C40 CITIES
CLIMATE CHANGE RISK ASSESSMENT GUIDANCE

AUGUST 2018

A guidance document to help cities conducting a Climate Change Risk assessment in line with GCOM and C40Cities requirements.

1 | CONTEXT

1.1. OBJECTIVES

This documents aims to provide a concise, easy-to-read guidance, to help the cities to develop a climate risk assessment report, compatible with the GCOM and C40 Climate Action Planning Framework. It provides the methodology and components of the assessment, and can serve as a basis to request consultant services by cities.

This reporting framework uses precise language to indicate the following for a Climate Change Risk Assessment report:

 # Essential components, which GCOM and C40 Climate Action Planning Framework define as crucial for the assessment.
 # Best practices, for highly recommended items.

1.2. WHY CITIES SHOULD CONDUCT A RISK ASSESSMENT

A climate risk assessment seeks to understand the likelihood of future climate hazards and the potential impacts of these hazards on cities spatially, and their inhabitants. This is fundamental information for prioritizing action and investment into climate adaptation and resilience.[4] As a part of city's Climate Change Risk Assessment, both GCOM and C40 require cities to report on:

 # Climate-related hazards; affecting the whole city, including all communities. Hazards may include meteorological, climatological, hydrological, geophysical, or biological events and should acknowledge variability in hazard exposure across the city. The hazard assessment should identify the most frequent, severe and widespread hazards and those likely to cause the greatest impact. It should take into account the city's historic trends and current situation, as well as future scenarios based on available scientific evidence through to 2050 at least.

 # Impacts assessment of hazards; on people, systems and sectors such as: urban planning, environmental quality, food, Information and Communication Technologies (ICT), transport, energy, water, waste, public health, and economy, among others. The assessment would consider the vulnerability of people, systems or sectors; their capacity to adapt in the face of hazards, and also the potential impact in terms of number of people affected, cost of damage, days' service lost, etc. The impact assessment would consider hazards experienced today and projections through to 2050.

4. C40Cities, May 2018, Climate Action Planning Framework.

>>>> GLOSSARY

CLIMATE RISKS:

Risk depends on the likelihood (also sometimes referred as probability) of an event, multiplied with the hazards impacts (also sometimes referred as consequences).[1] Risk at an urban scale can also be defined as the potential for adverse consequences on lives, health, ecosystems, economic, social and cultural assets, services, and infrastructures. In general, three broad risk categories are usually used: acceptable risks, tolerable risks, and intolerable risks.

The uncertainty of this probability increases considerably with climate change. Major risks lie in the failure to adapt to changes in the environment, leading to instability and insecurity of economic system(s) threatening adequate level of societal welfare. Climate change risk depends on climatic factors as well as decisions (intentional or unintentional) of agents governing interdependencies among climatic and socio-economic-environmental systems. Inadequate decisions (adaptation) can cause systemic risk propagating through all systems.[2]

VULNERABILITY:

Facing a climate hazard, people and infrastructures are exposed to the same potential losses but are not vulnerable in the same way. Vulnerability depends on physical, socio-economic, the availability of services, governmental and cultural factors and can be quantified by the degree of loss resulting from a hazard, and the capacity to recover from an event.

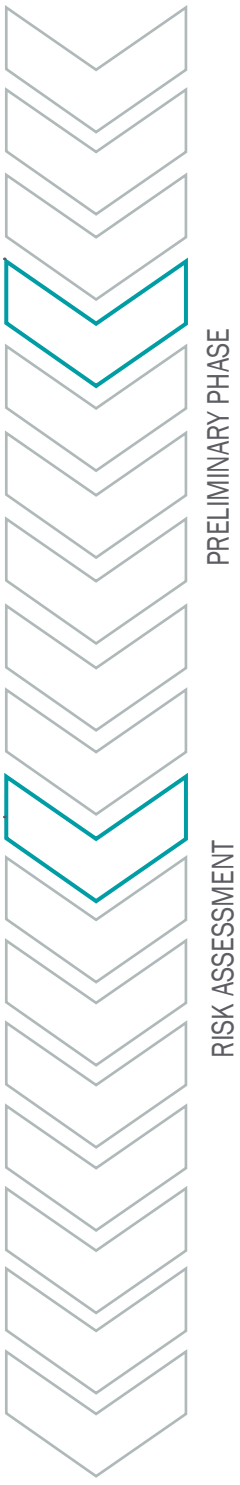
ADAPTIVE CAPACITY:

It is the technical and financial ability and willingness of the city's key stakeholders at various levels—local, regional, and national— to cope with the adverse impacts of climate change. A quick measure of institutional awareness is the presence of a comprehensive analysis of climate risks for the city and corresponding adaptation and mitigation initiatives. [3]

1. IPCC, 2014: Annex II: Glossary.
2. EC FP7 research project, April 2018, Econadapt Toolbox Website.
3. Shagun Mehrotra & al, 2009, Framework for city risk assessment.

