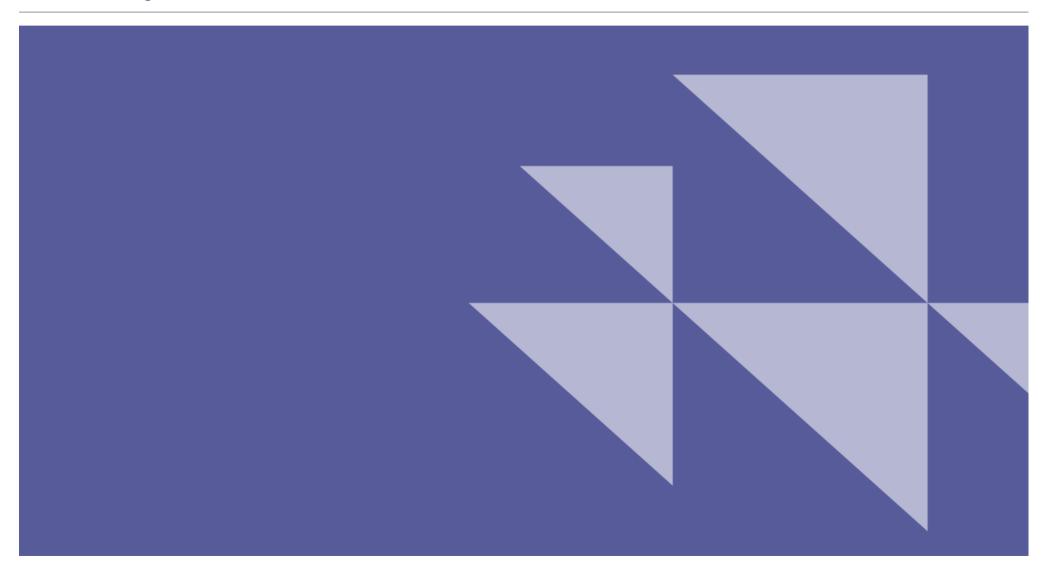


Cities 2019 Questionnaire



CDP Cities disclosure cycle 2019

Cities 2019 Questionnaire

We invite a reply to the following questions. In 2019, CDP has partnered with CLEI Local Governments for Sustainability to present one unified platform for city climate reporting, streamlining the process of reporting and ensuing simplicity and standardisation for reporting cities. Cities will only have to report once, on one platform, to the following questions.

ICLEI will continue to support and provide technical assistance to local governments, while CDP and ICLEI will both use the self-reported city data to provide robust analysis of the action being taken by cities across the world.

How to respond

Please respond to the information request using CDP's Online Response System (ORS), accessed via CDP's website or the activation link you will receive. This document shows all the possible questions that cities may encounter in the ORS. However, it should not be used instead of the ORS. If you are unable to respond online via the ORS please e-mail cities@cdp.net.

Please answer the questions comprehensively while also assessing the relevance of the information you provide. Where you do not have all of the information requested, please respond with what you have as this is more valuable than no response.

The deadline for response is 10th July 2019

Help and resources

- 2019 Online Reporting Guidance: This document provides a high-level overview of each questionnaire section as well as guidance on every question. It provides information on the intent of each question as well as examples of good responses for selected questions
- In-ORS Guidance: Within the ORS, there will be three levels of help and guidance
 - Brief help text is provided below every question. This text will give you guidance on the intent of the guestion.
 - Clicking on the help icon above each question will show a pop-up window with information on how to respond to the question.
- More detailed guidance can be found by clicking the expandable link below the question. This link will display the full reporting guidance including detailed information on how to respond, examples, links to documentation and scoring associated with the question.
- Contact us: All cities can write to cities@cdp.net for questions which are not answered in the guidance, for help accessing the ORS, or for general inquiries.
- C40 cities can contact their regional director or reporting@c40.org for help in compiling their response.
- ICLEI cities can contact their regional director or carbonn@iclei.org for help in compiling their response.

0. Introduction

Introduction

0.1 Please give a general description and introduction to your city including your city's reporting boundary in the table below.

Response Options

Please complete the following table:

| Administrative boundary | Description of city |
|---|---------------------|
| Select from: | Text field |
| Local government area within a city / metropolitan area | |
| City / Municipality | |
| Independent city | |
| Special city | |
| Federal district | |
| Sovereign city-state | |
| Metropolitan area | |
| Province / County | |
| Independent province | |
| Intercommunality | |
| Sub-municipal district | |
| Other: please specify | |

City Details

0.3 Please provide information about your city's Mayor or equivalent legal representative authority in the table below.

Response Options

Please complete the following table:

| Leader title | Leader name | Current term end month | Current term end year |
|--------------|-------------|------------------------|-----------------------|
| Text field | Text field | Select from: | Numerical field |
| | | January | |
| | | February | |
| | | March | |
| | | April | |
| | | May | |
| | | • June | |
| | | • July | |
| | | August | |
| | | September | |
| | | October | |
| | | November | |
| | | December | |

0.4 Please select the currency used for all financial information disclosed throughout your response.

Response Options

Select from Appendix A.

0.5 Please provide details of your city's current population. Report the population in the year of your reported inventory, if possible.

Response Options

Please complete the following table:

| Current population | Current population year | Projected population | Projected population year |
|--------------------|-------------------------|----------------------|---------------------------|
| Numerical field | Numerical field | Numerical field | Numerical field |

0.6 Please provide further details about the geography of your city.

Response Options

Please complete the following table:

Land area of the city boundary as defined in question 0.1 (in square km)

Numerical field

1. Governance & Data Management

Governance

1.0 Does your city incorporate sustainability goals and targets (e.g. GHG reductions) into the master planning for the city?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to incorporate in the next 2 years
- Not intending to incorporate
- Do not know

If Yes to 1.0:

1.0a Please detail which goals and targets are incorporated in your city's master plan and describe how these goals are addressed in the table below.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Goal type | How are these goals/targets addressed in the city master plan? |
|-----------------------------|--|
| Select from: | Text field |
| Emissions reduction targets | |
| Adaptation targets | |
| Renewable energy targets | |
| Energy efficiency targets | |
| Water security targets | |
| Waste management targets | |
| Other: please specify | |
| | |

[Add Row]

1.1 Has the Mayor or city council committed to climate adaptation and/or mitigation across the geographical area of the city?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in future
- Not intending to undertake
- Do not know

1.1a Please select any commitments to climate adaptation and/or mitigation your city has signed and attach evidence.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Name of commitment and attach document | Type of commitment | Comments |
|---|--------------------|------------|
| Select from: | Select from: | Text field |
| Global Covenant of Mayors for Climate & Energy | Adaptation | |
| Durban Adaptation Charter | Mitigation | |
| Mexico City Pact | Both | |
| UNISDR, Making Cities Resilient Campaign | Other | |
| • 100 Resilient Cities | | |
| Resilient Communities for America | | |
| STAR Communities | | |
| • LEED for Cities | | |
| Mayors National Climate Action Agenda | | |
| Chicago Climate Charter | | |
| Klimakommune (Climate Municipality) | | |
| 100% Renewable Energy Cities & Regions Network | | |
| Building Efficiency Accelerator | | |
| District Energy in Cities Initiative | | |
| One Planet City Challenge | | |
| EcoMobility Alliance Idl File Great Cities Presents | | |
| ICLEI's Green Climate Cities Program | | |
| Deadline 2020 - Delivering the 1.5 degree ambition of the Paris Agreement in a resilient, inclusive way | | |
| Individual City Commitment City and leave we different | | |
| Other: please specify | | |

[Add Row]

If Not intending to undertake to 1.1:

1.1b Please explain why your Mayor or city council does not have any commitments to climate adaptation and/or mitigation.

Response Options

Please complete the following table:

| Reason | Explanation |
|-------------------------------------|-------------|
| Select from: | Text field |
| Lack of political will | |
| Commitments are under consideration | |
| Lack of funding / resources | |
| Lack of expertise / knowledge | |
| Actions prioritised over commitment | |
| Other: please specify | |

1.6 Does the Mayor have a statutory duty (legal responsibility) to reduce greenhouse gases?

Response Options

Select one of the following options:

- Yes, driven by the regional level
- Yes, driven by the national level
- Yes, driven by the city
- No
- Do not know

1.7 How many staff (FTE) work on topics related to climate change mitigation and adaptation?

Response Options

Please complete the following table:

| Mitigation | Adaptation |
|-----------------|-----------------|
| Numerical field | Numerical field |

Data Management

1.9 How many staff (FTE) does your city have for environmental related data management? (including collecting, storing, analyzing and communicating).

Response Options

Numerical field.

1.11 How would you characterize the data management of your city and department?

Response Options

Please complete the following table:

| City | Department |
|--|--|
| Select from: Initial. Our city does not have a stable, consistent environment for information management Recognised. Our city has recognised that we are not managing our sustainability data and are in the process of planning and establishing a system Repeatable. Our city has undocumented policies and procedures in place to repeat some information processes Defined. Our city has documented policies and procedures for the management of information across the organisation Managed. Our city has established organisational wide metrics for each department and results are measured Optimised. Our city is focussed on continuous process improvement through the use of data | Select from: Initial. Our department does not have a stable, consistent environment for information management Recognised. Our department has recognised that we are not managing our sustainability data and are in the process of planning and establishing a system Repeatable. Our department has undocumented policies and procedures in place to repeat some information processes Defined. Our department has documented policies and procedures for the management of information across the organisation Managed. Our department has established organisational wide metrics for each department and results are measured Optimised. Our department is focussed on continuous process improvement through the use of data |

1.12 What tools does your city / department use to manage its environmental related data?

Response Options

Select all that apply:

- Microsoft Excel
- Enterprise (packaged) software
- Custom designed software
- Other

1.13 What tools does your city / department use to analyse its environmental related data?

Response Options

Select all that apply:

- Microsoft Excel
- Statistical Software SPSS, SAS, etc.
- Visualization/Analysis Software Tableau, Qlik, etc
- Other
- We do not analyse our environmental data

1.14 Does your city have a team dedicated to data analysis (e.g., data analytics staff, performance management staff, evaluation staff, chief data officer, etc.)?

Response Options

Select one of the following options:

- The city does not have a team dedicated to data analysis
- The city has a team dedicated to data analysis that supports some departments, but our engagement with them is limited
- The city has a team dedicated to data analysis city-wide

1.15 Has your city's Mayor or equivalent legal authority communicated their commitment to governing with data publicly to city residents (e.g., through public remarks, press releases, etc.)?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

2. Climate Hazards and Vulnerability

Risk and Vulnerability Assessment

2.0 Has a climate change risk or vulnerability assessment been undertaken for the city area?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes or In progress to 2.0:

2.0a Please select the primary process or methodology used to undertake the risk or vulnerability assessment of your city.

