2018</i> )	ICLEI World Secretariat
Members	
Alessandra Sgobbi	European Commission - DG CLIMA
Alice de Palma	CDP
Sara Telahoun	CDP
Chantal Oudkerk Pool	C40
Aleksandra Kazmierczak	European Environment Agency
James Deweese	WRI
Lucie Blondel	CoM-IUC office/Climate Alliance
Shannon Mc Daniel	GCoM Secretariat

### **Climate Action and Energy Access Planning Subcommittee**

Chair	
Silvia Rivas Calvete	EC - DG JRC
Members	
Wee Kean Fong	WRI
Lucie Blondel	CoM-IUC office/Climate Alliance
Miriam Badino	ICLEI World Secretariat
Michael Doust	C40
Julia Lipton	C40
Nicola Mander	C40
Robert Kehew	UN HABITAT
Shannon Mc Daniel	GCoM Secretariat

## Annex B: GHG Inventories Reporting Framework

Outline of reporting framework under the GCOM, mandatory level. This is not a reporting template.

	Mandatory	Description	GCOM support
<b>Local Government Information</b>			
Official name of local government	✓		
Country	✓		
Region	✓		
Inventory year	✓		
Geographic boundary	✓	Description of boundary and accompanying map	
Resident population (in the inventory year)	✓		
GDP	Optional		
Heating degree days / cooling degree days	Optional		
GHGs	CO2 or CO2e (CO2, CH4, N2O)	CO2e at a minimum, state which gases are included and encouraged to disaggregate by individual GHG. Biogenic carbon is not required but may be reported separately	
Emissions factors	IPCC or LCA	IPCC recommended but may use LCA where required for national reporting. If LCA, will also need to consent to GCOM converting data to an 'IPCC' inventory	- Develop tool and capacity to convert LCA inventory to 'IPCC' inventory
GWP	✓	Local governments should disclose which GWP factors they are using (i.e. FAR; SAR; TAR; AR4; AR5)	
<b>Emission Sources (Activity data and Emission Factors by Fuel type / activity and GHG Emissions)</b>			
Building / Stationary Energy	Fossil fuels	Grid-supplied energy	
Residential buildings	✓	✓	All GHG emissions from fuel combustion in stationary sources within the city boundary, consumption of grid-supplied energy consumed within the city boundary and fugitive emissions within the city boundary.
Commercial building and facilities	✓	✓	
Institutional buildings and facilities	✓	✓	
Industry	Non-ETS (or similar) ✓	✓	
	ETS (or similar)	✓	
Agriculture	✓	✓	GHG emissions from sources covered by a regional or national emissions trading program should be identified.
Fugitive emissions	✓		
Transportation / Mobile Energy	Fossil fuels	Grid-supplied energy	
On-road	✓	✓	All GHG emissions from fuel combustion and use of grid-supplied energy for transportation within the city boundary. In case
Rail	✓	✓	
			- Guidance on disaggregating road and rail data by fleet type

Waterborne navigation	✓	✓	waterborne navigation, aviation and off-road are not occurring, the notation key NO shall be used, where they are not significant the notation key NO may be used. Where they are significant sources, emissions shall be included (see section 3.2 (2)). Road and rail travel should additionally be disaggregated by municipal fleet, public transport and private and comment transport.	- Guidance on using the four different boundary methodologies
Aviation	✓	✓		
Off-road	✓	✓		
			Cities may use the Fuel sales, Geographic (Territorial), Resident activity and City-induced methodologies to estimate activity.	
Waste (non-energy)	Waste generated			
Solid waste		✓	All GHG emissions from disposal and treatment of waste generated within the city boundary.	- National-level waste composition and treatment data - Calculators using default and user data estimate emissions from waste by treatment type
Biological waste		✓		
Incinerated and burned waste		✓	Where waste is used for energy generation, emissions do not need to be reported here. Instead, the notation key IE should be used. These emissions will be captured through the use of heat or electricity generated from the treatment of waste. If a treatment type is not applicable, the notation key NO shall be used.	
Wastewater		✓		

