DRAFT FOR CONSULTATION

Recommendations for a Global Covenant of Mayors common reporting framework

Version 2.0

April 23rd , 2018

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1. Introduction

About the Global Covenant of Mayors

The Global Covenant of Mayors for Climate & Energy[1] (GCoM) is the world's largest initiative 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 GCoM, cities and local governments voluntarily commit 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.

1.1. About the Regional Covenants

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, adapting the common vision and principles of the GCoM to meet local realities. Regional Covenants operate as "local chapters" of the global initiative – allowing for regional specificities, in light of the different contexts, priorities and capacities. Regional Covenants are supported by Regional Covenant Secretariats, city networks and other regional stakeholders. Their activities may be funded by various donors through projects and initiatives.

1.2. About the GCoM common reporting framework

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 for city reporting have been developed and are provided in this document for review.

These proposed reporting requirements are to be flexible enough to meet needs in 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 within GCoM will unite local voices and raise the bar, also for all climate stakeholders.

[1] 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 draft 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 common reporting requirements. They have been designed considering regional/national contexts and local governments' needs. The recommendations provide a step-wise approach to meeting GCoM commitments. They are built on pre-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.

1.3. About the ongoing consultation

After in-depth discussions among experts, the present draft version is open for stakeholders' review and comments. This period of consultation with cities and local stakeholders will begin in all regions to refine the proposed reporting framework and ensure it accounts for regional variations and effectively supports local efforts to take climate action.

The following sections present the draft 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.

Kindly submit your feedback via the online survey before JUNE 1ST, 2018. To complement the present document, several activities will be proposed by Regional Secretariats and city networks in the coming weeks (e.g. webinars in national languages) to explain the proposed framework and present the survey questions.

1.4. Next steps

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

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

2. Definitions

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 administrative boundary.

2.1. Proposed reporting levels

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

- 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 advise**, 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 these reporting requirements to accommodate limitations in data availability and differences in emission sources between local governments (see the section 3.5. on **notation keys**).

2.3. General Principles

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

- The reporting requirements allow **flexibility** to suit differentiated local circumstances and needs, such as: (i) the use of different methodologies under the Intergovernmental Panel on Climate Change (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 United Nation’s Framework Convention on Climate Change’s (UNFCCC) 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), provided that the same boundaries are used (i.e. for GHG inventories, risk and vulnerability assessments, etc).

- Local governments **shall** report in a way that enables meaningful comparison and aggregation with other cities.

3. Greenhouse Gas Emissions Inventory

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[2].

Local governments **shall** submit their greenhouse gas emissions inventory to GCoM[3] within two years of joining GCoM, and then every subsequent two years, or as set by regional GCoM chapters. Greenhouse gas emissions inventories **shall** cover a consecutive period of 12 months.

3.1. GHG Accounting Principles

In addition to the general reporting principles mentioned in section 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[4] 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, such as 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.

[2] Considering that the IPCC is revisiting the 2006 IPCC Guidelines, and changes will also be studied and accommodated for the GCoM, as relevant.

[3] Inventory should be submitted to the GCoM secretariat where a Regional or National Covenant does not exist.

[4] 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[5], 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 a specific country).

3.2. Emission Sources

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.

It is **recommended** to report emissions from Industrial Processes and Product Use (IPPU) and Agriculture, Forestry and Other Land Use (AFOLU) sectors[6].

(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.
- The emissions data **shall** be disaggregated by residential buildings, commercial buildings and facilities, institutional buildings and facilities, industry[7] 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 this is the case, the notations key “Not Occurring” (NO) **shall** be used (see **section 3.5.** for more details on the notation keys). Where it is occurring, however, a significant source it **should** be included.
- 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[8] to estimate activity. They **should** identify the methodology used.

[5] 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, kilometers driven, tons of solid waste sent to landfill, etc.).

[6] Please refer to 2006 IPCC Guidelines for National Greenhouse Gas Inventories for more details on these sectors.

[7] 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.