Response Options

Please complete the following table:

| Primary methodology | Description |
|---|-------------|
| Select from: | Text field |
| IPCC climate change impact assessment guidance | |
| OECD Strategic Environmental Assessment and Adaptation to Climate Change | |
| UNDP climate risk management methodologies | |
| UK Climate Impacts Partnership Framework (UKCIP) | |
| World Bank Urban Risk Assessment (URA) | |
| Shaping climate resilient development: A framework for decision making (ECA) | |
| Sendai Framework for Disaster Risk Reduction | |
| US Federal Emergency Management Agency (FEMA) Hazard Identification and Risk Assessment | |
| Australian/New Zealand Standard for Risk Management | |
| State or region vulnerability and risk assessment methodology | |
| Agency specific vulnerability and risk assessment methodology | |
| Proprietary methodology | |
| CRAFT Tool - City Climate Hazard Taxonomy | |
| Building Adaptive and Resilient Cities (BARC) toolkit (regional - Canada) | |
| ICLEI ACCCRN Process Toolkit (regional - Southeast Asia) | |
| Local Government Climate Change Adaptation Toolkit (regional - Oceania) | |
| • Unknown | |
| Other: please specify | |

If Yes to 2.0:

2.0b Please attach and provide details on your climate change risk and vulnerability assessment. Please provide details on the boundary of your assessment, and where this differs from your city's boundary, please provide an explanation.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Publication title | Year of adoption from local government | Web link | Boundary of assessment relative to city boundary (reported in 0.1) | Explanation of boundary choice where the asssessment boundary differs from the the city boundary | Areas/Sectors covered by the risk and vulnerability assessment | Primary author of assessment | Does the assessment identify vulnerable populations? |
|-------------------|--|------------|---|--|---|---|--|
| Text field | Numerical field | Text field | Select from: Same – covers entire city and nothing else Smaller – covers only part of the city Larger – covers the whole city and adjoining areas Partial – Covers part of the city and adjoining areas | Text field | Select from: Energy Water Supply and Sanitation Transport Food and agriculture Waste Management Information & Communications Technology Environment, Biodiversity and Forestry Industrial Commercial Residential Education Public Health Community and Culture Law & Order Emergency Management Land use planning Tourism Other | Select from: Dedicated city team Relevant city department Consultant International organization Community group Regional / state / provincial government National / central government Other | Select from: • Yes • No |

[Add Row]

If Not intending to undertake is selected in 2.0:

2.0c Please explain why your city does not have a climate risk and vulnerability assessment.

Response Options

Please complete the following table:

| Reason | Comment |
|---|------------|
| Select one of the following options: | Text field |
| Lack of resources/funding | |
| Lack of expertise | |
| Lack of political will | |
| Climate hazards not experienced in the city | |
| • Other | |

2.1 Please list the most significant climate hazards faced by your city and indicate the probability and consequence of these hazards, as well as the expected future change in frequency and intensity. Please also select the most relevant assets or services that are affected by the climate hazard and provide a description of the impact.

Response Options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Climate Hazards | Did this hazard significantly impact your city before 2019? | Current probability of hazard | Current consequence of hazard | Social impact of hazard overall | Future change in frequency |
|---------------------------|--|---|---|---|--|
| Select from Appendix G | Select from: • Yes • No • Do not know | Select from: High Medium High Medium Medium Low Low Do not know Does not currently impact the city | Select from: High Medium High Medium Medium Low Low Do not know Does not currently impact the city | Select from: Fluctuating socio-economic conditions Increased incidence and prevalence of disease and illness Increased demand for public services Increased demand for healthcare services Increased risk to already vulnerable populations Increased conflict and/or crime Increased resource demand Loss of traditional jobs Migration from rural areas to cities Population displacement Loss of tax base to support public services Other | Select from: Increasing Decreasing None Do not know Not expected to happen in the future |

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| Future change in intensity | When do you first expect to experience those changes? | Most relevant assets/ services affected overall | Please identify which vulnerable populations are affected | Magnitude of expected future impact | Please describe the impacts experienced so far, and how you expect the hazard to impact in the future |
|--|--|--|--|---|---|
| Select from: Increasing Decreasing None Do not know Not expected to happen in the future | Select from: Immediately Short-term (by 2025) Medium-term (2026-2050) Long-term (after 2050) | Select from: Energy Water supply & sanitation Transport Food & agriculture Waste management Information & communications technology Environment, biodiversity, forestry Industrial Commercial Residential Education Tourism Public health Society / community & culture Law & order Emergency services Land use planning Other | Select from: Women & girls Children & youth Elderly Indigenous population Marginalized groups Persons with disabilities Persons with chronic diseases Low-income households Unemployed persons Persons living in sub-standard housing Other | Select from: High Medium Low Do no know | Text field |

2.2 Please identify the factors that most greatly affect your city's ability to adapt to climate change and indicate how those factors either support or challenge this ability.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

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| Factors that affect ability to adapt | Support / Challenge | Please describe the factor and the degree to which it supports or challenges the adaptive capacity of your city |
|---|---------------------|---|
| Select from: | Select from: | Text field |
| Access to basic services | Challenge | |
| Access to healthcare | Support | |
| Access to education | Do not know | |
| Cost of living | | |
| Housing | | |
| Poverty | | |
| • Inequality | | |
| Unemployment | | |
| Underemployment | | |
| Public health | | |
| Political stability | | |
| Political engagement / transparency | | |
| Government capacity | | |
| Budgetary capacity | | |
| Migration | | |
| Safety and security | | |
| Economic health | | |
| Economic diversity | | |
| Rapid urbanization | | |
| Resource availability | | |
| Environmental conditions | | |
| Infrastructure conditions / maintenance | | |
| Infrastructure capacity | | |
| Land use planning | | |
| Community engagement | | |
| Access to quality / relevant data | | |
| • Other | | |

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3. Adaptation

Adaptation Actions

3.0 Please describe the main actions you are taking to reduce the risk to, or vulnerability of, your city's infrastructure, services, citizens, and businesses from climate change as identified in the Climate Hazards section.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Climate hazards | Action | Action title | Status of action | Co-benefit area | Action description and implementation progress |
|---|------------------------|--------------|--|------------------------|--|
| Drop-down populated with selections from 2.1 column 1 | Select from Appendix B | Text field | Select from: Scoping Pre-feasibility study Pre-implementation Implementation Implementation complete but not in operation Operation Monitoring and reporting | Select from Appendix H | Text field |

| Finance status | Total cost of the project | Total cost provided by the local government | Primary source fund | Web link |
|--|---------------------------|---|----------------------------------|------------|
| Select from: | Numerical field | Numerical field | Select from: | Text field |
| Pre-feasibility study status | | | Local | |
| Feasibility undertaken | | | (Sub)national | |
| Feasibility finalised, and finance partially secured | | | International (ODA) | |
| Finance secured | | | Climate finance (carbon credits) | |
| | | | Public-private partnership | |
| | | | • Other | |

[Add Row]

Adaptation Planning

3.1 Does your city council have a published plan that addresses climate change adaptation?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes or In progress to 3.1:

3.1a Please provide more information on your plan that addresses climate change adaptation and attach the document. Please provide details on the boundary of your plan, and where this differs from your city's boundary, please provide an explanation.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Publication title | Areas covered by adaptation plan | Year of adoption from local government | Boundary of plan relative to city boundary (reported in 0.1) | If the city boundary is different from the plan boundary, please explain why and any areas / other cities excluded or included? | Stage of implementation |
|------------------------------------|----------------------------------|--|---|--|---|
| Text field and attachment function | Select from Appendix E | Numerical field | Select from: Same – covers entire city and nothing else Smaller – covers only part of the city Larger – covers the whole city and adjoining areas Partial – Covers part of the city and adjoining areas | Text field | Select from: Plan in development Plan developed but not implemented Plan in implementation Implementation complete Measurement in progress Plan update in progress Other |

| Type of plan | Has your local government addressed the synergies, trade-offs, and co-benefits, if any, of the main mitigation and adaptation actions you identified? | trade-offs, and co-benefits of this | Primary author of plan | Description of the stakeholder engagement process | Web link |
|--|---|-------------------------------------|-------------------------------|---|------------|
| Select from: | Select from: | Text field | Select from: | Text field | Text field |
| Standalone | • Yes | | Dedicated city team | | |
| Integrated mitigation / adaptation | In Progress | | Relevant city department; | | |
| Addressed in general city plan | Intending to undertake in the next 2 | | Consultant | | |
| Addressed in city sector plan | years | | International organization | | |
| Other | Not intending to undertake | | Community group | | |
| | Don't know | | Regional / state / provincial | | |
| | | | government | | |
| | | | National / central government | | |
| | | | Other | | |

[Add Row]

3.1b Please explain why not and any future arrangements you have to create a plan.

Response Options

Please complete the following table:

| Reason | Comment |
|--|------------|
| Select from: | Text field |
| Adaptation is not within city control | |
| Adaptation is covered under main city strategy | |
| Lack of resources/funding | |
| Lack of expertise | |
| • Lack of political will | |
| Adaptation is covered in the city plans | |
| Adaptation is not currently a priority for my city | |
| • Other | |

Adaptation Goals

3.2 Please describe the main goals of your city's adaptation efforts and the metrics/KPIs for each goal.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Adaptation goal | Target year | Metrics / Indicators | | Does this target align with a requirement from a higher level of government? |
|-----------------|-----------------|----------------------|-----------------|---|
| Text field | Numerical field | Text field | Numerical field | Select from: • Yes • Yes, but it exceeds its scale or requirements • No • Do no know |

[Add Row]

4. City-wide Emissions

The questions in this section refer to your city's city-wide (sometimes referred to as "geographic" or "community") emissions inventory. This inventory encompasses emissions which are within a particular city boundary, over which local governments can exercise a degree of influence through the policies and regulations they implement.

City-wide GHG Emissions Data

4.0 Does your city have a city-wide emissions inventory to report?

By selecting Yes below, you are indicating that you have fuel and/or greenhouse gas (GHG) emissions data from the entire city area over which the city government can exercise a degree of influence through the policies and regulations they implement (sometimes referred to as 'geographic' or 'community' emissions) to report at this time.

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake

If Yes or In Progress to 4.0:

4.1 Please state the dates of the accounting year or 12-month period for which you are reporting your latest city-wide GHG emissions inventory.

Response Options

Please complete the following table:

| From | То |
|--------------------|--------------------|
| Drop-down calendar | Drop-down calendar |

If Yes or In Progress to 4.0:

4.2 Please indicate the category that best describes the boundary of your city-wide GHG emissions inventory.

Response Options

Please complete the following table:

| Boundary of inventory relative to city boundary (reported in 0.1) | | Explanation of boundary choice where the inventory boundary differs from the city boundary (include inventory boundary, GDP and population) |
|--|------------|---|
| Select from: Same - covers entire city and nothing else Smaller - covers only part of the city Larger - covers the whole city and adjoining areas Partial - Covers part of the city and adjoining areas | Text field | Text field |

If Yes or In progress to 4.0:

4.3 Please give the name of the primary protocol, standard, or methodology you have used to calculate your city's city-wide GHG emissions.

Response Options

Please complete the following table:

| Primary protocol | Comment |
|--|------------|
| Select from: | Text field |
| Global Protocol for Community Greenhouse Gas Emissions Inventories (GPC) | |
| International Standard for Determining Greenhouse Gas Emissions for Cities (UNEP and World Bank) | |
| 2006 IPCC Guidelines for National Greenhouse Gas Inventories | |
| U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (ICLEI) | |
| Regional or country specific methodology | |
| City specific methodology | |
| • Other | |

If Yes or In progress to 4.0:

4.4 Which gases are included in your city-wide emissions inventory?

Response Options

Select all that apply:

- CO2
- CH4
- N2O
- HFCs
- PFCs
- SF6
- NF3

If Yes to 4.0:

4.5 Please attach your city-wide inventory in Excel or other spreadsheet format and provide additional details on the inventory calculation methods in the table below.