1.3. PROCESS FOR REPORTING

In order to maximise the quality and applicability of the assessment, the following process is recommended. Steps 1 and 2 are preliminary phases, to establish the goals and the team for the report. Steps 3 and 4 establish the Climate Change Risk Assessment. Further, the assessment will allow the development and implementation of an Adaptation Action plan.



STEP 1 | Establish the Context

It is essential for the city to determine the **goals & objectives** of this assessment, what would be considered as a success. Identify the **existing & potential human and financial resources,** as well as the relevant **internal** (local government) and **external stakeholders** to engage throughout this process.

STEP 2 | Stakeholders, Interdisciplinary Team and Resources

Identify and involve relevant **actors**: universities, scientific/academic institutions, different government agencies who can take part in the study.

Identify and analyse the existing **sets of data** : what documentation is available, incomplete or have dated. An independent pre-assessment can be used to facilitate the city acknowledging gaps and sets the new objectives.

STEP 3 | Identify, Analyse and Evaluate Risks

Create a report detailing the sector-based hazards and risks:

- # Analyse the **demographic, socio-economic and environmental context**, to understand the potential evolution of impacts and priorities on the city;
- # Study the **past climatic events**: intensity, frequency, scale and impacts;
- # Set the **climate change trends**, future scenarios of evolution;
- # Research each of the **future hazards:** likelihood, consequence, frequency
- # Assess the **impact** these extreme events could have on people and sectors.

STEP 4 | Create Risks and Vulnerabilities Map

Include spatial maps highlighting vulnerable areas and hot spots, to the previous report:

- # Identify **how and where** each climate hazard will affect the city, and **which assets/sectors** will be affected.
- # Consider the cascading effects on other sectors via an **interdependencies** assessment.
- # Identify **priority risks** based on level of exposure, sensitivity, interdependencies and vulnerability

2 | ASSESSMENT CHECKLIST

A | Introduction and General Content

No Limited Yes

 # Essential | The Climate Change Risk Assessment identifies the following essential elements [5]:

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

Terminologies and definitions used in the reports should be consistent with those used in the IPCC Fifth Assessment Report (AR5)[6] or any update following the AR5 as well as with national frameworks/requirements.

 # Best Practice | The report can include greater analytical details about:

>> **Introduction** (of the goals and objectives for the local government);
>> **Summary** setting out the main findings.

B | Context, Past Climatic Events and Trends

No Limited Yes

B.1. DEMOGRAPHIC AND SOCIO-ECONOMIC CONTEXT

 # Essential | The Climate Change Risk Assessment identifies the following essential elements:

>> **A short description** on the city's demographic and socio-economic context and key future trends: an overview of the **city's contextual data**, **trends** and/or information on **social and economic projections** for the city[7].

 # Best Practice | The report can include greater analytical details about trends [8]:

>> **Population/demographics** (e.g. age profiles, life expectancy, immigration);
>> **Socio-Economic development** (e.g. housing affordability; energy demand/access; water demand/access; undernourishment; poverty; Social Progress Index);
>> **Future trends** (e.g. emerging technologies; innovations and disruptors enabling transformational action).

5. *GCOM Data Standards, Measurement and Reporting Technical Working Group (D-TWG), July 2018.*
6. *IPCC, 2014: Annex II: Glossary.*
7. *C40Cities, May 2018, Climate Action Planning Framework.*
8. *Social Progress Imperative (M. E Porter, S. Stern, M. Green), 2016, Social Progress Index.*

No Limited Yes

B.2. ENVIRONMENTAL CONTEXT AND PROJECTED TRENDS

 # Essential | The Climate Change Risk Assessment identifies the following essential elements [9]:

>> A short description of the **current administrative and physical geography** as relevant to climate change (e.g. coastal; inland; fluvial; topography; elevation).

 # Best Practice | A report can include greater analytical details about trends:

>> **Global climate trend:** a short description of climate change anticipated globally, a short description of the country-wide impacts and governance.

>> **Climate change in the city**: assess past and recent climatic trends experienced in the city. Identify climate change scenarios based on at least three different representative greenhouse gas emission pathways and the expected impact. Climate change scenarios should also include estimated likelihood and frequency of high intensity events (e.g. droughts, cyclones and floods, heat waves and high wind speeds). The analysis should be based on recent data, using a combination of global and regional climate models, statistical downscaling and expert judgment (including interviews with key city officials and researchers).