#### Energy Generation (Activity Data and Emission Factors by energy carrier and GHG Emissions)

	Within city boundary	Owned by city		
Electricity-only generation	✓	✓	All GHG emissions from generation of grid-supplied energy within the city boundary and all GHG emissions from generation of grid-supplied energy by facilities owned (full or partial) by the local government outside the city boundary disaggregated by electricity-only, CHP and heat/cold production plants. GHG emissions from sources covered by regional or national emissions trading program should be identified. In addition, local governments are recommended to report all GHG emissions associated with distributed renewable generation, if any.	- Make ETS data available at local government level.
CHP generation	✓	✓		
Heat/cold generation	✓	✓		
Local renewable energy generation	Recommended			

#### Allowable Notation Keys

Notation keys may be used to accommodate limitations in data availability and differences in emission sources between local authorities. Where notation keys are used, local authorities should provide an accompanying	Not Occurring	NO	An activity or process does not occur or exist within the local government (e.g. waterborne navigation in a city with no coast or river)	- Guidance and examples on using notation keys
	Included elsewhere	IE	GHG emissions for this activity are estimated and already presented in another category in the inventory (e.g. waste is used for energy generation)	
	Not estimated	NE	GHG emissions occur but have not been estimated or reported. NE	

explanation.

should be used sparingly and where used should be priority for future data collection

Confidential

C

GHG emissions which could lead to the disclosure of confidential information

## Annex C: Targets Reporting Framework

	Minimum	Ambitious	Comments
Boundary (geographic, coverage, sectors and GHGs)	Consistent with minimum requirements of GHG inventory framework		Where target boundary does not align with inventory boundary, additions and exclusions shall be specified and justified. Exclusions shall be indicated using the notation key Included Elsewhere (IE)
Target type	Any target type (base year, base year intensity, baseline scenario, fixed level)		For baseline scenario target, modeling methodology and parameters shall be transparently described
Target year	Same as NDC, or as set by regional/national Covenants	2050	If beyond 2030, shall also include interim target. If the NDC target is before 2030, cities should additionally set a target for 2030.
Base year (base year and intensity targets only)	Should be the same as NDC, or as set by regional/national Covenants		If different to NDC, shall be justified
Ambition	Same as NDC, or as set by regional/national Covenants	More ambitious than NDC	Refers to unconditional components of NDC
Units	% reduction from base / scenario year, and absolute emissions for target year in tCO <sub>2</sub> e		
Use of transferable emissions	Only permissible where target ambition exceeds the unconditional components of the NDC		The local government shall report the target, with and without the transferable emissions units, as well as identify the source of the transferable emissions units.
Conditionality	Permissible but conditional components shall be stated and identified	Conditional components of the target are identified and should be quantified where possible	Permissible only when LG's target ambition exceeds the unconditional components of the NDC

## Annex D: Risk and Vulnerability Assessment Reporting Framework

(m)	= mandatory to report
(r)	= Recommended to report
(opt)	= Optional to report
<i>italics</i>	= Explanatory notes

Table 1. Section A - Current and future climate risks, exposure, impacts and vulnerability

<b>Table 1.</b> Please identify <b>the most significant</b> climate hazards faced by your jurisdiction (m) and complete the questions to the right for each one.		
<b>HAZARDS</b> <sup>21</sup> ( <i>grouped under headers, can report on multiple across the table</i> )	<b>CURRENT hazard RISK level</b> ( <i>dropdown for each hazard selected</i> )	
	Probability of Hazard (m)	Consequence of hazard (m)
<b>Extreme Precipitation</b>		
Rain storm	<input type="radio"/> High <input type="radio"/> Moderate <input type="radio"/> Low <input type="radio"/> Do not know	<input type="radio"/> High <input type="radio"/> Moderate <input type="radio"/> Low <input type="radio"/> Do not know
Monsoon	[dropdown as above]	[dropdown as above]
Heavy snow	[dropdown as above]	[dropdown as above]
Fog	[dropdown as above]	[dropdown as above]
Hail	[dropdown as above]	[dropdown as above]
<b>Storm and wind</b> ∨		
Severe wind	[dropdown as above]	[dropdown as above]
Tornado	[dropdown as above]	[dropdown as above]
Cyclone (Hurricane / Typhoon)	[dropdown as above]	[dropdown as above]
Extra tropical storm	[dropdown as above]	[dropdown as above]
Tropical storm	[dropdown as above]	[dropdown as above]
Storm surge	[dropdown as above]	[dropdown as above]
Lightning / thunderstorm	[dropdown as above]	[dropdown as above]
<b>Extreme cold temperature</b> ∨		
Extreme winter conditions	[dropdown as above]	[dropdown as above]
Cold wave	[dropdown as above]	[dropdown as above]
Extreme cold days	[dropdown as above]	[dropdown as above]
<b>Extreme hot temperature</b> ∨		
Heat wave	[dropdown as above]	[dropdown as above]
Extreme hot days	[dropdown as above]	[dropdown as above]
<b>Water Scarcity</b> ∨		
Drought	[dropdown as above]	[dropdown as above]
<b>Wild fire</b> ∨		
Forest fire	[dropdown as above]	[dropdown as above]
Land fire	[dropdown as above]	[dropdown as above]
<b>Flood and sea level rise</b> ∨		
Flash / surface flood	[dropdown as above]	[dropdown as above]
River flood	[dropdown as above]	[dropdown as above]
Coastal flood	[dropdown as above]	[dropdown as above]
Groundwater flood	[dropdown as above]	[dropdown as above]
Permanent inundation	[dropdown as above]	[dropdown as above]
<b>Chemical change</b> ∨		
Salt water intrusion	[dropdown as above]	[dropdown as above]