If you have an inventory in the format of the GPC, please attach it below. If you are using the ClearPath tool, please attach both extracts in the table below. If your inventory is not in the format of the GPC, you can also attach it below.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Emissions inventory format | Document title and attachment | Emissions factors used | Global Warming Potential (select relevant IPCC Assessment Report) | Please select if these additional sectors are included in the inventory | Population in inventory year | Overall Level of confidence | Comment on level of confidence |
|---|------------------------------------|--------------------------------|--|---|------------------------------|---------------------------------|--------------------------------|
| Select from: GPC format: City Inventory Reporting and Information System (CIRIS) GPC Reporting tool GPC format: ClearPath (ICLEI) Custom or older GPC format SCATTER This inventory is in a format other than the GPC | Text Field and attachment function | Select from: IPCC LCA Other | Select from: IPCC 2nd AR (1995) IPCC 3rd AR (2001) IPCC 4th AR (2007) IPCC 5th AR (2013) | Industrial process and/or product use Agriculture, forestry or other land use sectors | Numerical field | Select from: High Medium Low | Text field |

[Add Row]

If Global Protocol for Community Scale Greenhouse Gas Emissions Inventories is selected in 4.3 and No – continue reporting using the GPC format to 4.3a:

4.6b Please provide a summary of emissions by sector and scope as defined in the Global Protocol for Community Greenhouse Gas Emissions Inventories (GPC) in the table below.

Response Options

Please complete the following table:

| Sector and scope (GPC reference number) | Emissions (metric tonnes CO2e) | Where data is not available, please explain why | |
|---|--------------------------------|---|--|
| Stationary Energy: energy use – Scope 1 (I.X.1) | Numerical field | Text field | |
| Stationary Energy: energy use – Scope 2 (I.X.2) | Numerical field | Text field | |
| Stationary Energy: energy use – Scope 3 (I.X.3) | Numerical field | Text field | |

| Stationary Energy: energy generation supplied to the grid – Scope 1 (I.4.4) | Numerical field | Text field | |
|---|-----------------|------------|--|
| Transportation – Scope 1 (II.X.1) | Numerical field | Text field | |
| Transportation – Scope 2 (II.X.2) | Numerical field | Text field | |
| Transportation – Scope 3 (II.X.3) | Numerical field | Text field | |
| Waste: waste generated within the city boundary – Scope 1 (III.X.1) | Numerical field | Text field | |
| Waste: waste generated within the city boundary – Scope 3 (III.X.2) | Numerical field | Text field | |
| Waste: waste generated outside the city boundary – Scope 1 (III.X.3) | Numerical field | Text field | |
| Industrial Processes and Product Use – Scope 1 (IV) | Numerical field | Text field | |
| Agriculture, Forestry and Land Use – Scope 1 (V) | Numerical field | Text field | |
| TOTAL Scope 1 (Territorial) emissions | Numerical field | Text field | |

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| TOTAL Scope 2 emissions | Numerical field | Text field |
|-------------------------|-----------------|------------|
| | | |
| TOTAL Scope 3 emissions | Numerical field | Text field |
| | | |
| TOTAL BASIC emissions | Numerical field | Text field |
| | | |
| TOTAL BASIC+ emissions | Numerical field | Text field |
| | | |

If any methodology other than GPC is selected in 4.3 and if Yes selected in response to 4.0:

4.6c Please provide a breakdown of your GHG emissions by scope. Where values are not available, please use the comment field to indicate the reason why.

Response Options

Please complete the following table:

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| Scope | Metric tonnes CO2e | Level of confidence |
|---|--------------------|---------------------------------|
| Scope 1 emissions excluding emissions from grid-supplied energy generation | Numerical field | Select from: High Medium Low |
| Scope 1 emissions from grid-supplied energy generation within the city boundary | Numerical field | Select from: High Medium Low |
| Total Scope 1 emissions (Row 1 + Row 2) | Numerical field | Select from: High Medium Low |
| Total Scope 2 emissions | Numerical field | Select from: High Medium Low |
| Total (Scope 1 + Scope 2) emissions | Numerical field | Select from: High Medium Low |
| Total Scope 3 emissions | Numerical field | Select from: High Medium Low |

If 2006 IPCC Guidelines for National Greenhouse Gas Inventories or International Standard for Determining Greenhouse Gas Emissions for Cities (UNEP and World Bank) is selected in 4.3 and if Yes selected in response to 4.0:

4.6d Where it will facilitate a greater understanding of your city-wide emissions, please provide a breakdown of these emissions by IPCC sector in the table below.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

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| IPCC sector | Sector | Scope | Emissions (metric tonnes CO2e) |
|---|-------------------------------|--------------|--------------------------------|
| Select from: | Select from: | Select from: | Numerical field |
| • Energy | Stationary energy (buildings) | Scope 1 | |
| Industrial processes and product use (IPPU) | Residential buildings | • Scope 2 | |
| Agriculture, Forestry and other land use (AFOLU) | Public buildings | Total figure | |
| Waste | Commercial buildings | | |
| • Other | Industrial buildings | | |
| | Transportation | | |
| | • Road | | |
| | Rail | | |
| | Waste | | |
| | Wastewater | | |
| | Other | | |

If U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (ICLEI)is selected in 4.3 and if Yes selected in response to 4.0

4.6e Where it will facilitate a greater understanding of your city-wide emissions, please provide a breakdown of these emissions by the US Community Protocol sources.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| US Community Protocol Sources | Sector | Scope | Emissions (metric tonnes CO2e) |
|---|-------------------------------|--------------|--------------------------------|
| Select from: | Select from: | Select from: | Numerical field |
| Built environment | Stationary energy (buildings) | • Scope 1 | |
| Transportation and other mobile sources | Residential buildings | • Scope 2 | |
| Solid waste | Public buildings | Total figure | |
| Wastewater and water | Commercial buildings | | |
| Agricultural livestock | Industrial buildings | | |
| Upstream impacts of community-wide activities | Transportation | | |
| | • Road | | |
| | Rail | | |
| | Waste | | |
| | Wastewater | | |
| | Other | | |

[Add Row]

If Regional or country specific methodology, City specific methodology or Other is selected in 4.3and if Yes selected in response to 4.0

4.6f Where it will facilitate a greater understanding of your city-wide emissions, please provide a breakdown of these emissions by end user (buildings, water, waste, transport), economic sector (residential, commercial, industrial, institutional), or any other classification system used in your city.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Source | Sector | Scope | Emissions (metric tonnes CO2e) |
|------------|-------------------------------|--------------|--------------------------------|
| Text field | Select from: | Select from: | Numerical field |
| | Stationary energy (buildings) | • Scope 1 | |
| | Residential buildings | • Scope 2 | |
| | Public buildings | Total figure | |
| | Commercial buildings | | |
| | Industrial buildings | | |
| | Transportation | | |
| | • Road | | |
| | • Rail | | |
| | Waste | | |
| | Wastewater | | |
| | • Other | | |

If Yes to 4.0

4.8 Please indicate if your city-wide emissions have increased, decreased, or stayed the same since your last emissions inventory, and describe why.

Response Options

Please complete the following table:

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| Change in emissions | Reason for change | Please explain and quantify changes in emissions |
|---------------------------------------|---|--|
| Select from: | If "Increased" or "Decreased" is selected: | Text field |
| Increased | Increased energy/electricity consumption | |
| Decreased | Population increase | |
| Stayed the same | Improved data accuracy | |
| This is our first year of calculation | Emissions reduction actions not implemented | |
| Do not know | Change in weather conditions | |
| | Change in accounting methodology | |
| | Change in calculation following verification | |
| | Behavioural change | |
| | Technological change | |
| | Legislative change | |
| | Change in available data | |
| | Change in data collection methods | |
| | Policy change | |
| | Financial conditions | |
| | • Other | |
| | If "This is our first year of calculation" is selected: | |
| | Lack of resource / funding overcome | |
| | Lack of knowledge overcome | |
| | • Other | |
| | If "Stayed the same" is selected: | |
| | No new inventory to report | |
| | Emissions have not changed | |
| | • Other | |
| | If "Do not know" is selected: | |
| | Change in staff | |
| | Lack of documentation | |
| | Change in methodology | |
| | • Other | |
| | | |

If Yes to 4.0:

4.9 Does your city have a consumption-based inventory to measure emissions from consumption of goods and services by your residents?

Response Options

Please complete the following table:

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| Response | Provide an overview and attach your consumption-based inventory if relevant |
|--|---|
| Select from: | Text field and attachment function |
| • Yes | |
| • In progress | |
| Intending to undertake in the next 2 years | |
| Not intending to undertake | |
| Do not know | |
| | |

City-wide External Verification

If Yes to 4.0:

4.11 Has the city-wide GHG emissions data you are currently reporting been externally verified or audited in part or in whole?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes to 4.11:

4.11a Please provide the following information about the city-wide emissions verification.

Response Options

Please complete the following table:

| Name of verifier and attach verification certificate | Year of verification | Please explain which parts of your inventory are verified |
|--|----------------------|---|
| Text field and attachment function | Numerical field | Text field |

If Not intending to undertake or Intending to undertake in the next 2 years to 4.11:

4.11b Please explain why your city-wide emissions inventory is not verified and describe any plans to verify your city-wide emissions in the future.

Response Options

Please complete the following table:

| Reason | Comments |
|----------------------------------|------------|
| Select from: | Text field |
| Verification under consideration | |
| Lack of funding / resources | |
| Lack of expertise / knowledge | |
| Verification is not prioritised | |
| Data is internally verified | |
| • Other | |

Historical emissions inventories

4.12 Please provide details on any historical and base year city-wide emissions inventories your city has, in order to allow assessment of targets in the table below.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Inventory date from | Inventory date to | Scopes/boundary covered | Previous emissions (metric tonnes CO2e) | Is this inventory used as the base year inventory? | Methodology | File name and attach your inventory | Comments |
|---------------------|-------------------|--|---|--|--|-------------------------------------|------------|
| Date field | Date field | Select from: Total emissions Scope 1 (direct) Scope 2 (indirect) Scope 3 (other indirect) Other | Numerical field | Select from: • Yes • No | Select from: Global Protocol for Community Greenhouse Gas Emissions Inventories (GPC) International Standard for Determining Greenhouse Gas Emissions for Cities (UNEP and World Bank) 2006 IPCC Guidelines for National Greenhouse Gas Inventories U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (ICLEI) Regional or country specific methodology City specific methodology Other | Text field and attachment function | Text field |

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Re-stating previous emissions inventories

If Yes to 4.0:

4.13 Since your last submission, have you needed to recalculate any past city-wide GHG emission inventories previously reported to CDP?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

If Yes to 4.13:

4.13a Please provide your city's recalculated total city-wide emissions figures for any previous inventories along with Scope 1, 2 and 3 breakdowns where applicable.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Inventory date from | Inventory date to | Scope | Previous emissions (metric tonnes CO2e) | Updated emissions (metric tonnes CO2e) | Updated methodology | File name and attach your new inventory | Reasoning for recalculation |
|---------------------|-------------------|---|---|--|--|---|-----------------------------|
| Date field | Date field | Select from: Total emissions Scope 1 Scope 2 Scope 3 Other | Numerical field | Numerical field | Select from: Global Protocol for Community Greenhouse Gas Emissions Inventories (GPC) International Standard for Determining Greenhouse Gas Emissions for Cities (UNEP and World Bank) 2006 IPCC Guidelines for National Greenhouse Gas Inventories U.S. Community Protocol | Text field and attachment function | Text field |
| | | | | | for Accounting and Reporting of Greenhouse Gas Emissions (ICLEI) Regional or country specific methodology City specific methodology Other | | |