>> Bring information on the **city's current environmental quality** : e.g. water quality, air quality, biodiversity and green areas. [10]

>> When relevant to climate change, bring extra information on **resource management** : e.g. solid waste volume and management, food sources and consumption, deforestation, alien plant invasions.

B.3. MAJOR CLIMATE HAZARD OCCURRED IN THE PAST

 # Essential | It is essential for the Climate Change Risk Assessment to report the major hazards occurred in the past [11]:

>> **Scale of the hazard**, and description of the impacts, including loss of human lives and economic losses (direct and indirect, if possible), environmental and other impacts spatially specified;

>> **Current risk level** of those hazards (likelihood x impact, also sometimes referred as 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. The sectors can be among the following list: 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… The results may be reported following the template in the annexes (table 1, section A and B Current and future climate risks, exposure, impacts and vulnerability).

>> **Vulnerable population groups** most affected by the hazard.

 # Best Practice | No Specification.

9. *C40Cities, May 2018, Climate Action Planning Framework.*
10. *C40Cities, May 2018, Climate Action Planning Framework.*
11. *GCOM Data Standards, Measurement and Reporting Technical Working Group (D-TWG), July 2018.*

C | Projected Climate Hazard and Impact

No Limited Yes

C.1. PROJECTED CLIMATE HAZARDS

 # Essential | It is essential for the Climate Change Risk Assessment to report the most significant climate hazards faced or projected to be faced by their communities, based on global climate trends and climate downscale to the region, and to report for each [12]:

- >> **Description of expected future hazards,** and description of the expected impacts, including loss of human lives and economic losses (direct and indirect, if possible), environmental and other impacts spatially specified;
- >> **Current risk level** (likelihood x impact) of the hazard (also sometimes referred as probability x consequence);
- >> **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. In each sector, include a brief background of the sector and its importance for the city. The results can be reported following the template in the annexes (table 1, section A and B Current and future climate risks, exposure, impacts and vulnerability);
- >> **Qualitative assessment 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. The results can be reported in the last section of the template in the annexes (table 1, section A and B Current and future climate risks, exposure, impacts and vulnerability).

 # Best Practice | The report can include greater analytical details about:

- >> **Interdependencies analysis across service sectors,** considering knock-on impacts from one system/business/community to another and potential for cascading damage or failures. A series of best practice examples is provided in the C40 Infrastructure + Interdependencies Climate Risk Report. [13]
- >> Assessment of **how specific hazards may influence others**. Assessment of projected hazards beyond 2050 to inform long-range planning. Updates to the hazard assessment scheduled to take account of emerging scientific evidence.
- >> **Impacts quantified** (e.g. number of people affected, days of service lost) for potential damages, avoided economic and societal costs; and the value of city systems at risk assessed and set out (value-at-risk assessment).[14]

C.2. ADAPTIVE CAPACITY

 # Essential | It is essential for the Climate Change Risk Assessment to identify factors that will most greatly affect their adaptive capacity, and report for each factor[15] :

- >> **Description of the factor** as it relates to (supporting or challenging) adaptive capacity;
- >> **Degree** to which the factor challenges (as opposed to supports) adaptive capacity.

The results can be reported in the template in the annexes (refer to table 2).

12. *GCOM Data Standards, Measurement and Reporting Technical Working Group (D-TWG), July 2018.*
13. *C40Cities & AECOM, Spring 2017, C40 Infrastructure Interdependencies + Climate Risks Report.*
14. *C40Cities, May 2018, Climate Action Planning Framework.*
15. *GCOM Data Standards, Measurement and Reporting Technical Working Group (D-TWG), July 2018.*

C.2. ADAPTIVE CAPACITY

 # Best Practice | The report can include greater analytical details about:

>> **Measurement** from the factors previously identified of the climate sensitivity in the city and **mapping** of areas that will have the highest vulnerability to projected changes and are vulnerable to specific hazards or risks.

D | Conclusion

No Limited Yes

 # Essential | No Specification.

 # Best Practice | The report can include greater analytical details about:

>> **Gaps in the understanding of impacts**, identifying where more research might be needed.

>> **Compare updated projections with previous projections** to identify significant differences or areas where data might be more certain.

>> **Priority risks** based on levels of exposure, sensitivity, interdependencies and vulnerability.

>> **Existing policies, programmes, assets, capacities, and actions** that could address the priority risks and vulnerabilities. Also highlight the critical gaps in capacity, policy, programs, assets and knowledge (including, where possible, informal knowledge that may be held in the community).