(3) Waste

- All GHG emissions from disposal and treatment of waste generated within the city boundary **shall** be reported and disaggregated by treatment type.
- Where waste is used for energy generation[9], emissions do not need to be reported. Instead, the notation key IE **should** be used (see **section 3.5.** for more details on the notation keys).

3.3. Energy generation

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.

3.4. Activity Data and Emission Factors

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 their inventory using activity-based emission factors for the purpose of aggregating inventories' data.
- Local governments **shall** account for emissions of the following gases: carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O)[10].
- GHG emissions **shall** be reported in metric tonnes of CO_2 equivalent (CO_2e)[11]. Where possible, local governments **should** report CO_2e emissions by individual GHG.

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[8] 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.

[9] For example, household waste sent for incineration; or sludge from wastewater.

[10] When reporting IPPU, it will include hydro fluoro carbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

- 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.

3.5. Notation Keys

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. 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.
- **"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 as not reported publicly.

4. Target Setting

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 of joining GCoM.

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

The emissions boundary[12] **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 (but then to use the notation keys to identify this). 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.[13]

(2) Target type

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[11] CO_2 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).

[12] 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

[13] For example, some European cities' targets do not include emissions sources that are already included in the EU Emissions Trading Scheme.

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[14]. 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)

(3) Target year

The target year **shall** be the same as the target year adopted in the national/regional Nationally Determined Contribution (NDC[15]) or as set by regional GCoM chapters. Cities that set a target year beyond 2030 **shall** include an interim target between now and 2030.

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

The base year **shall** be the same as the base year used in the national/regional NDC or as set by regional GCoM chapters. Where the base year is different from the NDC (e.g. due to a lack of data availability), this **shall** be justified.

(5) Ambition

At a minimum, the target **shall** be as ambitious as the unconditional components[16] of the NDC. Local governments **should** set targets that are more ambitious than the national/regional NDC.

(6) Units

Targets **shall** be reported as a percentage (%) reduction from the base year or scenario year. The absolute emissions in the target year(s) in metric tonnes CO_2e **shall** also be reported.

[14] Please refer to the *Greenhouse Gas Protocol Mitigation Goal Standard* for more details on these target types.

[15] UNFCCC NDC List

[16] 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).

(7) Use of transferable emissions

The use of transferable emissions units[17] is only permissible when a city's target ambition exceeds the NDC. Where this is the case, the local authority **shall** report the target, with and without the transferable emissions units, as well as identify the source of the transferable emissions units.

(8) Conditionality

Any conditional components included in the target **shall** be identified where possible. The conditional components **should** also to 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), if possible.

[17] 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.

5. Risk and Vulnerability Assessment

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.

5.1. Climate Risk and Vulnerability Assessment

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

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
- At least five 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
- Vulnerable population groups (e.g. poor, elderly, youth, people with chronic disease, unemployed, etc.) that are expected to be most affected by future hazards

5.3. Adaptive Capacity

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

5.4. Major Climate Hazards Occurred in the Past Year

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

- 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
- At least five 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

6. Climate Action and Energy Access Plan(s)

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) (adaptation planning is further described in section 5). 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

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 (7.1).

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 of the plan and the date
- 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, the action plans **shall** provide the following information:

- Brief description of the action
- Financial strategy for implementing the action
- Implementation status, cost and timeframe
- Implementing agency(ies)
- Stakeholders involved in planning and implementation of the action
- Assessment of energy saving, renewable energy production, and GHG emissions reduction by action or sector (only applicable to mitigation action plans)

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

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

6.2 Monitoring

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 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.

6.3 Energy Access Plan

All local governments **shall** report their energy access plans. However, at this stage, the detailed reporting requirement 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 be 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 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 sustainable[18], 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.[19]

(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 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.

[18] For GCoM, nuclear energy is not considered “sustainable”.

[19] Energy Access Outlook 2017 “From Poverty to Prosperity”

7. Overall Reporting Timelines

The reporting requirements include 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 submitted the climate action plan

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

Annex A: Members of D-TWG

Below are lists of the members of the D-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- Joint Research Centre
*‡Michael Doust	C40
Members	
*‡Albana Kona	European Commission- Joint Research Centre
*‡Silvia Rivas - Calvete	European Commission- 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 ENER
Olav Berg	European Commission - DG ENER
Albana Kona	European Commission - 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- Joint Research Centre
Laura Kavanaugh *(until 28 FEB 2018)*	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- 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 requirements under the GCOM mandatory level. This is not a reporting template.