[Add Row]

5. Emissions Reduction

Mitigation Target setting

5.0 Do you have a GHG emissions reduction target in place at the city-wide level?

Response Options

Select all that apply:

- Base year emissions (absolute) target
- Fixed level target
- Base year intensity target
- Baseline scenario (business as usual) target
- No target

If "Base year emissions (absolute) target" is selected in 5.0:

5.0a Please provide details of your total city-wide base year emissions reduction (absolute) target. In addition, you may add rows to provide details of your sector-specific targets, by providing the base year emissions specific to that target.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Sector | Where sources differ from the inventory, identify and explain these additions / exclusions | Boundary of target relative to city boundary (reported in 0.1) | Base year | Year of target implementation | Base year emissions (metric tonnes CO2e) | Percentage reduction target |
|--|--|---|-----------------|-------------------------------|--|-----------------------------|
| Select from: All emissions sources included in city inventory Energy Transport Waste Other | Text field | Select from: Same - covers entire city and nothing else Smaller - covers only part of the city Larger - covers the whole city and adjoining areas Partial - Covers part of the city and adjoining areas | Numerical field | Numerical field | Numerical field | Numerical field |

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| Target year | Target year absolute emissions (metric tonnes CO2e) | Percentage of target achieved so far | Does this target align with the global 1.5 - 2°c pathway set out in the Paris Agreement? | Please indicate to which sector(s) the target applies | Does this target align to a requirement from a higher level of sub-national government? | Please describe your target. If your country has an NDC and your city's target is less ambitious than the NDC, please explain why. |
|-----------------|--|--------------------------------------|--|---|---|--|
| Numerical field | Numerical field | Numerical field | Select from: • Yes - 1.5 c • Yes - 2°c • No • Do not know | Select from: Energy industry Heating and cooling supply Commercial buildings Residential buildings Public facility Industrial facilities Transport Water Other | Select from: Yes Yes, but it exceeds its scale or requirement No Do not know | Text field |

If "Fixed level target" selected in 5.0:

5.0b Please provide details of your total fixed level target.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Sector | | Boundary of target relative to city boundary (reported in 0.1) | Year of target implementation | Target year | Projected population in target year |
|--|------------|--|-------------------------------|-----------------|-------------------------------------|
| Select from: All emissions sources included in city inventory Energy Transport Waste Other | Text field | Select from: Same - covers entire city and nothing else Smaller - covers only part of the city Larger - covers the whole city and adjoining areas Partial - Covers part of the city and adjoining areas | Numerical field | Numerical field | Numerical field |

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| Target year absolute emissions goal (metric tonnes CO2e) | Percentage of target achieved | Does this target align with the global 1.5 - 2°c pathway set out in the Paris Agreement? | Please indicate to which sector(s) the target applies | Does this target align to a requirement from a higher level of government? | Please describe your target. If your country has an NDC and your city's target is less ambitious than the NDC, please explain why. |
|--|-------------------------------|--|---|--|--|
| Numerical field | Numerical field | Select from: • Yes - 1.5°c • Yes - 2°c • No • Do not know | Select from: Energy industry Heating and cooling supply Commercial buildings Residential buildings Public facility Industrial facilities Transport Water Other | Select from: • Yes • Yes, but it exceeds its scale or requirement • No • Do not know | Text field |

If "Base year intensity target" selected in 5.0:

5.0c Please provide details of your total city-wide base year intensity target. An intensity target is usually measured per capita or per unit GDP. If you have an absolute emissions reduction target, please select "Base year emissions (absolute) target" in question 5.0.

Response Options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Sector | inventory, identify and explain | Boundary of target relative to city boundary (reported in 0.1) | Base year | Year of target implementation | Intensity unit (Emissions per) | Base year emissions per intensity unit (metric tonnes CO2e per denominator) | Base year emissions (metric tonnes CO2e) |
|---|---------------------------------|--|-----------------|-------------------------------|---|---|--|
| Select from: All emissions sources included in city inventory Energy Transport Waste Other | Text field | Select from: Same - covers entire city and nothing else Smaller - covers only part of the city Larger - covers the whole city and adjoining areas Partial - Covers part of the city and adjoining areas | Numerical field | Numerical field | Select from: Metric tonnes of CO2e per capita Metric tonnes of CO2e per unit GDP Other | Numerical field | Numerical field |

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| Percentage reduction target in emissions intensity | Target year | Target year absolute emissions (metric tonnes CO2e) | Percentage of target achieved | Does this target align with the global 1.5 - 2°c pathway set out in the Paris Agreement? | Please indicate to which sector(s) the target applies | Does this target align to a requirement from a higher level of government? | Please describe your target. If your country has an NDC and your city's target is less ambitious than the NDC, please explain why. |
|--|-----------------|---|-------------------------------|--|---|--|--|
| Numerical field | Numerical field | Numerical field | Numerical field | Select from: • Yes - 1.5°c • Yes - 2°c • No • Do not know | Select from: Energy industry Heating and cooling supply Commercial buildings Residential buildings Public facility Industrial facilities Transport Water Other | Select from: • Yes • Yes, but it exceeds its scale or requirement • No • Do not know | Text field |

If "Baseline scenario (business as usual) target" is selected in response to 5.0:

5.0d Please provide details of your total city-wide baseline scenario target, including projected business as usual emissions.

Response Options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Sector | inventory, identify and explain | Boundary of target relative to city boundary (reported in 0.1) | Base year | Year of target implementation | Base year emissions (metric tonnes CO2e) | Target year | Estimated business as usual absolute emissions in target year (metric tonnes CO2e) |
|---|---------------------------------|--|-----------------|-------------------------------|--|-----------------|--|
| Select from: All emissions sources included in city inventory Energy Transport Waste Other | Text field | Select from: Same - covers entire city and nothing else Smaller - covers only part of the city Larger - covers the whole city and adjoining areas Partial - Covers part of the city and adjoining areas | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field |

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| Percentage reduction target from business as usual | Percentage of target achieved | Does this target align with the global 1.5 - 2°c pathway set out in the Paris Agreement? | Please describe the target and the modelling methodology(ies) and parameters used to define it | Please indicate to which sector(s) the target applies | Does this target align to a requirement from a higher level of government? | Please describe your target. If your country has an NDC and your city's target is less ambitious than the NDC, please explain why. |
|--|-------------------------------|--|--|---|--|--|
| Numerical field | Numerical field | Select from: • Yes - 1.5°c • Yes - 2°c • No • Do not know | Text field | Select from: Energy industry Heating and cooling supply Commercial buildings Residential buildings Public facility Industrial facilities Transport Water Other | Select from: Yes Yes, but it exceeds its scale or requirement No Do not know | Text field |

If "No target" is selected in 5.0:

5.0e Please explain why you do not have a city-wide emissions reduction target and any plans to set one in the future.

Response Options

Please complete the following table:

| Reason | Comment |
|---|------------|
| Select from: | Text field |
| Emissions not calculated | |
| Not intending to set a target | |
| Lack of resources | |
| Lack of available data | |
| Policies/projects prioritized over target setting | |
| Target is set at regional level | |
| Target is set at national level | |
| Target is in development | |
| Target already achieved | |
| • Other | |

If Yes -1.5 or Yes -2°c is selected in "Does this target align..." in 5.0a, 5.0b, 5.0c or 5.0d:

5.1 Please describe how the target(s) reported above align with the global 1.5-2°c pathway set out in the Paris agreement.

Response Options

This is an open text question.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

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Mitigation Actions

5.4 Describe the anticipated outcomes of the most impactful mitigation actions your city is currently undertaking; the total cost of the action and how much is being funded by the local government.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Mitigation action | Action title | Means of implementation | Implementation status | Estimated emissions reduction (metric tonnes CO2e) | Energy savings (MWh) | Renewable energy production (MWh) | Timescale of reduction / savings / energy production |
|------------------------|--------------|---|---|--|----------------------|--------------------------------------|---|
| Select from Appendix D | Text field | Select all the apply from Appendix F | Select from: Scoping Pre-feasibility study Pre-implementation Implementation Implementation complete Operation Monitoring and reporting | Numerical field | Numerical field | Numerical field | Select from: Per year Projected lifetime Other |

| Co-benefit area | Action description | Finance status | Total cost of the project | Total cost provided by the local government | Primary fund source | Web link to action website |
|--|--------------------|--|---------------------------|---|---|----------------------------|
| Select all that apply from Appendix H | Text field | Select from: Pre-feasibility study status Feasibility undertaken Feasibility finalized, and finance partially secured Finance secured | Numerical field | Numerical field | Select from: Local (Sub) national International (ODA) Climate finance (carbon credits) Public-private partnership Other | Text field |

[Add Row]

Mitigation Planning

5.5 Does your city have a climate change mitigation or energy access plan for reducing city-wide GHG emissions?

Response Options

Select one of the following options:

- Yes
- In progress

- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes to 5.5:

5.5a Please attach your city's climate change mitigation plan below. If your city has both action and energy access plans, please make sure to attach all relevant documents below.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Publication title and attach document | Year of adoption from local government | Web link | Areas covered by action plan | Boundary of plan relative to city boundary (reported in 0.1) | If the city boundary is different from the plan boundary, please explain why and any areas/other cities excluded or included |
|---------------------------------------|--|------------|---------------------------------------|--|---|
| Text field and attachment function | Numerical field | Text field | Select all that apply from Appendix E | Select from: Same – covers entire city and nothing else Smaller – covers only part of the city Larger – covers the whole city and adjoining areas Partial – Covers part of the city and adjoining areas | Text field |

| Stage of implementation | Has your local government assessed the synergies, trade-offs, and co-benefits, if any, of the main mitigation and adaptation actions you identified? | Comment or describe the synergies, trade- offs, and co-benefits of this interaction | Has there been a stakeholder engagement plan to develop the plan? | Primary author of plan |
|---|--|--|---|---|
| Select from: Plan in development Plan developed but not implemented Plan in implementation Implementation complete Measurement in progress Plan update in progress Other | Select from: Yes In progress Intending to undertake in the next 2 years Not intending to undertake Don't know | Text field | Text field | Select from: Dedicated city team Relevant city department Consultant International organization Community group Regional / state / provincial government National / central government Other |

[Add Row]

If Not intending to undertake, or Intending to undertake in the next 2 years to 55:

5.5b Please explain why you do not have a city climate change mitigation plan and any future plans to create one.