<sup>21</sup> Hazards based on C40 Hazard Taxonomy. Full definitions will be made available in the GCOM guidance materials. Can report on 1 or more. If you identify a hazard that has not been listed here, please notify the GCoM/Regional Covenant Secretariat.

Ocean acidification	[dropdown as above]	[dropdown as above]
Atmospheric CO2 concentrations	[dropdown as above]	[dropdown as above]
Mass movement ▾		
Landslide	[dropdown as above]	[dropdown as above]
Avalanche	[dropdown as above]	[dropdown as above]
Rock fall	[dropdown as above]	[dropdown as above]
Subsidence	[dropdown as above]	[dropdown as above]
Biological hazards ▾		
Water-borne disease	[dropdown as above]	[dropdown as above]
Vector-borne disease	[dropdown as above]	[dropdown as above]
Air-borne disease	[dropdown as above]	[dropdown as above]
Insect infestation	[dropdown as above]	[dropdown as above]

...Current and future climate risks, exposure, impacts, vulnerability (table 1 continued horizontally from hazards table, only top row shown, which is repeated down *the table*)

Please indicate how you expect climate change to affect the intensity and frequency of each hazard and when you FIRST expect to experience those changes <sup>22</sup>			Please describe the overall impact of FUTURE hazards in your jurisdiction and the sectors, assets, and/or services that will be most affected (at least 5). <sup>23</sup>				Please indicate which vulnerable population groups will be most impacted by FUTURE hazards. <sup>24</sup>
Expected change in frequency (m)	Expected change in intensity (m)	Timescale <sup>25</sup> (m)	Description of expected impact (r)	Impacted sectors, assets, and the magnitude of those impacts (m)	Magnitude of expected impact <sup>26</sup>	Impacted vulnerable groups (r) (can specify multiple for each hazard)	
<input type="radio"/> Increase <input type="radio"/> Decrease <input type="radio"/> No change <input type="radio"/> Not known	<input type="radio"/> Increase <input type="radio"/> Decrease <input type="radio"/> No change <input type="radio"/> Not known	<input type="radio"/> Immediately <input type="radio"/> Short-term <input type="radio"/> Medium-term <input type="radio"/> Long-term <input type="radio"/> Not known	[open field]	<input type="radio"/> Transport <input type="radio"/> Energy <input type="radio"/> ICT (Information and Communications technology) <input type="radio"/> Water supply and sanitation <input type="radio"/> Waste management <input type="radio"/> Public Health <input type="radio"/> Law & Order <input type="radio"/> Emergency Services <input type="radio"/> Land use planning <input type="radio"/> Education <input type="radio"/> Food & Agriculture <input type="radio"/> Environment, Biodiversity, Forestry <input type="radio"/> Commercial <input type="radio"/> Industrial <input type="radio"/> Tourism <input type="radio"/> Residential <input type="radio"/> Society/community & culture <input type="radio"/> Other ____	<input type="radio"/> High <input type="radio"/> Moderate <input type="radio"/> Low <input type="radio"/> Do not know	<i>Women and girls</i> <i>Children and Youth</i> <i>Elderly</i> <i>Indigenous population</i> <i>Marginalized groups</i> <i>Persons with disabilities</i> <i>Persons with chronic diseases</i> <i>Low-income households</i> <i>Unemployed persons</i> <i>Persons living in sub-standard housing</i> <i>Other</i>	
[repeat as above, for all hazards]	[repeat as above, for all hazards]	[repeat as above, for all hazards]	[repeat as above, for all hazards]	[repeat as above, for all hazards]	[repeats, for all hazards and s/a/s]	[repeat as above, for all hazards]	