		Mandatory		Description	GCOM support
Local Government Information					
Name of local government		✓			
Country		✓			
Region		✓			
Inventory year		✓			
Geographic boundary		✓		Description of boundary and accompanying map	
Resident population		✓			
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)	
Emission Sources (Activity data and Emission Factors by Fuel type / activity and GHG Emissions)					
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. GHG emissions from sources covered by a regional or national emissions trading program should be identified.	- Make ETS data available at local government level
Commercial building and facilities		✓	✓		
Institutional buildings and facilities		✓	✓		
Industry	Non-ETS (or similar)	✓	✓		
	ETS(or similar)	✓	✓		
Agriculture		✓	✓		
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 waterborne navigation, aviation and off-road are significant, the	- Guidance on disaggregating road and rail data by fleet type - Guidance on using the four different boundary
Rail		✓	✓		
Waterborne navigation		✓	✓		

Aviation	✓	✓	notation key NO shall be used. Road and air travel should additionally be disaggregated by municipal fleet, public transport and private and comment transport. Cities may use the Fuel sales, Geographic (Territorial), Resident activity and City-induced methodologies to estimate activity.	methodologies
Off-road	✓	✓		
Waste (non-energy)	Waste generated			
Solid waste		✓	All GHG emissions from disposal and treatment of waste generated within the city boundary. Where waste is used for energy generation, emissions do not need to be reported here. Instead, the notation key IE shall be used. If a treatment type is not applicable, the notation key NO shall be used.	- 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		✓		
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 distributed renewable generation.	- 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 explanation.	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 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 chapters	2050	If beyond 2030, shall also include interim target
Base year (base year and intensity targets only)	Same as NDC, or as set by regional chapters		If different to NDC, shall be justified
Ambition	Same as NDC, or as set by regional chapters	More ambitious than NDC	Refers to unconditional components of NDC
Units	% reduction from base / scenario year, and absolute emissions for target year in tCO2e		
Use of transferable emissions	Only permissible where target ambition exceeds NDC		Target may be reported with, and without, transferable emissions, and source of transferable emissions shall be identified
Conditionality	Permissible but conditional components shall be stated and identified	Conditional components of the target are quantified	

Annex D: Risk and Vulnerability Assessment Reporting Framework

(m)	=	mandatory to report
(r)	=	Recommended to report
(c)	=	For consultation
(opt)	=	Optional to report
†	=	Indicates this language (e.g. of headers) is a placeholder, the subcommittee did not discuss exact wording in this case (in other cases, the language presented is part of the subcommittee's recommendation at this stage).
italics	=	Explanatory notes
footnotes	=	Further information on fields and suggestions for guidance materials; formatting

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

Table 1. Please identify **the most significant** climate hazards faced by your jurisdiction (m) and complete the questions to the right for each one.†		
HAZARDS [20] *(grouped under headers, can report on multiple across the table)*	CURRENT hazard **RISK** level (*dropdown for each hazard selected)*	
	Probability of Hazard [21] (m)	Consequence of hazard (m)
Extreme Precipitation		
Rain storm	○ High ○ Moderate ○ Low ○ Do not know	○ High ○ Moderate ○ Low ○ 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]
Storm and wind ∨		
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]
Extreme cold temperature ∨		
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]
Extreme hot temperature ∨		
Heat wave	[dropdown as above]	[dropdown as above]
Extreme hot days	[dropdown as above]	[dropdown as above]
Water Scarcity ∨		
Drought	[dropdown as above]	[dropdown as above]
Wild fire ∨		
Forest fire	[dropdown as above]	[dropdown as above]

[20] Hazards based on C40 Hazard Taxonomy. Full definitions available in the CRAFT glossary (to be included in the GCOM guidance materials – e.g. Storm surge here is waves from WIND ACTION during storms). Can report on 1 or more, suggest 5-10 if applicable.