Response Options

Please complete the following table:

| Reason | Comment |
|---|------------|
| Select from: | Text field |
| No plans yet to create an action plan | |
| Resources lacking to create an action plan | |
| Action plan in early stages of project planning | |
| Action planning in progress | |
| Lack of budget/resources | |
| • Other | |

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6. Opportunities

Opportunities

6.0 Please indicate the opportunities your city has identified as a result of addressing climate change and describe how the city is positioning itself to take advantage of these opportunities.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Opportunity | Describe how the city is maximizing this opportunity |
|--|--|
| Select from: | Text field |
| Development of local/sustainable food businesses | |
| Development of energy efficiency measures and technologies | |
| Increase in clean technology businesses | |
| Development of waste management / recycling businesses | |
| Development of tourism industry | |
| Development of sustainable transport sector | |
| Development of sustainable construction sector | |
| Increase opportunities for trading and investment | |
| Increase opportunities for partnerships | |
| Development of climate change resiliency projects | |
| Development of carbon markets | |
| Development of resource conservation and management | |
| Increased water security | |
| Extended agricultural seasons | |
| Additional funding opportunities | |
| Improved efficiency of operations | |
| Increased energy security | |
| Increased attention to other environmental concerns | |
| Increased infrastructure investment | |
| • Other | |
| No opportunities identified | |

[Add Row]

6.1 Does your city collaborate in voluntary partnership with businesses in your city on sustainability projects?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years

- Not intending to undertake
- Do not know

If Yes to 6.1:

6.1a Please provide some key examples of how your city collaborates with business in the table below.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Collaboration area | Description of collaboration |
|------------------------|------------------------------|
| Select from Appendix E | Text field |

[Add Row]

6.2 List any emission reduction, adaptation, water related or resilience projects you have planned within your city for which you hope to attract financing, and provide details on the estimated costs and status of the project. If your city does not have any relevant projects, please select No relevant projects under Project Area.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Project area | Project Title | Stage of project development |
|------------------------------|---------------|------------------------------|
| Select from: | Text field | Select from: |
| Buildings | | Scoping |
| Energy efficiency / retrofit | | Pre-feasibility study |
| Outdoor lighting | | Project feasibility |
| Renewable energy | | Project structuring |
| Transport | | Transaction preparation |
| Waste management | | Post implementation |
| Waste recycling | | |
| Water management | | |
| Other | | |
| No relevant projects | | |

| Status of financing | Project description | Total cost of project | Total investment cost needed (if relevant) |
|--|---------------------|-----------------------|--|
| Select from: Project not funded and seeking partial funding Project not funded and seeking full funding Project partially funded and seeking additional funding Other | Text field | Numerical field | Numerical field |

[Add Row]

Finance & Economic Opportunities

6.3 Has your City received/secured funding for any low carbon projects (e.g. energy efficiency, renewable energy, low emission vehicles, bus rapid transit, waste management) or climate adaptation projects from a development bank (e.g. World Bank, Asian Development Bank, etc.)?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

6.4 Has your City established a fund to invest in energy efficiency, renewable energy or carbon reduction projects?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

6.5 Does your City have its own credit rating?

Response Options

Please complete the following table:

| | Does your city have a credit rating? | Rating agency | Rating |
|---------------|--------------------------------------|---------------|------------|
| International | Select from: • Yes • No | Text field | Text field |
| Domestic | Select from: • Yes • No | Text field | Text field |

6.6 Are Environmental, Social and Governance (ESG) issues incorporated into investment decisions of any of the city retirement funds?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

6.7 How are investment decisions of the city retirement funds made?

Response Options

This is an open text question.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

6.8 Which individuals in the city have responsibility for oversight and/or implementation of investment of the city retirement funds?

Response Options

Please complete the following table:

| | Does the individual have responsibility for oversight and/or implementation of investment of the city retirement funds? |
|--------------------------------------|---|
| City council/elected representatives | Select from: • Yes • No • Do not know |
| Treasury or city finance staff | Select from: • Yes • No • Do not know |
| Other staff | Select from: • Yes • No • Do not know |

6.9 Has your City prepared a strategy for green growth?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

6.11 How many people within your City are employed in green jobs/ industries?

Response Options

Numerical field.

7. Local Government Emissions

The questions in this section refer to emissions associated with your local government operations (sometimes referred to as "corporate" or "municipal") emissions.

Local Government Operations GHG Emissions Data

The questions in this section refer to emissions reduction targets and actions associated with your local government operations (sometimes referred to as "corporate" or "municipal") emissions.

7.0 Do you have an emissions inventory for your local government operations to report? Reporting a Local Government Operations emissions inventory is optional.

By selecting Yes below, you are indicating that you have fuel and/or greenhouse gas (GHG) emissions data from your local government operations (sometimes referred to as 'corporate' or 'municipal' emissions) to report at this time.

Response Options

Select one of the following options:

- Yes
- In progress
- Not intending to undertake in the next 2 years
- Not intending to undertake

If Yes or In progress to 7.0:

7.1 Please state the dates of the accounting year or 12-month period for which you are reporting an emissions inventory for your local government operations.

Response Options

Please complete the following table:

| From | То |
|--------------------|--------------------|
| Drop-down calendar | Drop-down calendar |

If Yes or In progress to 7.0:

7.2 Please indicate the category that best describes the boundary of your local government operations emissions inventory.

Response Options

Select one of the following options:

- Departments, entities or companies over which operational control is exercised
- Departments, entities or companies over which financial control is exercised
- Other

If Yes or In progress to 7.0:

7.3 Please give the name of the primary protocol, standard, or methodology used to calculate your local government operations emissions inventory and attach your inventory using the

attachment function.

Response Options

Please complete the following table:

| Primary protocol | Comment |
|--|------------|
| Select from: | Text field |
| Greenhouse Gas Protocol: Public Sector Standard | |
| International Emissions Analysis Protocol (ICLEI) | |
| • ISO 14064 | |
| Local Government Operations Protocol (ICLEI/The Climate Registry/California Climate Action Registry/ California Air Resources Board) | |
| Australian National Greenhouse and Energy Reporting (Measurement) Determination | |
| Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC), (WRI, C40 and ICLEI) | |
| 2006 IPCC Guidelines for National Greenhouse Gas Inventories | |
| • Other | |

If Yes or In progress to 7.0:

7.4 Which gases are included in your emissions inventory?

Response Options

Select all that apply:

- CO2
- CH4
- N2O
- HFCs
- PFCs
- SF6
- NF3

Energy Data

If Yes to 7.0:

7.5 Please give the total amount of fuel (refers to Scope 1 emissions) that your local government has consumed this year.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Source | Fuel | Amount | Units | Emissions (tonnes CO2e) |
|---|------------------------|-----------------|---------------|-------------------------|
| Select from: | Select from Appendix C | Numerical field | Select from: | Numerical field |
| Airport (s) | | | GWh | |
| Buildings | | | • MWh | |
| Buses | | | • kWh | |
| Electricity generation | | | • TJ | |
| Electricity transmission and distribution | | | • GJ | |
| Employee commuting | | | • MJ | |
| Incineration of waste | | | Therms | |
| • Landfills | | | Btu m3 | |
| Local trains | | | • L | |
| Maritime port | | | Metric tonnes | |
| Municipal vehicle fleet | | | Short tons | |
| Regional trains | | | | |
| Roads / highways | | | | |
| Street lighting and traffic signals | | | | |
| Subway / underground | | | | |
| Thermal energy | | | | |
| Waste collection | | | | |
| Wastewater treatment | | | | |
| Water supply | | | | |
| Unknown source | | | | |
| Total | | | | |
| • Other | | | | |

[Add row]

If Yes to 7.0:

7.6 Please provide total (Scope 1 + Scope 2) GHG emissions for your local government operations, in metric tonnes CO2e. Scopes are a common categorization method.

Scope 1: All direct GHG emissions

Scope 2: Indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling.

Response Options

Please complete the following table:

| Total Scope 1 + Scope 2 emissions (metric tonnes CO2e) | Total Scope 1 emissions (metric tonnes CO2e) | Total Scope 2 emissions (metric tonnes CO2e) | Comment |
|--|--|--|------------|
| Numerical field | Numerical field | Numerical field | Text field |

If Yes to 7.0:

7.7 Do you measure local government Scope 3 emissions?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake

If Yes to 7.7:

7.7a Please complete the table.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Source of Scope 3 emissions | Emissions (metric tonnes CO2e) | Comment |
|---|--------------------------------|------------|
| Select from: | Numerical field | Text field |
| Employee commuting | | |
| Employee business travel | | |
| Emissions from contracted services | | |
| Upstream production of materials and fuels | | |
| Upstream and downstream transportation of materials and fuels | | |
| Waste related Scope 3 emission sources | | |
| • Other | | |

[Add Row]

If Not intending to undertake or Intending to undertake in the next 2 years to 7.7:

7.7b Please explain why not and detail your plans to do so in the future, if any.

Response Options

Please complete the following table:

| Reasoning | Explanation |
|--|-------------|
| Select from: | Text field |
| • Lack of data | |
| Low data quality | |
| Lack of knowledge/capacity | |
| Lack of funding/resources | |
| Scope categorization not used | |
| Not required by national authorities | |
| Not required by international agreements | |
| Local government Scope 3 emissions have been assessed as insignificant | |
| • Other | |

If Yes to 7.0:

7.8 Please indicate if your local government operations emissions have increased, decreased, or stayed the same since your last emissions inventory, and please describe why.

Response Options

Please complete the following table:

| Change in emissions | Reason for change | Please explain |
|---------------------------------------|---|----------------|
| Select from: | If "Increased" or "Decreased" selected: | Text field |
| Increased | Increased energy/electricity consumption | |
| Decreased | Population increase | |
| Stayed the same | Improved data accuracy | |
| This is our first year of calculation | Emissions reduction actions not implemented | |
| Do not know | Change in weather conditions | |
| | Change in accounting methodology | |
| | Change in calculation following verification | |
| | Behavioural change | |
| | Technological change | |
| | Legislative change | |
| | Change in available data | |
| | Change in data collection methods | |
| | Policy change | |
| | Financial conditions | |
| | • Other | |
| | If "This is our first year of calculation" is selected: | |
| | Lack of resource / funding overcome | |
| | Lack of knowledge overcome | |
| | • Other: | |
| | If "Stayed the same" is selected: | |
| | No new inventory to report | |
| | Emissions have not changed | |
| | • Other | |
| | If "Do not know" is selected: | |
| | Change in staff | |
| | Lack of documentation | |
| | Change in methodology | |
| | • Other | |

Local Government Emissions Verification

If Yes to 7.0

7.9 Has the GHG emissions data you are currently reporting been externally verified or audited in part or in whole?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes to 7.9:

7.9a Please provide the following information about the emissions verification process.

Response Options

Please complete the following table:

| Name of verifier and attach verification certificate | Year of verification | Please explain which parts of your inventory are verified |
|--|----------------------|---|
| Text field and attachment function | Numerical field | Text field |

If Not intending to undertake, or Intending to undertake in the next 2 years to 7.9:

7.9b Please explain why your local government operations inventory is not verified and describe any future plans for verification.

Response Options

| Reason | Comments |
|----------------------------------|------------|
| Select from: | Text field |
| Verification under consideration | |
| Lack of funding / resources | |
| Lack of expertise / knowledge | |
| Verification is not prioritised | |
| Data is internally verified | |
| • Other | |

8. Energy

Energy

8.0 Does your city have a renewable energy or electricity target?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes to 8.0:

8.0a Please provide details of your renewable energy or electricity target and how the city plans to meet those targets.

Response Options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Scale | Energy / electricity types covered by target | Base year | Total renewable energy / electricity covered by target in base year (in unit specified in column 2) | Percentage renewable energy / electricity of total energy or electricity in base year |
|--|--|-----------------|---|---|
| Select from: City-wide Local government operations | Select from: Total installed capacity of renewable energy (in MW) Total installed capacity of renewable electricity (in MW) All energy produced (in MWh) All electricity produced (in MWh) All electricity consumed (in MWh) Other | Numerical field | Numerical field | Percentage field |

| | Total renewable energy / electricity covered by target in target year (in unit specified in column 2) | • | | Plans to meet target (include details on types of energy/electricity) |
|-----------------|---|---|------------------|---|
| Numerical field | Numerical field | Percentage field | Percentage field | Text field |

[Add Row]

If Not intending to undertake, or Intending to undertake to 8.0:

8.0b Please explain why you do not have a renewable energy or electricity target and any plans to introduce one in the future.