<sup>22</sup> Allow entities to report multiple expected impacts across multiple time scales for the same hazard (e.g. allow cities to add multiple rows for the same hazards).

<sup>23</sup> Terminology: this and the following section address exposure and impacts (further guidance will be provided in the implementation phase).

<sup>24</sup> The guidance document that will be made available will elaborate on the concept of vulnerable population and provide examples and guidance helping local governments to identify the relevant groups.

<sup>25</sup> Short Term = by 2025 Medium term = 2026-2050 Long term = after 2050 (further guidance will be provided)

<sup>26</sup> For each hazard, select which sectors/assets/services will be most impacted. Then for each sector/asset/service selected, indicate the magnitude of the expected impact (creative formatting needed). **Law & Order** = police, security personnel and systems etc.; **Emergency services** = first responders, EMT, Firefighters etc.; **Society/Community & culture** = things like cultural assets, heritage, community in the sense of social cohesion etc. (which could be impacted if communities are relocated or heritage sites submerged, for example). Further guidance will be provided in the implementation phase.

Table 2. Section A (continued) – Adaptive Capacity

<b>Table 2. Please identify and describe the factors that will most greatly affect your jurisdiction's adaptive capacity. (m)</b>		
FACTOR <i>(grouped under headers, can report on multiple across the table)</i>	Description (m)	Degree to which this factor presents a challenge for your jurisdictions adaptive capacity (m)
<b>Services</b>		
Access to basic services	[open field]	<input type="radio"/> High <input type="radio"/> Moderate <input type="radio"/> Low <input type="radio"/> No concern <sup>27</sup> <input type="radio"/> Do not know
Access to healthcare	[open field]	[dropdown as above]
Access to education	[open field]	[dropdown as above]
Public health	[open field]	[dropdown as above]
<b>Socio-economic</b>		
Cost of living	[open field]	[dropdown as above]
Housing	[open field]	[dropdown as above]
Poverty	[open field]	[dropdown as above]
Inequality	[open field]	[dropdown as above]
Unemployment	[open field]	[dropdown as above]
Migration	[open field]	[dropdown as above]
Economic health	[open field]	[dropdown as above]
Economic diversity	[open field]	[dropdown as above]
<b>Governmental</b>		
Political stability	[open field]	[dropdown as above]
Political engagement / transparency	[open field]	[dropdown as above]
Government capacity	[open field]	[dropdown as above]
Budgetary capacity	[open field]	[dropdown as above]
Safety and security	[open field]	[dropdown as above]
Land use planning	[open field]	[dropdown as above]
Access to quality / relevant data	[open field]	[dropdown as above]
Community engagement	[open field]	[dropdown as above]
<b>Physical &amp; Environmental</b>		
Rapid urbanization	[open field]	[dropdown as above]
Resource availability	[open field]	[dropdown as above]
Environmental conditions	[open field]	[dropdown as above]
Infrastructure conditions / maintenance	[open field]	[dropdown as above]
Infrastructure capacity	[open field]	[dropdown as above]
<b>Other</b>		
Other _____	[open field]	[dropdown as above]

<sup>27</sup> Factors reported as “no concern” may have a neutral or a positive influence on adaptive capacity. To reduce reporting fields, preference is given here to factors that challenge adaptive capacity, though cities may also describe factors that have a positive influence as well (and GCOM partners may choose to independently collect more data on positive factors as an optional field).