>> **Additional actions needed** to address priority risks and vulnerabilities due to climate change.

ANNEXES

REFERENCES

>> C40Cities, May 2018, Climate Action Planning Framework.
https://assets.locomotive.works/sites/5ab410c8a2f42204838f797e/pages/5ae2f92374c4837e195d0e00/files/CAP_Framework_20180515.pdf?1526373999

>> C40Cities & AECOM, Spring 2017, C40 Infrastructure Interdependencies + Climate Risks Report.
https://unfccc.int/sites/default/files/report_c40_interdependencies_.pdf

>> EC FP7 research project, April 2018, Uncertainties and risk analysis climate change adaption, Econadapt Toolbox Website
http://econadapt-toolbox.eu/insights

>> IPCC, 2014: Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 117-130. *https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_Glossary.pdf)*

>> GCOM Data Standards, Measurement and Reporting Technical Working Group (D-TWG), July 2018, Recommendation for common reporting frameworks for greenhouse gas emissions inventories, targets, risk and vulnerability, climate action and energy access, Draft for Consultation, version 5.0.
https://www.globalcovenantofmayors.org/wp-content/uploads/2018/05/Consultation-document-English-1.pdf

>> Shagun Mehrotra, Claudia E. Natenzon, Ademola Omojola, Regina Folorunsho, Joseph Gilbride, Cynthia Rosenzweig, 2009, Framework for city risk assessment, Fifth Urban Research Symposium.
http://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resources/336387-1256566800920/6505269-1268260567624/Rosenzweig.pdf

>> Social Progress Imperative, M. E Porter, S. Stern, M. Green, 2016, Social Progress Index.
http://www.socialprogressimperative.org/wp-content/uploads/2016/06/SPI-2016-Main-Report.pdf

RISK AND VULNERABILITY ASSESSMENT REPORTING FRAMEWORK

These tables were from the GCOM Data Standards, Measurement and Reporting Technical Working Group (D-TWG), July 2018, Recommendation for common reporting frameworks for greenhouse gas emissions inventories, targets, risk and vulnerability, climate action and energy access, Draft for Consultation, version 5.0.

(m) = mandatory to report

(r) = recommended to report

(opt) = optionnal to report

italics = explanatory notes

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 [16] *(grouped under headers, can report on multiple across the table)*	CURRENT hazard **RISK** level (*dropdown for each hazard selected)*	
	Probability of Hazard [17] (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]

16. *Hazards based on C40 Hazard Taxonomy. Full definitions 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.*

Water Scarcity ∨		
Drought	[dropdown as above]	[dropdown as above]
Wild fire ∨		
Forest fire	[dropdown as above]	[dropdown as above]
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]

16. *Hazards based on C40 Hazard Taxonomy. Full definitions available in the CRAFT glossary. Can report on 1 or more, suggest 5-10 if applicable.*
17. *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).*

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† [18]			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). [19]			Please indicate which vulnerable population groups will be most impacted by FUTURE hazards. † [20]
Expected change in frequency (m)	Expected change in intensity (m)	Timescale [21] (m)	Description of expected impact (r)	Impacted sectors, assets, and services (m) (c) [22] *(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]

18. 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).

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

20. A full list is not provided here, recommend a "preapproved" list is taken from relevant scientific literature.

21. 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

22. 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)

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[23] ○ 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]

23. 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 4. If available, please provide more information on your jurisdiction's climate adaptation plan(s)[31]

Title (m)	Short Description (m)	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] o Not adopted	o Standalone climate adaptation plan o Addressed in combined adaptation and mitigation climate action plan± o Addressed in general city plan o Addressed in city sector plan(s) o Other _____	o Same, covers whole jurisdiction and nothing else o Smaller, covers part of the jurisdiction o Larger, covers the whole jurisdiction and adjoining areas o Partial, covers part of the jurisdiction and adjoining areas	o Local government o Consultant o International organization o Community group o Regional / state / provincial government o National / central government o Other _____	o Formal schedule for update o Yes o No o Do not know o If yes, what is the time period for update? (years): _____ o Status of current update o Currently Exists; o In Progress o Does not exist but intending to undertake in the future; o Do not know	

31. Combined with other questions, a full picture of where the city is in its planning and revision process is provided.
32. Refers to year officially adopted, not published, if the years are different.
33. 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).
34. The mandatory fields in this table are required for compliance after 3 years.

C40 CITIES
CLIMATE LEADERSHIP GROUP

The C40 Cities Climate Leadership Group connects more than 90 of the world's greatest cities, representing over 650 million people and one quarter of the global economy.

Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.

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