Response Options

Please complete the following table:

| Reasoning | Comment |
|--|------------|
| Select from: | Text field |
| Target already achieved | |
| Energy / electricity is not within the city jusisdiction | |
| Lack of renewable energy potential within the city | |
| Lack of funding | |
| The grid is not controlled by the city | |
| Renewable energy not prioritized | |
| Target is under development / consideration | |
| • Other | |

8.1 Does your city have energy consumption data to report?

Response Options

Select one of the following options:

- Yes
- No

If Yes to 8.1:

8.2 Please indicate the energy mix of electricity consumed in your city.

Response Options

| Energy source | Percent |
|---------------|------------------|
| Coal | Percentage field |
| Gas | Percentage field |
| Oil | Percentage field |
| Nuclear | Percentage field |
| Hydro | Percentage field |
| Biomass | Percentage field |
| Wind | Percentage field |
| Geothermal | Percentage field |
| Solar | Percentage field |
| Other sources | Percentage field |

If Yes to 8.1:

8.3 What scale is the energy mix data reported above?

Response Options

Select from:

- Local government operations energy mix reported
- City-wide energy mix reported
- National energy mix reported
- We do not have access to energy data (please specify)
- Other
- 8.4 What percentage of your city's electricity grid mix is zero carbon? "Zero carbon" may include solar, wind, hydro and other zero carbon generation sources.

Response Options

Percentage field.

If Yes to 8.1:

8.5 How much (in MW capacity) renewable energy is installed within the city boundary in the following categories?

Response Options

| Туре | MW capacity | Please describe the scale of the energy source |
|---------------------------------|-----------------|--|
| Renewable district heat/cooling | Numerical field | Text field |
| Solar PV | Numerical field | Text field |
| Solar thermal | Numerical field | Text field |
| Ground or water source | Numerical field | Text field |
| Wind | Numerical field | Text field |
| Other: please specify | Numerical field | Text field |

8.6 Does your city have a target to increase energy efficiency?

Response Options

Select from:

- Yes
- In progress
- Intending to undertake in the next 2 years
- Not intending to undertake
- Do not know

If Yes to 8.6:

8.6a Please provide details on your city's energy efficiency targets.

Response Options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Scale | Energy efficiency type covered by target | | Total energy consumed/produced covered by target in base year (in unit specified in column 2) | |
|--|---|-----------------|---|-----------------|
| Select from: City-wide Local government operations | Select from: Reduce total energy produced (in MWh) Reduce total energy consumed (in MWh) Other | Numerical field | Numerical field | Numerical field |

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| Total energy consumed/produced covered by target in target year (in unit specified in column 2) | Percentage of energy efficiency improvement in target year compared to base year levels | | Plans to meet target (include details on types of energy in thermal /electricity) | Please indicate to which energy sector(s) the target applies (Multiple choice) |
|---|---|-----------------|---|--|
| Numerical field | Numerical field | Numerical field | Text field | Select from: Energy industry Heating and cooling supply Commercial buildings Residential buildings Public facility Industrial facilities Transport Other |

If Not intending to undertake, or Intending to undertake to 8.6:

8.6b Please explain why you do not have an energy efficiency target and any plans to introduce one in the future.

Response Options

Please complete the following table:

| Reasoning | Comment |
|--|------------|
| Select from: | Text field |
| Target already achieved | |
| Energy / electricity is not within the city jurisdiction | |
| Lack of renewable energy potential within the city | |
| Lack of funding | |
| The grid is not controlled by the city | |
| Renewable energy not prioritized | |
| Target is under development / consideration | |
| • Other | |

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9. Buildings

Buildings

9.0 What is the total tCO2e emissions per capita from existing commercial, institutional and residential buildings in your city?

Response Options

Please complete the following table:

| | Total tonnes of CO2e emissions per capita |
|--------------------|---|
| Commercial | Numerical field |
| Municipal | Numerical field |
| Residential | Numerical field |
| New buildings | Numerical field |
| All building types | Numerical field |

9.1 Does your city have emissions reduction targets OR energy efficiency targets for the following building types?

Response Options

| | Emissions reduction target | Energy efficiency target |
|--------------------|--|--|
| Commercial | Select from: • Yes • No • Do not know | Select from: • Yes • No • Do not know |
| Municipal | Select from: • Yes • No • Do not know | Select from: • Yes • No • Do not know |
| Residential | Select from: • Yes • No • Do not know | Select from: • Yes • No • Do not know |
| New buildings | Select from: • Yes • No • Do not know | Select from: • Yes • No • Do not know |
| All building types | Select from: • Yes • No • Do not know | Select from: • Yes • No • Do not know |

9.2 Does your city have requirements which incentivise net zero carbon, Passivehaus or other ultra-high-efficiency standards for NEW buildings? (requirements can include regulations, codes or planning policy).

Response Options

Please complete the following table:

| Response | Please provide more detail and/or link to more information about the requirements | | |
|--------------|---|--|--|
| Select from: | Text field | | |
| • Yes | | | |
| • No | | | |
| Do not know | | | |

9.3 Does your city have requirements which incentivises net zero carbon, Passivehaus or other ultra high-efficiency standards for EXISTING buildings? (requirements can include regulations or codes)

Response Options

Select one of the following options:

- Yes it applies only to new buildings
- Yes it applies to both new and existing buildings
- No
- Do not know

9.4 What is the total final annual energy use for buildings within your city boundary (aggregated across all fuel types)? (*in USA 'total final energy use' is known as 'site energy use')?

Response Options

| | Total final energy use (kWh) |
|--------------------|------------------------------|
| Commerical | Numerical field |
| Institutional | Numerical field |
| Municipal | Numerical field |
| Residential | Numerical field |
| New Buildings | Numerical field |
| All building types | Numerical field |

10. Transport

Transport

10.0 Do you have mode share information available to report for the following transport types?

Response Options

Select all that apply:

- Freight transport
- Passenger transport

If 'Passenger transport' is selected in 10.0:

10.1 What is the mode share of each transport mode in your city for passenger transport?

Response Options

Please complete the following table:

| | Mode share |
|-----------------------------|------------------|
| Private motorized transport | Percentage field |
| Rail/Metro/Tram | Percentage field |
| Buses (including BRT) | Percentage field |
| Ferries/ River boats | Percentage field |
| Walking | Percentage field |
| Cycling | Percentage field |
| Taxis or For Hire Vehicles | Percentage field |
| Other | Percentage field |

If 'Freight transport' is selected in 10.0:

10.2 What is the mode share of each transport mode in your city for freight transport?

Response Options

| | Mode share |
|-----------------------------|------------|
| Private motorized transport | Percentage |
| Rail/Metro/Tram | Percentage |
| Ferries/River boats | Percentage |
| Other | Percentage |

10.3 What are the total number of journeys made in your city each year by each mode below?

Response Options

Please complete the following table:

| | Number of journeys made each year |
|-----------------------------|-----------------------------------|
| Private motorized transport | Numerical field |
| Rail/Metro/Tram | Numerical field |
| Buses (including BRT) | Numerical field |
| Ferries/ River boats | Numerical field |
| Walking | Numerical field |
| Cycling | Numerical field |
| Taxis or For Hire Vehicles | Numerical field |
| Other | Numerical field |

10.4 What are the vehicle kilometres of road goods vehicles travelled in your city?

Response Options

Assign numeric response.

10.5 Please provide the total fleet size and number of vehicle types for the following modes of transport.

Response Options

| | Number of private cars | Number of buses | Number of municipal fleet (excluding buses) | Number of freight vehicles | Number of taxis | Transport Network Companies (e.g. Uber, Lyft) fleet size | Customer-drive carshares (e.g. Car2Go, Drivenow) fleet size |
|------------------|------------------------|-----------------|---|----------------------------|-----------------|--|---|
| Total fleet size | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field |
| Electric | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field |
| Hybrid | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field |
| Plug in hybrid | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field |
| Hydrogen | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field | Numerical field |

10.6 How many buses has your city procured in the last year?

Response Options

Please complete the following table:

| | Number of buses |
|-----------------------|-----------------|
| Total number of buses | Numerical field |
| Electric | Numerical field |
| Hybrid | Numerical field |
| Plug-in hybrid | Numerical field |
| Hydrogen | Numerical field |
| Diesel | Numerical field |
| CNG | Numerical field |

10.7 Do you have a low or zero-emission zone in your city? (i.e. an area that disincentivises fossil fuel vehicles)

Response Options

Select one of the following options:

- Yes
- No
- Do not know

If Yes is to 10.7:

10.7a Please provide more details about the zero emissions zone.

Response Options

Please complete the following table:

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| Size (sq. km) | Stipulations and any plans to expand |
|-----------------|--------------------------------------|
| Numerical field | Text field |

10.9 How many public access EV charging points do you have in your city for the following types:

Response Options

Please complete the following table:

| EV charging point type | Number of charging points |
|------------------------|---------------------------|
| Rapid 43 kw and above | Numerical field |
| Fast 7-22kw | Numerical field |
| Slow 3kw or below | Numerical field |
| All types | Numerical field |

10.11 Does your city collect air quality data?

Response Options

Select one of the following options:

- Yes
- No
- Do not know

If Yes to 10.11:

10.12 What is the most recent calendar year for which you have air quality data?

Response Options

Numerical field

10.13 (This question has been removed)

If Yes to 10.11:

10.15 Please provide the daily and annual average concentrations average breakdown of the following air pollutants gases within your city wide:

Response Options

| | Min daily average concentration | Max daily average concentration | Annual average concentration | Units | % completeness of data (e.g. % of days with monitoring) | Comments |
|----------------------------|---------------------------------|---------------------------------|------------------------------|------------|---|------------|
| Particulate matter PM2.5* | Numerical field | Numerical field | Numerical field | Text field | Text field | Text field |
| Particulate matter PM10* | Numerical field | Numerical field | Numerical field | Text field | Text field | Text field |
| Carbon monoxide (CO)* | Numerical field | Numerical field | Numerical field | Text field | Text field | Text field |
| Nitrogen dioxides (NO2x) * | Numerical field | Numerical field | Numerical field | Text field | Text field | Text field |
| Sulphur dioxides (SO2x) * | Numerical field | Numerical field | Numerical field | Text field | Text field | Text field |
| Ozone (O3) | Numerical field | Numerical field | Numerical field | Text field | Text field | Text field |

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11. Urban Planning

Urban Planning

11.0 What is the size of your city's park space in square km?

Response Options

Numerical field.

11.1 What percentage of your population lives within 500m of a public transport stop?

Response Options

Percentage field.

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12. Food

Food

12.0 How many meals per year are served through programs managed by your city? (this includes schools, canteens, hospitals etc.)

Response Options

Numerical field.

12.1 How many tonnes of food are produced within your city's boundaries each year?

Response Options

Numerical field.

12.2 What is the per capita meat consumption (kg) in your city?

Response Options

Numerical field.

12.3 What is the per capita dairy consumption (kg/yr) in your city?

Response Options

Numerical field

12.4 Does your city have any policies relating to food consumption within your city? If so, please describe the expected outcome of the policy.