[21] For Guidance Document: refers to probability the hazard "occurring in the next five years" – tbd is how to define high, moderate, low (CRAFT uses % chance, but this is hard to know precisely).

Land fire	[dropdown as above]	[dropdown as above]
Flood and sea level rise ∨		
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]
Chemical change ∨		
Salt water intrusion	[dropdown as above]	[dropdown as above]
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 would be 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† [22]			Please describe the overall impact of FUTURE hazards in your jurisdiction and the sectors, assets, and/or services that will be most affected (up to 5). [23]			Please indicate which vulnerable population groups will be most impacted by FUTURE hazards. † [24]
Expected change in frequency (m)	Expected change in intensity (m)	Timescale [25] (m)	Description of expected impact (r)	Impacted sectors, assets, and services (m) (c) [26] *(select up to 5)* and the magnitude of those impacts (m)		Impacted vulnerable groups † (r) (c) *(can select multiple for each hazard)*
○ Increase ○ Decrease ○ No change ○ Not known	○ Increase ○ Decrease ○ No change ○ Not known	○ Immediately ○ Short-term ○ Medium-term ○ Long-term ○ Not known	[open field]	○ Transport > ○ Energy ○ ICT (Information and Communications technology) ○ Water supply and sanitation ○ Waste management ○ Public Health ○ Law & Order ○ Emergency Services ○ Land use planning ○ Education ○ Food & Agriculture ○ Environment, Biodiversity, Forestry ○ Commercial ○ Industrial ○ Tourism ○ Residential ○ Society/community & culture ○ Other ____	< Magnitude of expected impact ○ High ○ Moderate ○ Low ○ Do not know	*[List of vulnerable groups, e.g.* *Women* *Youth* *Elderly* *Indigenous population* *[Other etc.]*
[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]

[14] 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).

[23] Terminology: this and the following section address exposure and impacts (include explanation in guidance document).

[24] A full list is not provided here, recommend a "preapproved" list is taken from relevant scientific literature. Recommend to consult with cities on the value and use of this field.

[25] Range of years for each option to be provided in the guidance document: Short Term = by 2025 Medium term = 2026-2050 Long term = after 2050

[26] For each hazard, select which sectors/assets/services will be most impacted (max 5). Then for each sector/asset/service selected, indicate the magnitude of the expected impact (creative formatting needed). For Guidance Materials: **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 on this field needed – recommend cities are consulted on how this is worded and explained – how do they understand this? How would they present it, so it is clear?

Table 2. Section A (continued) – Adaptive Capacity

Table 2. Please identify and describe **the [5-10] factors** that will **most greatly** affect your jurisdiction's adaptive capacity. (m)		
FACTOR *(grouped under headers, can report on multiple across the table)*	Description (m)	Degree to which this factor presents a challenge for your jurisdictions adaptive capacity (m)
Services		
Access to basic services	[open field]	○ High ○ Moderate ○ Low ○ No concern[27] ○ 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]
Socio-economic		
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]
Governmental		
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]
Physical &Environmental		
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]
Other		
Other _____	[open field]	[dropdown as above]

[27]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. If available, please provide more information on your jurisdiction's climate risk or vulnerability assessment(s) *(rows can be added so multiple assessments can be reported on)* [28]					
Title (m)	Year (m)	Scope/Boundary [29] (m)	Primary author (m)	Update/revision process (opt)	Upload file (m)[30]
[open field]	[dropdown of years]	○ Same, covers whole jurisdiction and nothing else ○ Smaller, covers part of the jurisdiction ○ Larger, covers the whole jurisdiction and adjoining areas ○ Partial, covers part of the jurisdiction and adjoining areas	○ Local government ○ Consultant ○ International organization ○ Community group ○ Regional / state / provincial government ○ National / central government ○ Other _____	○ Formal schedule for update ○ Yes ○ No ○ Do not know ○ If yes, what is the time period for update? (years): _____ ○ Status of current update ○ Currently Exists; ○ In Progress ○ Does not exist but intending to undertake in the future; ○ Do not know	

[28] Combined with other questions, a full picture of where the city is in their planning and revision process is provided.

