



City WORKS for Climate Action



# Imprint

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**City WORKS** supports the localisation of global agendas. Over the past years, great amount of experience has been gained in terms of localisation the 2030 Agenda / the sustainable development goals.

The focus of this work is to bring the climate aspects along the City WORKS logic, to support climate actions at the local level.

**Goal of this document** is to provide cities and advisors with a specific interest on **climate topics** (localising the Paris agreement) with different information and tools to help them prepare the localisation process, connect the climate agenda to local action, and plan for local climate action. It builds upon the vast number of resources from City WORKS and Climate Policy meets Urban Development / Collaborative Climate Actions as well as the various relevant stakeholders in the area of cities and climate change (ICLEI, C40, Global Covenant of Mayors for Climate and Energy, UN Habitat and many others).

This document / approach is work-in-progress. Recommendations and suggestions are most welcome. Amendments might be done as soon as implementation on the ground has been possible.

# How to use this document

- You can navigate the document through the built-in sections by using the normal view option
- Each section provides details about the phase / step and the specific tools
- Information about the phases / steps and the overall rationale are given in the next section
- Navigation directly to each tool also possible via the [TOOL OVERVIEW](#) (best accessed then in full screen view option)

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> PHASE II - Step 1. Resources (10)

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# Collaborative climate action

**Collaborative Climate Action (CCA)** is politically intended, well-organised cooperation across different levels of government to achieve climate goals – ideally jointly defined and implemented. Effective and more ambitious implementation can only be achieved through collaboration.

The main tool to turn the overarching global goals of the Paris Agreement into action are the **Nationally Determined Contributions (NDCs)**. Both the first round of NDCs and most of the NDCs updated in 2020/2021 are far from sufficient to avoid catastrophic global warming, leading to average temperature increase in the range from 2.9 to 3.4 degrees Celsius.

Given the insufficient commitments in most NDCs, there is an urgent need for more ambitious and more effective climate action. Cities are responsible for 75% of global CO<sub>2</sub> emissions and 80% of global final energy consumption. At the same time, urban areas are centres for innovation and economic activity – more than half of the world's population already lives in cities and they generate over 80% of the global gross national product (GDP). Cities and regions are therefore crucial parts of the solution, playing an indispensable role in implementing climate measures and achieving sustainable development.

Local governments across the globe have, on average, primary authority over about one third of the potential for urban climate change mitigation (not taking into account decarbonisation of the power sector). The national level accounts for a further one third, while the final one third hinges on collaboration between levels of government. By engaging with and empowering governments and stakeholders, the project thus contributes to implementing the Paris Climate Agreement.



<https://collaborative-climate-action.org/about-cca/>

<https://www.giz.de/en/worldwide/75947.html>

<https://collaborative-climate-action.org>

The screenshot shows the website's navigation menu with links for ABOUT CCA, PUBLICATIONS, RESOURCES, STORIES, and CONTACT. The main banner features the headline "LOCALISING NDCS WITH INSPIRATION FROM THE 2030 AGENDA - POLICY BRIEF" and a "READ MORE" button. Below the banner are three columns: "About Collaborative Climate Action" (describing CCA/MLCG), "Publications" (exploring CPMUD reports), and "Localising NDCs" (discussing Paris Agreement goals). A section titled "WHY ARE CITIES CRUCIAL FOR CLIMATE ACTION?" lists statistics: 55% of the world's population lives in cities, 80% of global GDP is generated in cities, and 75% of global CO2 emissions originate in cities. The footer mentions "COLLABORATIVE CLIMATE ACTION AROUND THE WORLD".

<https://collaborative-climate-action.org/publications/>

## Study: Multi-Level Climate Governance – Supporting Local Action



<https://collaborative-climate-action.org/wp-content/uploads/2019/11/Multi-Level-Climate-Governance.pdf>

## Study: Collaborative Climate Action – a prerequisite for more ambitious climate policy



<https://collaborative-climate-action.org/wp-content/uploads/2021/02/CCA-a-prerequisite-for-more-ambitious-climate-action.pdf>

## Policy Brief: Localising NDCs with inspiration from the 2030 Agenda



<https://collaborative-climate-action.org/wp-content/uploads/Localising-NDCs-with-inspiration-from-the-2030-Agenda-Policy-Brief-GIZ.pdf>

# City WORKS

<https://localising-global-agendas.org>

**City WORKS**  
Localising Global Agendas

Home About City WORKS Toolkit Global Agendas Stories of Success Tool Library

**We enable cities to implement global agendas locally**

City WORKS is a digital toolkit that helps you to understand and connect global agendas with local visions and realities. Find out how to foster urban transformation and learn how your city contributes to global agendas.