Table 3. Section A (continued) - Climate risk and vulnerability assessment

Table 3. Please provide more information on your jurisdiction’s climate risk and vulnerability assessment(s) (rows can be added so multiple assessments can be reported on) <sup>28</sup>						
Title (m)	Year (m)	Scope/Boundary <sup>29</sup> (m)	Primary author (m)	Update/revision process (opt)	Upload (m) <sup>30</sup>	file
[open field]	[dropdown of years]	<ul style="list-style-type: none"> <li><input type="radio"/> Same, covers whole jurisdiction and nothing else</li> <li><input type="radio"/> Smaller, covers part of the jurisdiction</li> <li><input type="radio"/> Larger, covers the whole jurisdiction and adjoining areas</li> <li><input type="radio"/> Partial, covers part of the jurisdiction and adjoining areas</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Local government</li> <li><input type="radio"/> Consultant</li> <li><input type="radio"/> International organization</li> <li><input type="radio"/> Community group</li> <li><input type="radio"/> Regional / state / provincial government</li> <li><input type="radio"/> National / central government</li> <li><input type="radio"/> Other _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Formal schedule for update</li> <li><input type="radio"/> Yes</li> <li><input type="radio"/> No</li> <li><input type="radio"/> Do not know</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="radio"/> If yes, what is the time period for update? (years): _____</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="radio"/> Status of current update</li> <li><input type="radio"/> Currently Exists</li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul>		

<sup>28</sup> Combined with other questions, a full picture of where the city is in their planning and revision process is provided.

<sup>29</sup> The boundary of the assessment shall be equal to or greater than the boundary of the whole jurisdiction. Jurisdiction definition = ICLEI Typology - State / Region; Province / County / District; Independent province; City / Municipality; Independent city; Special city / Federal district; Sub-municipal district; Sovereign city-state (guidance on where “metropolitan area” fits will be provided).

<sup>30</sup> The mandatory fields in this table are required for compliance after 2 years.

Table 4. Section B – Climate adaptation plan

Table 4. If available, please provide more information on your jurisdiction’s climate adaptation plan(s) <sup>31</sup>							
Title (m)	Short Description (m)	Year adopted (m) <sup>32</sup>	Nature of climate adaptation plan (m)	Scope/Boundary <sup>33</sup> (m)	Primary author (m)	Update/revision process (opt)	Upload file (m) <sup>34</sup>
[open field]	[open field]	[dropdown of years] <input type="radio"/> Not adopted	<input type="radio"/> Standalone climate adaptation plan <input type="radio"/> Addressed in combined adaptation and mitigation climate action plan± <input type="radio"/> Addressed in general city plan <input type="radio"/> Addressed in city sector plan(s) <input type="radio"/> Other _____	<input type="radio"/> Same, covers whole jurisdiction and nothing else <input type="radio"/> Smaller, covers part of the jurisdiction <input type="radio"/> Larger, covers the whole jurisdiction and adjoining areas <input type="radio"/> Partial, covers part of the jurisdiction and adjoining areas	<input type="radio"/> Local government <input type="radio"/> Consultant <input type="radio"/> International organization <input type="radio"/> Community group <input type="radio"/> Regional / state / provincial government <input type="radio"/> National / central government <input type="radio"/> Other _____	<input type="radio"/> Formal schedule for update <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Do not know <hr/> <input type="radio"/> If yes, what is the time period for update? (years): _____ <hr/> <input type="radio"/> Status of current update <input type="radio"/> Currently Exists; <input type="radio"/> In Progress <input type="radio"/> Does not exist but intending to undertake in the future; <input type="radio"/> Do not know	

<sup>31</sup> Combined with other questions, a full picture of where the city is in its planning and revision process is provided.

<sup>32</sup> Refers to year officially adopted, not published, if the years are different.

<sup>33</sup> The boundary should be at least equal to the boundary of the whole jurisdiction. Jurisdiction definition = ICLEI Typology - State / Region; Province / County / District; Independent province; City / Municipality; Independent city; Special city / Federal district; Sub-municipal district; Sovereign city-state (guidance on where “metropolitan area” fits will be provided).

<sup>34</sup> The mandatory fields in this table are required for compliance after 3 years.