[29]Recommend that to be considered for compliance, the boundary should be at least equal to the boundary of the whole jurisdiction. Jurisdiction definition = ICLEI Typology (assuming jurisdiction type will be indicated earlier in the profile section of the reporting form) - State / Region; Province / County / District; Independent province; City / Municipality; Independent city; Special city / Federal district; Sub-municipal district; Sovereign city-state (to include – guidance on where "metropolitan area" fits).

[30]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)[31]							
Title (m)	Short (m) Description	Year adopted (m)[32]	Nature of climate adaptation plan (m)	Scope/Boundary [33] (m)	Primary author (m)	Update/revision process (opt)	Upload file (m)[34]
[open field]	[open field]	[dropdown of years] ○ Not adopted	○ Standalone climate adaptation plan ○ Addressed in combined adaptation and mitigation climate action plan± ○ Addressed in general city plan ○ Addressed in city sector plan(s) ○ Other _____	○ Same, covers whole jurisdiction and nothing else ○ Smaller, covers part of the jurisdiction ○ Larger, covers the whole jurisdiction and adjoining areas ○ Partial, covers part of the jurisdiction and adjoining areas	○ Local government ○ Consultant ○ International organization ○ Community group ○ Regional / state / provincial government ○ National / central government ○ Other _____	○ Formal schedule for update ○ Yes ○ No ○ Do not know ○ If yes, what is the time period for update? (years): _____ ○ Status of current update ○ Currently Exists; ○ In Progress ○ Does not exist but intending to undertake in the future; ○ Do not know	

[31] Combined with other questions, a full picture of where the city is in their planning and revision process is provided. Suggest that some fields such a title and description be part of the online profile.

[32] Refers to year officially adopted, not published, if the years are different.

[33]Recommend that to be considered for compliance, the boundary should be at least equal to the boundary of the whole jurisdiction. Jurisdiction definition = ICLEI Typology (assuming jurisdiction type will be indicated earlier in the profile section of the reporting form) - State / Region; Province / County / District; Independent province; City / Municipality; Independent city; Special city / Federal district; Sub-municipal district; Sovereign city-state (to include – guidance on where "metropolitan area" fits).

[34]The mandatory fields in this table are required for compliance after 3 years (timeline for consultation with cities, a longer time may be needed).

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 [35](r)	Progress (r) † [36]	Monitoring Plan† (r)
[open field]	[year dropdown]	[year dropdown]	[open field]	○ 0-25% complete ○ 25-50% complete ○ 50-75% complete ○ 75- 99% complete ○ 100% complete	[Upload/link]

[35]E.g. Reduce by half the population exposed to heat waves.

[36] Placeholder text – recommend that there be a way to indicate their progress toward achieving the goal, one way to do so is provided here, another may be better.

Table 6. Section B (continued) Key Adaptation Action†

(*this section incorporates recommendations from the Climate Action / Energy Access Subcommittee (please see these for more)*[37]

Table 6. Please describe a selection of key or representative actions contained in the adaptation plan †											
Related Hazard [38] (r)	Action	Short Description	Policy instrument (opt)	Financial cost and strategy (opt)	Implement-ation status[39]	Timeframe	Responsible body	Stakeholders involved[40] *(can select multiple)*	Identification of synergies, trade-offs and co-benefits of mitigation and adaptation	Target [41] (r)	KPI (r)
Key Hazard 1 (auto-populate) [Auto populate or dropdown]	[open field]	[open field]	tbd	tbd	tbd	[years dropdown]	[dropdown]	○ National government ○ Regional government ○ Local government ○ Academia ○ Business & Private sector ○ Trade union ○ NGO and associations ○ Citizens ○ Other _____	[tbd]		

Please describe how your jurisdiction has prioritized adaptation actions (m) [42]
[open field]

[37]This section overlaps with another subcommittee's mandate, so more general recommendations are provided. Design of potential fields was not discussed in detail by this group. Please note the current versions of the SECAP, CRAFT, and cCR have fields related to adaptation actions that could serve as a reference for developing this further. In brief, it is recommended that a table such as this be included in the reporting form so that key adaptation actions can be reported on using some or all of these fields.