[Get started ->](#)

## What you can do with City WORKS



## What does City WORKS offer?



### TRANSLATION OF GLOBAL AGENDAS TO LOCAL LEVEL

Explanations, references and information on global agendas and their relevance for cities

[Read more](#)



### PROCESS GUIDE

Guided step by step navigation through targeted tools and questions to design a tailor-made process.

[Read more](#)



### TOOL LIBRARY

Templates, weblinks and references to additional tools and information

[Read more](#)

## City WORKS - Quick-Guide

QUICK GUIDE

City WORKS – A digital working aid to support the implementation of global agendas in cities and communities

giz

## CONCEPT STUDY: Linking Urban Action with Global Agendas

CONCEPT STUDY:  
Linking Urban Action with Global Agendas

giz

## City WORKS Toolkit

City WORKS is conceived as a set of interlinked tools that help cities realise, analyse and tackle the implications of global agendas locally. For this it offers a targeted step-by-step process.

City WORKS enables municipal actors to:

- recognise the relevance of global agendas for local development,
- analyse and identify the specific needs for action at city level,
- develop and prioritise clear options for action, and
- identify and mobilise relevant actors and resources for implementation.

City WORKS aims to integrate already existing tools by various stakeholders and organisations to make the most effective use of synergies. Where no tools are currently available, the City WORKS team adapted existing tools or developed new ones.

City WORKS proposes a standard sequencing of **three phases including eight steps** for addressing global goals at the local level. However, you can apply City WORKS **in a sequential or in a non-linear way** to fit individual, context-specific needs and demands. Still, it is advised to start with the preparatory phase. Here you define the goal(s) and projected outcome(s) as well as the concrete modes, steps and tools that shall support you and your city in localising global agendas.



# City WORKS Toolkit

## Phase I. Get Started: Prepare the Localisation Process

These are activities to prepare for and initiate the process of localising global agendas according to your specific context. The aim is to reflect on your current needs and goals as development programme and urban advisors as well as those of your partners and especially the city in question. It is also about identifying entry points for implementation, choosing the City WORKS steps and tools that shall guide you through the process, defining the best mode of application.

## Phase II. Dive Deep: Connect Global Agendas to Local Action

The steps in this phase help you to raise awareness and deepen knowledge on global agendas among your target group as well as to analyse where a city currently stands in regard to their implementation. It also helps to analyse and identify specific needs for action and to prioritise clear options for action (e.g. urban development projects).

## Phase III. Turn Words into Action: Localise Global Agendas

Phase III is about planning for action, defining next steps, as well as identifying and mobilising relevant actors and resources for implementation. It is also about keeping track of progress during implementation, meaning to set-up effective monitoring and review mechanisms to measure the impact of the prioritised action and to help connect local reporting to national or even international reporting.

You can follow the different phases and steps either in a sequential or in a non-linear way (see also graphic 1), depending on your given context and specific goals that have been analysed and defined in phase I. For each step, you can find a set of tools available in the City WORKS toolkit. These can be used in different settings e.g. for workshops or focus group discussions.

## Supporting Activities

The supporting activities aim at bringing additional elements to the localisation process that are not specific to one phase or step of the City WORKS toolkit. These include fostering stakeholder engagement, advocating for and communicating about local action, strengthening capacity development, knowledge management and networking as well as promoting innovation. For each activity you will find some helpful tools and references in the corresponding section.



# Rationale

The recognition of the **transformative power of urbanization for development and the role of city leaders in driving global change** has been marked in many relevant international agendas, including the Paris Climate Agreement

This City WORKS for Climate Version focuses specifically on the role of subnational government levels and authorities, such as states and regions, cities and municipalities play in delivering on countries' Nationally Determined Contributions (NDCs) under the Paris Agreement. Subnational government levels and authorities, such as states and regions, cities and municipalities play an important role in delivering on countries' Nationally Determined Contributions (NDCs) under the Paris Agreement. Cities are main drivers of climate change (about 70% of global energy-related GHG emissions originate in cities). However, cities are also hit hard by the impacts of climate change (e.g. heat waves causing water shortages or high precipitation events leading to flooding put the livelihoods of millions of urban dwellers at risks and can cause unexpected local expenditures that may lead to disruptions in local businesses and budgets).