Table 5. Adaptation goals

Table 5. Please describe the main goals of your jurisdiction's adaptation efforts and the metrics/KPIs if applicable.					
Goal description (m)	Delivery date (m)	Baseline year (m)	Metric/KPI <sup>35</sup> (r)	Progress (r)	Monitoring Plan (r)
[open field]	[year dropdown]	[year dropdown]	[open field]	<input type="radio"/> 0-25% complete <input type="radio"/> 25-50% complete <input type="radio"/> 50-75% complete <input type="radio"/> 75-99% complete <input type="radio"/> 100% complete	[Upload/link]

<sup>35</sup>E.g. Reduce by half the population exposed to heat waves.

Table 6. Section B (continued) Key Adaptation Actions

Table 6. Please describe a selection of key or representative actions contained in the adaptation plan												
Related Hazard <sup>36</sup> (r)	Action	Short Description	Policy instrument (opt)	Financial cost and strategy (opt)	Implementation status <sup>37</sup> (opt)	Timeframe (opt)	Responsible body (opt)	Stakeholders involved (opt)	Identification of synergies, trade-offs and co-benefits of mitigation and adaptation (opt)	Target (r)	KPI (r)	
<i>Key Hazard 1 (auto-populate)</i>	[open field]	[open field]				[years dropdown]	[dropdown]	<ul style="list-style-type: none"> <li><input type="radio"/> National government</li> <li><input type="radio"/> Regional government</li> <li><input type="radio"/> Local government</li> <li><input type="radio"/> Academia</li> <li><input type="radio"/> Business &amp; Private sector</li> <li><input type="radio"/> Trade union</li> <li><input type="radio"/> NGO and associations</li> <li><input type="radio"/> Citizens</li> <li><input type="radio"/> Other _____</li> </ul>				

Please describe how your jurisdiction has prioritized adaptation actions (opt)

[open field]

<sup>36</sup> Cities should report a key or representative action for the main hazards identified as high risk above.

<sup>37</sup> If possible, quantitative information should be provided.

Table 7. Section C – Adaptation Planning Process

<b>Table 7.</b>	Commit and mobilize resources (m) <sup>38</sup>	Risk and vulnerability assessment (m) <sup>39</sup>	Develop and prioritize adaptation options (m) <sup>40</sup>	Develop adaptation plan (m) <sup>41</sup>	Implement adaptation plan (opt) <sup>42</sup>	Monitor and evaluate progress (m) <sup>43</sup>
Please describe your progress in the adaptation planning process (m)	<ul style="list-style-type: none"> <li><input type="radio"/> Currently exists</li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Currently exists</li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Currently exists</li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul> <div style="border: 1px solid black; padding: 2px;">                     Please select the factors considered when prioritizing adaptation options (<i>can select multiple</i>) (opt)                 </div> <ul style="list-style-type: none"> <li><input type="radio"/> Financial costs</li> <li><input type="radio"/> Risk level of each hazard</li> <li><input type="radio"/> Impacted sectors, services, and assets</li> <li><input type="radio"/> Vulnerable populations</li> <li><input type="radio"/> Stakeholder consensus</li> <li><input type="radio"/> Other _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Complete</li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Complete<sup>44</sup></li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Currently exists</li> <li><input type="radio"/> In Progress</li> <li><input type="radio"/> Does not exist but intending to undertake in the future</li> <li><input type="radio"/> Do not know</li> </ul>

<sup>38</sup> E.g. Initial adaptation policy commitment is defined. Human, technical, and financial resources are mobilized. Institutional structures are set up and appropriate coordination mechanisms are in place. Review of local policy and institutional context, previous plans, available resources, and data sources. Climate risk and vulnerability data collected.

<sup>39</sup> E.g. Conduct Analysis of climate risks and vulnerabilities including potential impacts on residents and sectors.

<sup>40</sup> E.g. Develop strategic vision and targets for developing and mainstreaming adaptation actions and policies. Compile, assess, and prioritize portfolio of potential adaptation options.

<sup>41</sup> E.g. Complete adaptation plan with detailed actions, programs, projects, and implementation strategies (including funding). This may be a standalone plan or may be integrated into a related sectoral plan or broader urban development strategy.

<sup>42</sup> E.g. Institutional arrangements as well as human, technical, and financial resources are in place to execute adaptation actions locally according to approved plans.