Response Options

Please complete the following table:

| Response | Please describe the expected outcome of the policy | |
|---------------|--|--|
| Select from: | Text field | |
| • Yes | | |
| • No | | |
| • Do not know | | |
| | | |

12.5 Do you have any incentives/tax/bans on a food item or food advertising in your city?

Response Options

| Response | Please provide more detail about the incentives/tax/bans |
|--------------|--|
| Select from: | Text field |
| • Yes | |
| • No | |
| Do not know | |

13. Waste

Waste

13.0 What is the annual solid waste generation in your city?

Response Options

Please complete the following table:

| | Amount |
|--|-----------------|
| Total solid waste generation (kg/year) | Numerical field |
| Waste generation per capita (kg/person/year) | Numerical field |

13.1 How much of the solid waste generated in your city is disposed to landfill or incineration (tonnes/year)?

Response Options

Numerical field

13.2 What percentage of the solid waste generated in your city is diverted away from landfill or incineration?

Response Options

Numerical field

13.3 What is the amount of your city's total solid waste collected for each of the following sectors (tonnes/year)?

Response Options

Please complete the following table:

| | Amount of total solid waste collected (tonnes/year) |
|-----------------------------------|---|
| Total | Numerical field |
| Residential | Numerical field |
| Commercial | Numerical field |
| Industrial | Numerical field |
| Construction and demolition waste | Numerical field |
| Other | Numerical field |

13.4 What is the amount of solid waste being treated (tonnes/year) via:

Response Options

| Waste treatment | Tonnes/year |
|---|-----------------|
| Re-use | Numerical field |
| Recycling | Numerical field |
| Composting | Numerical field |
| Anaerobic digestion | Numerical field |
| Incineration or other form of thermal treatment | Numerical field |
| Open burning | Numerical field |
| Sanitary landfill | Numerical field |
| Non-sanitary landfill | Numerical field |
| Other | Numerical field |

13.5 Please provide a waste composition analysis.

Response Options

Please attach the relevant document here.

13.6 Has your city implemented material restriction policies or regulations for consumer materials like single use plastics, disposable straws, disposable containers, etc.? If so, please specify.

Response Options

Please complete the following table:

| Please provide more detail about the restriction policies or regulations |
|--|
| Text field |
| |
| |
| |
| |

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14. Water Security

Water Supply

14.0 What are the sources of your city's water supply?

Response options

Select all that apply:

- Surface water
- Ground water
- Desalinated seawater
- Recycled / reclaimed water
- Rainwater
- Other source

14.1 Where does the water used to supply your city come from?

Response Options

Select one of the following options:

- From a river basin within the city boundary
- From adjacent river basins (by water transfer schemes) outside the city boundary
- Other
- Do not know

14.2 What percentage of your city's population has potable water supply service?

Response options

Percentage field.

14.3 Are you aware of any substantive current or future risks to your city's water supply?

Response options

Select one of the following options:

- Yes
- No
- Do not know

If Yes to 14.3:

14.3a Please identify the risks to your city's water supply as well as the timescale and level of risk.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Risks | Timescale | Magnitude | Risk description |
|-------------------------------------|--------------|-------------------|------------------|
| Select from: | Select from: | Select from: | Text field |
| Increased water stress | Current | Extremely serious | |
| Increased water scarcity | Short-term | Serious | |
| Declining water quality | Medium-term | Less Serious | |
| Inadequate or ageing infrastructure | Long-term | | |
| Higher water prices | | | |
| Regulatory | | | |
| Increased water demand | | | |
| Drought | | | |
| Energy supply issues | | | |
| Rationing of municipal water supply | | | |
| Severe weather events | | | |
| Change in land-use | | | |

If No to 14.3:

14.3b Please explain why you do not consider your city to be exposed to any substantive water-related risk.

Response Options

Please complete the following table:

| Reason | Explanation |
|---|-------------|
| Select from: | Text field |
| City water supply is secure | |
| Risks are not substantive | |
| No assessment of water risks undertaken | |
| • Other | |

Water Supply Management

If Yes to 14.3:

14.4 Please select the actions you are taking to reduce the risks to your city's water supply.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

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| Risks | Adaptation action | Status of action | Action description and implementation progress |
|----------------------|--|--|--|
| Populated from 14.3a | Select from: | Select from: | Text field |
| | Conservation awareness and education | Scoping | |
| | Conservation incentives | Pre-feasibility stufy | |
| | Water use restrictions | Pre-implementation | |
| | Efficiency regulations or standards | Implementation | |
| | Water metering | Implementation complete but not in operation | |
| | Municipal water efficiency retrofits | Operation | |
| | Diversifying water supply (including new sources) | Monitoring and reporting | |
| | Investment in existing water supply infrastructure | | |
| | Use of non-potable water outside | | |
| | Use of non-potable water indoors (within building) | | |
| | Watershed preservation | | |
| | Stormwater management (natural or man-made infrastructure) | | |
| | Nature-based solution | | |
| | Water recycling/reclamation | | |
| | • Other | | |

14.5 Does your city have a publicly available Water Resource Management strategy?

Response Options

Select one of the following options:

- Yes
- In progress
- Intending to undertake in the the next 2 years
- Not intending to undertake

If Yes to 14.5:

14.5a Please provide more information on your city's public Water Resource Management strategy.

Response Options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

| Publication title and attach document | Year of adoption from local government | Web link | Does this strategy include Sanitation services? | Stage of implementation |
|---------------------------------------|--|------------|---|--|
| Text field and attachment function | Numerical field | Text field | Select from: • Yes • No • Do not know | Select from: Plan in development Plan developed but not implemented Plan in implementation Implementation complete |
| | | | | Measurement in progressPlan update in progressOther |

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If No to 14.5:

14.5b Please explain why your city does not have a public Water Resource Management strategy.

Response Options

| Reason | Explanation |
|---|-------------|
| Select from: • Water Resource Management is not a priority for the city | Text field |
| Lack of funding/resources Lack of knowledge | |
| Water Resource Management is covered in other plansOther | |

Important Information

CDP has been making information requests relating to carbon and climate change on behalf of investors since 2003. To find out more about CDP and the previous responses from other organizations, please refer to our website at www.cdp.net.

What are the financial implications of responding?

CDP has charitable status and seeks to use its limited funds effectively. Consequently, responses must be prepared and submitted at the expense of responding cities. CDP also reserves the right, where it deems it appropriate in view of its charitable aims and objectives, to charge for access to or use of data and/or reports it publishes or commissions.

What is the basis of participation and what will happen to the data received?

When responding to CDP you will be given a choice as to whether your response is made public or non-public. We strongly encourage cities to make their responses public which means that the response will be made publicly available from the CDP website. Non-public responses will not be made publicly available and will only be used in aggregate and/or anonymously. Any responses submitted to the Global Covenant of Mayors (GCoM) will be considered public.

Scoring of responses

CDP provides private scores to cities who respond to the CDP Cities 2019 information request, the scoring methodology can be foundhere. Responses to CDP Cities 2019 will not be scored publicly by CDP or its partners. CDP is considering publicly scoring responses in the future.

What if a city wishes to change or update a response?

After you submit your response via the Online Response System, it will become 'read-only' and any amendments can be made through the dashboard. Please submit and make all necessary amendments by the submission deadline.

How can a city confirm its participation?

If you received this document in hard copy, please emailCities@cdp.net to confirm your participation.

What is the legal status of CDP?

CDP Worldwide (CDP) is an international non-profit that drives companies and governments to reduce their greenhouse gas emissions, safeguard water resources and protect forests. It is a UK registered charity (no. 1122330) and a company limited by guarantee registered in England and Wales (no. 05013650) with its registered office at 4th Floor Plantation Place South, 60 Great Tower Street, London EC3R 5AD. The charity has a wholly owned UK operating subsidiary and wholly owned subsidiaries in Germany, China and Hong Kong. It also exercises control over companies in Brazil, India and Japan through majority Board representation. In the US, CDP North America, Inc. is an independently incorporated entity which has US 501(c)(3) tax exempt status.

CDP is an independent not-for-profit organization holding the largest database of primary corporate climate change information in the world.

Thousands of organizations from across the world's major economies measure and disclose their greenhouse gas emissions and climate change strategies through CDP. CDP puts this information at the heart of financial and policy decision-making and its goal is to collect and distribute high quality information that motivates investors, corporations and governments to take action to prevent dangerous climate change.

Appendices

Appendix A: Currency AED United Arab Emirates dirham AFN Afghani ALL Lek AMD Armenian Dram ANG Netherlands Antillian Guilder AOA Kwanza ARS Argentine Peso AUD Australian Dollar AWG Aruban Guilder AZN Azerbaijanian Manat BAM Convertible Marks BBD Barbados Dollar BDT Bangladeshi Taka BGN Bulgarian Lev BHD Bahraini Dinar BIF Burundian Franc BMD Bermudian Dollar (customarily known as Bermuda Dollar) BND Brunei Dollar **BOB** Boliviano

| BOV Bolivian Mvdol (Funds code) |
|--|
| BRL Brazilian Real |
| BSD Bahamian Dollar |
| BTN Ngultrum |
| BWP Pula |
| BYR Belarussian Ruble |
| BZD Belize Dollar |
| CAD Canadian Dollar |
| CDF Franc Congolais |
| CHE WIR Euro (complementary currency) |
| CHF Swiss Franc |
| CHW WIR Franc (complementary currency) |
| CLF Unidades de formento (Funds code) |
| CLP Chilean Peso |
| CNY Yuan Renminbi |
| COP Colombian Peso |
| COU Unidad de Valor Real |
| CRC Costa Rican Colon |
| CUP Cuban Peso |
| CVE Cape Verde Escudo |
| CYP Cyprus Pound |
| CZK Czech Koruna |

| DJF Djibouti Franc | |
|----------------------------|--|
| DKK Danish Krone | |
| DOP Dominican Peso | |
| DZD Algerian Dinar | |
| EEK Kroon | |
| EGP Egyptian Pound | |
| ERN Nakfa | |
| ETB Ethiopian Birr | |
| EUR Euro | |
| FJD Fiji Dollar | |
| FKP Falkland Islands Pound | |
| GBP Pound Sterling | |
| GEL Lari | |
| GHS Cedi | |
| GIP Gibraltar pound | |
| GMD Dalasi | |
| GNF Guinea Franc | |
| GTQ Quetzal | |
| GYD Guyana Dollar | |
| HKD Hong Kong Dollar | |
| HNL Lempira | |
| HRK Croatian Kuna | |
| | |

| HTG Haiti Gourde | |
|---------------------------|--|
| HUF Forint | |
| IDR Rupiah | |
| ILS New Israeli Shekel | |
| INR Indian Rupee | |
| IQD Iraqi Dinar | |
| IRR Iranian Rial | |
| ISK Iceland Krona | |
| JMD Jamaican Dollar | |
| JOD Jordanian Dinar | |
| JPY Japanese yen | |
| KES Kenyan Shilling | |
| KGS Som | |
| KHR Riel | |
| KMF Comoro Franc | |
| KPW North Korean Won | |
| KRW South Korean Won | |
| KWD Kuwaiti Dinar | |
| KYD Cayman Islands Dollar | |
| KZT Tenge | |
| LAK Kip | |
| LBP Lebanese Pound | |