The Paris Climate Agreement calls for the inclusion and networking of all levels of government in order to mitigate and cope with climate change. According to a recent study by the Coalition for Urban Transitions (CUT), implementing available mitigation measures in cities could reduce urban GHG emissions by 90%. However, local governments have direct power over only one third of the emissions reduction potential in their cities. Another third depends on decision making at national level and the final third on the cooperation between all levels of government. Collaborative Climate Action – the politically intended, well-organised cooperation across different levels of government to achieve defined climate goals through joint action – is therefore essential for ambitious climate action.

The focus of the analysis is on City WORKS's **Phase II** and **Phase III** of the process described previously.

Moreover, following considerations are key:

**Multi-level climate governance (Collaborative Climate Action)** - multi-level (cooperation between government levels) approach is key to success

**Agenda 2030** - Even though the target group has a specific interest in SDG 13 Climate action, the connection to other SDGs could be made. For example which co-benefits the identified measures bring in relation to other SDGs – and maybe vice versa.

**Nationally Determined Contributions** - The Nationally Determined Contributions (NDCs) are the main tool to turn the overarching global goals of the Paris Agreement into national action. Since national climate action relies on the implementation taking place at local and regional level – the localisation of NDCs – it would be wonderful if this somehow could also be supported.

## Phase II. Dive Deep

Together with phase III, this is the core of the City WORKS toolkit. Their steps are based on an ideal planning process that you can either follow step-by-step or adapt according to your needs, goals and local context.

The steps in this phase first and foremost aim at raising awareness and deepening knowledge about the local relevance of global agendas, with specific focus on climate related agreements. Based on different assessments and exercises, they will then help you and your partners to analyse and identify specific needs and to prioritise clear options for action (e.g. define urban development projects or develop a city vision).

Key questions along this phase are:

- What do global (and national) climate agendas have to do with my city?
- Where does my city currently stand in terms of climate mitigation and adaptation achievements?
- Which measures can my city implement to address climate goals?
- How can my city prioritise certain measures?

Main steps:

**Step 1. Get to know the climate agenda**

**Step 2. Understand your current situation**

**Step 3. Identify measures for local climate action**

**Step 4. Prioritise measures for local climate action**

## Phase III. Turn Words into Action

After having identified and prioritised areas and/or concrete measures for local action that contribute to the climate goals / NDCs, the tools in phase III shall help you to prepare for their implementation, define next steps, and identify and mobilise relevant actors and resources. Simultaneously, it is important to plan and set-up effective monitoring and review mechanisms to measure the impact of activities and to help connect local with national or even international reporting. Strong review mechanisms also facilitate public communication about results thus fostering transparency and accountability for local action.

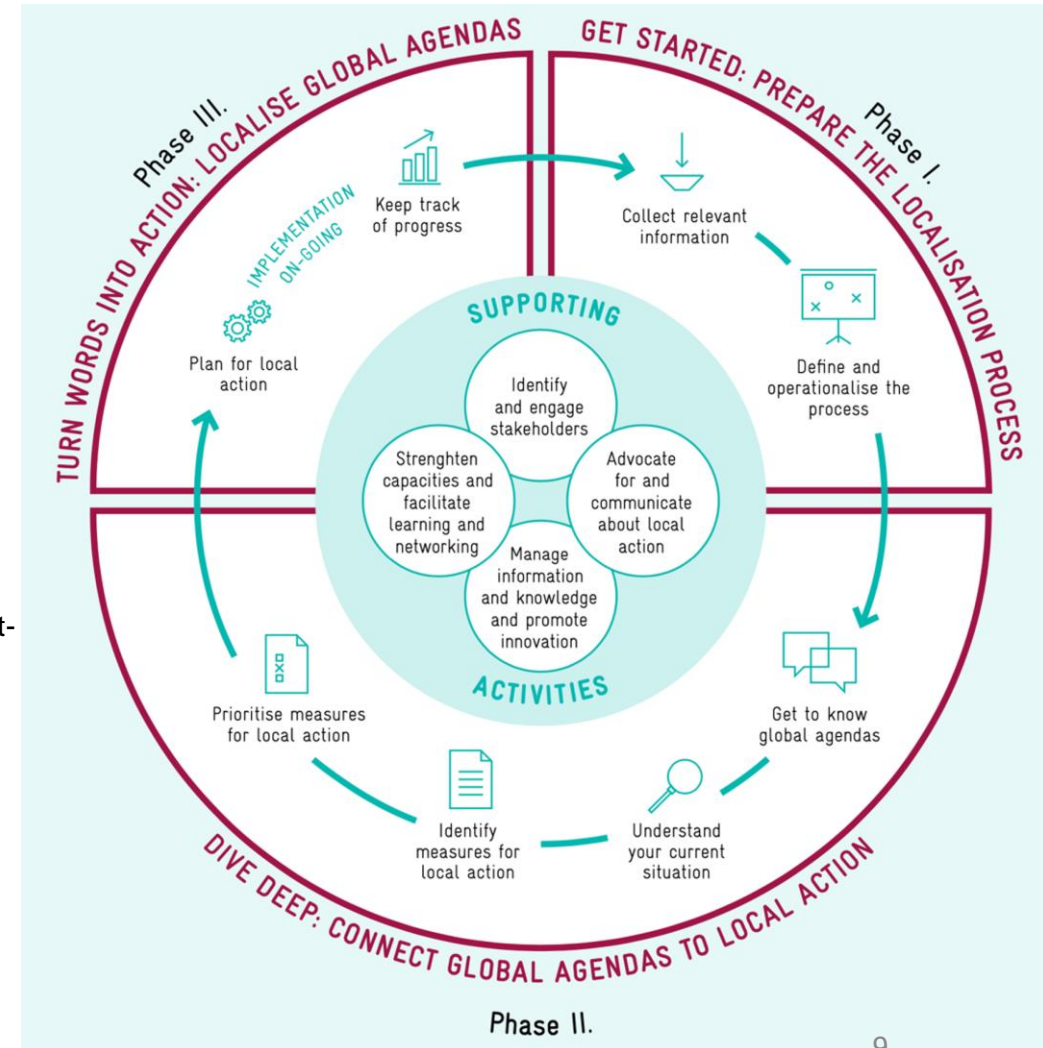
Key questions along this phase are:

- How to plan for local climate action?
- How to keep track of progress regarding climate actions?

Main steps:

**Step 1. Plan for local climate action**

**Step 2. Keep track of climate progress**



# City WORKS ,Climate Action' Tools (1)

Based on City WORKS tools

New / untested tools

Based on external tools



## Phase II. Dive Deep

<b>Step 1. Get to know climate agendas</b>	<a href="#">Page 12</a>
Resources on climate and cities	<a href="#">Page 13</a>
Slides and posters	<a href="#">Page 34</a>
Picture collection	<a href="#">Page 50</a>
Concept mapping - synergies between climate and SDG	<a href="#">Page 58</a>
<b>Step 2. Understand your current situation</b>	<a href="#">Page 62</a>
Brainstorm challenges/barriers and opportunities	<a href="#">Page 63</a>
Localise issues in the map	<a href="#">Page 66</a>
Review current plans and instruments	<a href="#">Page 68</a>
Corner game on challenges	<a href="#">Page 70</a>
Canvas – mitigation and adaptation sectors	<a href="#">Page 73</a>
GHG Inventory (ICLEI)	<a href="#">Page 79</a>
Risk and Vulnerability Assessment (C40)	<a href="#">Page 87</a>

# City WORKS ,Climate Action‘ Tools (2)

## Phase II. Dive Deep (cont.)

<b>Step 3. Identify measures for local climate action</b>	<a href="#">Page 92</a>
Brainstorming measures based on sectors / functions	<a href="#">Page 93</a>
Brainstorming measures based on challenges and opportunities	<a href="#">Page 100</a>
Brainstorming measures based on governing roles	<a href="#">Page 104</a>
<b>Step 4. Prioritise measures for local climate action</b>	<a href="#">Page 105</a>
Quick feasibility check	<a href="#">Page 106</a>
Interaction mitigation / adaptation actions (C40)	<a href="#">Page 109</a>

## Phase III. Turn Words into Action

<b>Step 1. Plan for local action</b>	<a href="#">Page 112</a>
Climate Action Plan	<a href="#">Page 113</a>
Vertically Integrated Action Tool (VIA) (C40)	<a href="#">Page 124</a>
<b>Recommendations for localizing NDCs</b>	<a href="#">Page 128</a>
<b>Step 2. Keep track of progress</b>	<a href="#">Page 137</a>
Data for climate indicators	<a href="#">Page 138</a>
International tools	<a href="#">Page 141</a>



## PHASE II. Dive deep

### Step 1 - Get to know climate agendas

<b>Resources on climate and cities</b> ( <a href="#">Page 13</a> )	Provide several resources to dive deeper on the topic of cities and climate change and the local implementation of climate goals.
<b>Slides and posters</b> ( <a href="#">Page 34</a> )	Explain key messages about the climate goals, interconnection to SDGs and their relevance for cities.
<b>Picture collection</b> ( <a href="#">Page 50</a> )	Use pictures to connect urban situations to global / climate agendas.
<b>Concept mapping synergies between climate and SDG</b> ( <a href="#">Page 58</a> )	Describe and explore connections between climate topics and SDGs,



<https://localising-global-agendas.org/city-works-toolkit/raise-awareness/>

[Back to tools overview](#)

# Resources on climate and cities



The topic of Cities and Climate Change has been covered in many publications and resources for the past years.