<sup>43</sup> E.g. Monitoring framework with key performance indicators is in place for adaptation actions. Progress is regularly monitored and reported to relevant decision makers and/or stakeholders locally, nationally, and globally as appropriate.

Table 8. Overall overview of the participatory process carried out in the adaptation planning process

Stakeholders	Drop down list: level of participation	Multiple choice: participatory technique
National government	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Regional government	[drop down list as above]	[drop down list as above]
Local government	[drop down list as above]	[drop down list as above]
Academia	[drop down list as above]	[drop down list as above]
Business & private sector	[drop down list as above]	[drop down list as above]
Trade union	[drop down list as above]	[drop down list as above]
NGO and associations	[drop down list as above]	[drop down list as above]
Citizens	[drop down list as above]	[drop down list as above]
Other: indicate which one	[drop down list as above]	[drop down list as above]
<p>Legend:</p> <p>Low → Information (meaning “low” level of participation): this is produced when the public are informed through a one-way flow of information, i.e. information passes from officials to the public, with no chance to provide feedback from the public to officials. There is no room for negotiation. The most frequent tools for informing are news, media, pamphlets, posters, and responses to inquiries.</p> <p>Medium → Consultation (“medium” level): the public is invited to give their opinion and provide feedback on analyses, alternatives and/or decisions; however, these opinions may have or may have not been taken into account.</p> <p>High → Partnership (“high” level): there have been negotiations between planners and the public in each aspect of the planning process. They have both agreed to share planning and decision-making responsibilities through joint policy boards, planning committees or other mechanisms for resolving impasses. The public have had some genuine bargaining influence over the outcome of the plan, including the development of adaptation options and the identification of the preferred solution.</p>		

## Annex E: Climate Action and Energy Access Reporting Framework

<b>ACTION PLANNING</b>	
<b>1. Develop an action plan for mitigation and adaptation</b>	Mandatory
<b>2. Plan to include target(s) / goal(s) of plan</b>	Mandatory
<b>3. Joint / collective action plans amongst local governments</b>	Optional for neighbouring governments
<b>4. Description of stakeholder engagement process in development of plan</b>	Mandatory
<b>5. Timeline for submission of the action plan</b>	Within 3 years upon joining GCOM
<b>6. Possible extension of the submission deadline</b>	Possible extension with justification
<b>7. Language of the plan</b>	Any official language
<b>8. Name of the plan</b>	Any - as long as the plan is compliant with the GCOM requirements.
<b>9. Integrated climate action plan (mitigation and adaptation)</b>	Optional
<b>10. Description of prioritization process of actions</b>	Recommended
<b>11. Key sectors addressed by the plan</b>	Key sectors in line with local governments' priorities and assessments (baseline emission inventory and risk and vulnerabilities assessment) outputs
<b>12. Description of each action in the Climate Action Plan document</b>	Mandatory
<b>13. Policy instrument(s) foreseen for the action, when appropriate</b>	Recommended
<b>14. Financial strategy per action/action area/sector</b>	Recommended
<b>15. Implementation status and timeframe</b>	Recommended
<b>16. Responsible body for each action/action area/sector</b>	Recommended
<b>17. Stakeholders involved for each action/action area/sector</b>	Recommended
<b>18. Assessment of energy savings, renewable energy production and GHG emissions reduction per key mitigation action/action area/sector</b>	Mandatory (recommend inclusion of figures)
<b>19. Formal adoption of the plan</b>	Mandatory
<b>20. Identification of synergies, trade-offs and co-benefits of mitigation and adaptation</b>	Mandatory

## MONITORING

<b>21. Monitoring, tracking and reporting progress towards commitments in the climate action plan</b>	Mandatory - performed by city and publicly disclosed
<b>22. Status of the implementation of each action in the climate action plan</b>	Mandatory
<b>23. Monitoring the costs of each action</b>	Recommended
<b>24. Frequency for submitting monitoring report of the implementation of actions</b>	Every 2 years but recommended yearly, following action plan submission
<b>25. Provisions for updating the Action plan (both mitigation and adaptation) when needed</b>	Mandatory to update and resubmit the action plan when there are significant changes

#### EVALUATION AND FEEDBACK

<b>26. Evaluation on mitigation and adaptation by an independent body providing a feedback report to the city</b>	By an independent body and to be decided regionally
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