| LKR Sri Lanka Rupee |
|--|
| LRD Liberian Dollar |
| LSL Loti |
| LTL Lithuanian Litas |
| LVL Latvian Lats |
| LYD Libyan Dinar |
| MAD Moroccan Dirham |
| MDL Moldovan Leu |
| MGA Malagasy Ariary |
| MKD Denar |
| MMK Kyat |
| MNT Tugrik |
| MOP Pataca |
| MRO Ouguiya |
| MTL Maltese Lira |
| MUR Mauritius Rupee |
| MVR Rufiyaa |
| MWK Kwacha |
| MXN Mexican Peso |
| MXV Mexican Unidad de Inversion (UDI) (Funds code) |
| MYR Malaysian Ringgit |
| MZN Metical |
| |

| NAD Namibian Dollar | |
|----------------------------|--|
| NGN Naira | |
| NIO Cordoba Oro | |
| NOK Norwegian Krone | |
| NPR Nepalese Rupee | |
| NZD New Zealand Dollar | |
| OMR Rial Omani | |
| PAB Balboa | |
| PEN Nuevo Sol | |
| PGK Kina | |
| PHP Philippine Peso | |
| PKR Pakistan Rupee | |
| PLN Zloty | |
| PYG Guarani | |
| QAR Qatari Rial | |
| RON Romanian New Leu | |
| RSD Serbian Dinar | |
| RUB Russian Ruble | |
| RWF Rwanda Franc | |
| SAR Saudi Riyal | |
| SBD Solomon Islands Dollar | |
| SCR Seychelles Rupee | |

| SDG Sudanese Pound | |
|--------------------------------|--|
| SEK Swedish Krona | |
| SGD Singapore Dollar | |
| SHP Saint Helena Pound | |
| SKK Slovak Koruna | |
| SLL Leone | |
| SOS Somali Shilling | |
| SRD Surinam Dollar | |
| STD Dobra | |
| SYP Syrian Pound | |
| SZL Lilangeni | |
| THB Baht | |
| TJS Somoni | |
| TMM Manat | |
| TND Tunisian Dinar | |
| TOP Pa'anga | |
| TRY New Turkish Lira | |
| TTD Trinidad and Tobago Dollar | |
| TWD New Taiwan Dollar | |
| TZS Tanzanian Shilling | |
| UAH Hryvnia | |
| UGX Uganda Shilling | |
| | |

| USD US Dollar | |
|--|--|
| UYU Peso Uruguayo | |
| UZS Uzbekistan Som | |
| VEB Venezuelan bolívar | |
| VND Vietnamese đồng | |
| VUV Vatu | |
| WST Samoan Tala | |
| XAF CFA Franc BEAC | |
| XAG Silver (one Troy ounce) | |
| XAU Gold (one Troy ounce) | |
| XBA European Composite Unit (EURCO) (Bonds market unit) | |
| XBB European Monetary Unit (E.M.U6) (Bonds market unit) | |
| Appendix B: Actions to reduce vulnerability | |
| No action currently taken | |
| Flood mapping | |
| Heat mapping and thermal imaging | |
| Landslide risk mapping | |
| Sea level rise modelling | |
| Biodiversity monitoring | |
| Real time risk monitoring | |
| Crisis management including warning and evacuation systems | |
| Public preparedness (including practice exercises/drills) | |

| Community engagement/education |
|--|
| Projects and policies targeted at those most vulnerable |
| Testing/vaccination programmes for vector-borne disease |
| Disease prevention measures |
| Air quality initiatives |
| Incorporating climate change into long-term planning documents |
| Restrict development in at risk areas |
| Resilience and resistance measures for buildings |
| Hazard resistant infrastructure design and construction |
| Diversifying power/energy supply |
| Economic diversification measures |
| Flood defences – development and operation & storage |
| Storm water capture systems |
| Additional reservoirs and wells for water storage |
| Soil retention strategies |
| Tree planting and/or creation of green space |
| Green roofs/walls |
| White roofs |
| Shading in public spaces, markets |
| Cooling systems for critical infrastructure |
| Retrofit of existing buildings |
| Cooling centers, pools, water parks/plazas |
| |

| Cool pavement |
|--|
| Water extraction protection |
| Promoting low flow technologies |
| Water butts/rainwater capture |
| Xeriscapes – low water landscaping design |
| Maintenance/repair – leaking infrastructure |
| Optimizing delivery fuel mix of water supply |
| Improve water supply distribution method |
| Promoting and incentivizing water efficiency |
| Water use restrictions and standards |
| Water efficient equipment and appliances |
| Water smart metering |
| Water use audits |
| Awareness campaign/education to reduce water use |
| Diversification of water supply |
| Increasing use of desalination |
| Nature based solutions for water |
| Other< |
| Appendix C: Fuel Type |
| Natural gas |
| Compressed Natural Gas (CNG) |
| Liquefied Petroleum Gas (LPG) |

| Liquefied Natural Gas (LNG) | |
|---------------------------------|--|
| Methane | |
| Butane | |
| Propane | |
| Town gas or city gas | |
| Coal (Bituminous or Black coal) | |
| Coking coal | |
| Crude oil | |
| Diesel/Gas oil | |
| Motor gasoline (petrol) | |
| Aviation gasoline | |
| Jet gasoline | |
| Jet kerosene | |
| Kerosene | |
| Residual fuel oil | |
| Distillate fuel oil No 1 | |
| Distillate fuel oil No 2 | |
| Distillate fuel oil No 3 | |
| Distillate fuel oil No 4 | |
| Distillate fuel oil No 5 | |
| Distillate fuel oil No 6 | |
| Liquified petroleum gas (LPG) | |

| Naptha |
|---|
| Bitumen |
| Petroleum coke |
| Wood or wood waste |
| Biodiesel |
| Biogasoline |
| Ethanol |
| E85 |
| Other liquid biofuel |
| Landfill gas |
| Other biogas |
| Waste (municipal) |
| Other |
| Appendix D: City-wide emissions reduction activities |
| Buildings > Building codes and standards |
| Buildings > Building performance rating and reporting |
| Buildings > Carbon emissions reduction from industry |
| Buildings > Energy efficiency/ retrofit measures |
| Buildings > On-site renewable energy generation |
| Buildings > Switching to low-carbon fuels |
| Community-Scale Development > Brownfield redevelopment programs |
| Community-Scale Development > Building standards |

Community-Scale Development > Compact cities

Community-Scale Development > Eco-district development strategy

Community-Scale Development > Green space and/ or biodiversity preservation and expansion

Community-Scale Development > Low carbon industrial zones

Community-Scale Development > Transit oriented development

Community-Scale Development > Urban agriculture

Energy Supply > Low or zero carbon energy supply generation

Energy Supply > Optimize traditional power/ energy production

Energy Supply > Smart grid

Energy Supply > Transmission and distribution loss reduction

Finance and Economic Development > Developing the green economy

Finance and Economic Development > Instruments to fund low carbon projects

Finance and Economic Development > Low-carbon industrial zones

Food and Agriculture > Encourage sustainable food production and consumption

Mass Transit > Improve bus infrastructure, services, and operations

Mass Transit > Improve fuel economy and reduce CO2 from bus and/or light rail

Mass Transit > Improve fuel economy and reduce CO2 from ferries

Mass Transit > Improve fuel economy and reduce CO2 from trucks

Mass Transit > Improve rail, metro, and tram infrastructure, services and operations

Mass Transit > Smart public transport

Outdoor Lighting > LED / CFL / other luminaire technologies

Outdoor Lighting > Smart lighting

Private Transport > Awareness and education for non-motorized transport Private Transport > Improve fuel economy and reduce CO2 from aviation Private Transport > Improve fuel economy and reduce CO2 from motorized vehicles Private Transport > Improve fuel economy and reduce CO2 from trucks (private) Private Transport > Improve the efficiency of freight systems Private Transport > Improve the operations of shipping ports Private Transport > Infrastructure for non-motorized transport Private Transport > Transportation demand management Waste > Improve the efficiency of long-haul transport Waste > Improve the efficiency of waste collection Waste > Landfill management Waste > Recyclables and organics separation from other waste Waste > Recycling or composting collections and/or facilities Waste > Waste prevention policies and programs Water > Wastewater to energy initiatives Water > Water metering and billing Water > Water recycling and reclamation Water > Water use efficiency projects **Appendix E: Action area sectors** Energy

Building and Infrastructure

Transport (Mobility)

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| Industry |
|---|
| ICT (Information and Communication Technology) |
| Spatial Planning |
| Agriculture and Forestry |
| Fishery |
| Water |
| Waste |
| Public Health and Safety |
| Business and Financial Service |
| Social Services |
| Appendix F: Means of implementation |
| |
| Education |
| Education Capacity building and training activities |
| |
| Capacity building and training activities |
| Capacity building and training activities Awareness raising program or campaign |
| Capacity building and training activities Awareness raising program or campaign Stakeholder engagement |
| Capacity building and training activities Awareness raising program or campaign Stakeholder engagement Infrastructure development |
| Capacity building and training activities Awareness raising program or campaign Stakeholder engagement Infrastructure development Assessment and evaluation activities |
| Capacity building and training activities Awareness raising program or campaign Stakeholder engagement Infrastructure development Assessment and evaluation activities Monitor activities |
| Capacity building and training activities Awareness raising program or campaign Stakeholder engagement Infrastructure development Assessment and evaluation activities Monitor activities Verification activities |

| Financial mechanism |
|--|
| Sustainable public procurement |
| Appendix G: Climate hazards |
| |
| Extreme Precipitation > Rain storm |
| Extreme Precipitation > Monsoon |
| Extreme Precipitation > Heavy snow |
| Extreme Precipitation > Fog |
| Extreme Precipitation > Hail |
| Storm and wind > Severe wind |
| Storm and wind > Tornado |
| Storm and wind > Cyclone (Hurricane / Typhoon) |
| Storm and wind > Extra tropical storm |
| Storm and wind > Tropical storm |
| Storm and wind > Storm surge |
| Storm and wind > Lightning / thunderstorm |
| Extreme cold temperature > Extreme winter conditions |
| Extreme cold temperature > Cold wave |
| Extreme cold temperature > Extreme cold days |
| Extreme hot temperature > Heat wave |
| Water Scarcity > Drought |
| Wild fire > Forest fire |

Wild fire > Land fire

Flood and sea level rise > River flood Flood and sea level rise > Coastal flood Flood and sea level rise > Groundwater flood Flood and sea level rise > Permanent inundation Chemical change > Salt water intrusion Chemical change > Ocean acidification Chemical change > Atmospheric CO2 concentrations Mass movement > Landslide Mass movement > Avalanche Mass movement > Rock fall Mass movement > Subsidence Biological hazards > Water-borne disease Biological hazards > Vector-borne disease Biological hazards > Air-borne disease Biological hazards > Insect infestation Appendix H: Co-benefit area Disaster Risk Reduction Enhanced resilience Disaster preparedness Enhanced climate change adaptation Reduced GHG emissions

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Flood and sea level rise > Flash / surface flood

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| Improved resource efficiency (e.g. food, water, energy) |
|--|
| Poverty reduction/eradication |
| Social inclusion, social justice |
| Social community and labour improvements |
| Greening the economy |
| Economic growth |
| Promote circular economy |
| Job creation |
| Improved resource quality (e.g. air, water) |
| Improved public health |
| Improved resource security (e.g. food, water, energy) |
| Security of tenure |
| Resource conservation (e.g. soil, water) |
| Ecosystem preservation and biodiversity improvement |
| Improved access to and quality of mobility services and infrastructure |
| Shift to more sustainable behaviours |
| Improved access to data for informed decision-making |
| |