## Goal

Provide several publications to deep-dive into the topic

## Note

Either prepare a self-study time to dive deep into selected resources in smaller groups (according to their demands and levels of knowledge) and report back to larger group or prepare slides with key messages from selected resources to be presented to participants (also refer to slide/poster tools) or just share the materials and resources in advance.

## Timeframe

1 to 4 hours

## Output

Understanding of different approaches and experiences from various sources

## References

Several, as listed below

[Back to tools  
overview](#)

# Starting points – Main references

<https://collaborative-climate-action.org>

The screenshot shows the homepage of Collaborative Climate Action. At the top, there is a navigation menu with links for ABOUT CCA, PUBLICATIONS, RESOURCES, STORIES, and CONTACT. Below the menu is a header section titled "LATEST NEWS ON COLLABORATIVE CLIMATE ACTION" featuring a large image of people cycling and a "LOCALISING NDCS WITH INSPIRATION FROM THE 2030 AGENDA – POLICY BRIEF" with a "READ MORE" button. The main content area is divided into three columns: "About Collaborative Climate Action" (describing CCA or Multi-Level Climate Governance), "Publications" (exploring reports by the CPMUD team), and "Localising NDCs" (discussing Nationally Determined Contributions). At the bottom, a section titled "Relevance of Cities" highlights that 55% of the world's population lives in cities, 80% of global GDP is generated in cities, and 75% of global CO2 emissions originate in cities. A final section is titled "COLLABORATIVE CLIMATE ACTION AROUND THE WORLD".

<https://collaborative-climate-action.org/publications/>

<https://localising-global-agendas.org>

The screenshot shows the homepage of City WORKS. The header includes the logo "City WORKS Localising Global Agendas" and a navigation menu with links for Home, About, City WORKS Toolkit, Global Agendas, Stories of Success, and Tool Library. The main banner features a cityscape background with a circular graphic of colored segments and icons, and the text "We enable cities to implement global agendas locally". Below the banner, a section titled "What you can do with City WORKS" lists three key actions: "Link local development plans to global agendas", "Develop sustainable urban projects", and "Set up an effective monitoring & evaluation system". A second section titled "What does City WORKS offer?" lists three offerings: "TRANSLATION OF GLOBAL AGENDAS TO LOCAL LEVEL" (with a "Read more" link), "PROCESS GUIDE" (with a "Read more" link), and "TOOL LIBRARY" (with a "Read more" link).

# Starting points – TOOL OF TOOLS

<https://ndcpartnership.org/ndc-toolbox>

The screenshot shows the NDC Partnership Climate Toolbox website. At the top, there is a navigation bar with the NDC Partnership logo and links for ABOUT US, HOW WE WORK, COUNTRY PAGES, KNOWLEDGE PORTAL, NEWS, and EVENTS. Below the navigation bar, the main heading is "CLIMATE TOOLBOX". A sub-heading reads: "The Climate Toolbox draws together tools, guidance, platforms, and advisory support from leading institutions in a searchable database to help countries plan and implement their NDCs. To learn more about the toolbox and its contributors, click here." Below this text is a green button labeled "EXPLORE TOOLS". There is also a search bar with the placeholder text "Already know what you are looking for?" and "Enter a keyword". On the right side, there is a large blue graphic with a white icon of a toolbox. At the bottom, there is a section titled "Begin Your Search" with three filter categories: 1. Filter by Activity (What are you trying to do?), 2. Filter by Focus (What is the focus of your activity?), and 3. Filter by Type (What types of resources are you looking for?). Each category has a list of options with plus signs and dropdown menus.