[38]Recommend that cities be required to report a key or representative action for the main hazards identified as high risk above. Further actions could also be added on an optional basis.

[39]If possible, quantitative information should be provided.

[40] Placeholder suggestions can use standardized list from elsewhere. Recommend that the type of "public" engaged be indicated for the key actions.

[41]Recommend to ask that a target and KPIs be specified for each action, when available.

[42]For quality assurance purposes, suggest to include a question on the process used for prioritizing adaptation actions. The process should consider risks, vulnerabilities, and adaptive capacity. (note: a similar question is already recommended for inclusion in the adaptation planning process table).

Table 7. Section C – Adaptation Planning Process

(Could be a type of cover page for the adaptation reporting section, could display graphically in city profiles online) [43]

Table 7.	Commit and mobilize resources (m) [44]	Risk and vulnerability assessment (m) [45]	Develop and prioritize adaptation options (m) [46]	Development adaptation plan (m) [47]	Implement adaptation plan (m) [48]	Monitor and evaluate progress (m) [49]
Please describe your progress in the adaptation planning process (m)	○ Currently exists ○ In Progress ○ Does not exist but intending to undertake in the future ○ Do not know	○ Currently exists ○ In Progress ○ Does not exist but intending to undertake in the future ○ Do not know	○ Currently exists ○ In Progress ○ Does not exist but intending to undertake in the future ○ Do not know Please select the factors considered when prioritizing adaptation options (*can select multiple*) (opt) † [51] ○ Financial costs ○ Risk level of each hazard ○ Impacted sectors, services, and assets ○ Vulnerable populations ○ Stakeholder consensus ○ Other ___	○ Complete ○ In Progress ○ Does not exist but intending to undertake in the future ○ Do not know	○ Complete[50] ○ In Progress ○ Does not exist but intending to undertake in the future ○ Do not know	○ Currently exists ○ In Progress ○ Does not exist but intending to undertake in the future ○ Do not know

[43]Guidance materials: include explanation of why GCOM considers all of these steps important and either required or strongly recommended. Recommend all are mandatory to report on (if not to complete) Examples explanations are included in the footnotes here, to be refined.

[44] 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. – suggest progress be part of public profile.

[45] E.g. Conduct Analysis of climate risks and vulnerabilities including potential impacts on residents and sectors. – suggest progress be part of public profile.

[46] E.g. Develop strategic vision and targets for developing and mainstreaming adaptation actions and policies. Compile, assess, and prioritize portfolio of potential adaptation options. – Interim step, less relevant to include in public profile.

[47]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. – suggest progress be part of public profile.

[48]E.g. Institutional arrangements as well as human, technical, and financial resources are in place to execute adaptation actions locally according to approved plans. – discussion needed on timeline required for implementation of plans to begin. – suggest progress be part of public profile.

[49] 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 - strongly encourage entities to also, in addition to reporting to the GCOM (requirement), develop their own M&E systems and KPIS (recognizing this can be quite challenging). Suggest this is part of the public profile, to encourage it be taken up.

[50] "Complete" vs "currently exists" - the "complete" status does not seem appropriate for most of the phases, which are not punctual but iterative actions. So "currently exists" is used in some cases, however this discussion item was not fully resolved in the group, another approach may be superior.

[51]Initial list, may not be exhaustive.

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	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Local government	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Academia	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Business & private sector	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Trade union	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
NGO and associations	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Citizens	High Medium	Questionnaire/survey Online consultation

	Low None	In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one
Other: indicate which one	High Medium Low None	Questionnaire/survey Online consultation In-depth interview Roundtable Focus group Workshop Citizen jury Other: indicate which one

Legend:
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.
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.
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.

Annex E: Climate Action and Energy Access Reporting Framework

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

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

EVALUATION AND FEEDBACK	
27. Evaluation on mitigation and adaptation by an independent body providing a feedback report to the city (and city networks	By an independent* body and to be decided Regionally