<https://www.local2030.org>

The screenshot shows the LOCAL2030 website. At the top, there is a navigation bar with the LOCAL2030 logo and links for HOME, ABOUT, TOOLS, LIBRARY, VLRS, LOCAL ACTION, COMMUNITY, STORIES, EVENTS, and PARTNERS. Below the navigation bar, there is a search bar. The main content area features four large cards with images and text. The first card is titled "LOCAL2030 RESPONSE TO COVID-19" and includes the text "Access tools, updates and connect with partners" and an "Explore" button. The second card is titled "UN JOINT SOCIO-ECONOMIC RESPONSE TO COVID-19" and includes the text "CORONAVIRUS" and an "Explore" button. The third card is titled "LOCAL SOCIO ECONOMIC RESPONSE TO COVID-19" and includes an "Explore" button. The fourth card is titled "VOLUNTARY LOCAL REVIEWS" and includes an "Explore" button. At the bottom, there is a large banner titled "SCALING AND ACCELERATING LOCAL IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS" with the text "Access tools and resources, engage in discussions, incubate new SDG solutions and share news, events and ideas."



## Starting points

- **UN Habitat Work on Climate Change**  
<https://unhabitat.org/topic/climate-change>  
<https://urbanresiliencehub.org>
- Urban LEDS: [www.urban-leds.org](http://www.urban-leds.org)
- [UN-Habitat – Sustainable Urbanization in the Paris Agreement](#)
- [UN Habitat - Addressing Urban and Human Settlement Issues in National Adaptation Plans](#)
- [Metropolis Observatory – Metropolises Addressing the Global Agendas](#)
- [OECD - Cities and Climate Change](#)
- [World Bank – Cities and Climate Change – An Urgent Agenda](#)
- CUT - Coalition for Urban Transitions: <https://urbantransitions.global>
- Climate Emergency, Urban Opportunity - <https://urbantransitions.global/en/publication/climate-emergency-urban-opportunity/>
- NAZCA –Non-State Actor Zone for Climate Action - UNFCCC platform of commitments and actions of non-state actors.  
<https://climateaction.unfccc.int>
- *Carbonn* Climate Registry (cCR) - global reporting platform for cities, towns and regions addressing climate change; Supporting cities, towns and regions tackling climate change to create transparency, accountability and credibility  
<https://carbonn.org>
- Global Covenant of Mayors for Climate and Energy - largest global alliance for city climate leadership across the globe.  
<https://www.globalcovenantofmayors.org>

# GIZ Expertise and Resources

## Leading Urban Climate Action (LUCA)

### Cities Fit for Climate Change

- <https://www.giz.de/en/worldwide/43392.html>
- Key publication: <https://www.giz.de/climate-proof-cities>

### Climate Digital Cities Hub

- <https://www.climate-digital-cities.com>

### Climate Smart Cities

- <https://www.giz.de/en/worldwide/75009.html>

### ICT-based Adaptation to Climate Change in Cities

- <https://www.giz.de/en/worldwide/66730.html>

### City Climate Finance Gap

- <https://www.citygapfund.org>
- [https://www.international-climate-initiative.com/fileadmin/Dokumente/2020/20201012\\_Brochure\\_Gap\\_Fund.pdf](https://www.international-climate-initiative.com/fileadmin/Dokumente/2020/20201012_Brochure_Gap_Fund.pdf)

### FELICITY

- <https://www.eib.org/en/products/advisory-services/felicity.htm>
- <https://www.giz.de/en/worldwide/52753.html>

### CFF

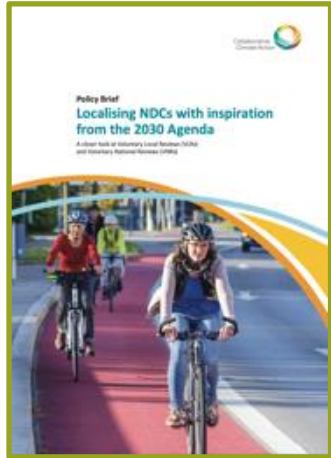
- <https://www.c40cff.org>

### Working Group on Transformation, Urban Opportunities and Climate Change

- <https://tuewas-asia.org/projectsprogrammes/transformation-urban-opportunities-climate-change/>

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# GIZ: Localising NDCs with inspiration from the 2030 Agenda



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**Clarissa Kees**  
**Marie-Lena Hutfils**

## Policy Brief

In the Policy Brief “Localising NDCs with inspiration from the 2030 Agenda – A closer look at Voluntary Local Reviews (VLRs) and Voluntary National Reviews (VNRs)” we look into why and how NDCs can and should be localised. We also examine what lessons the process of localising SDGs has to offer for the relatively new and unexplored concept of localising NDCs.

Both the goals of the Paris Agreement and the Sustainable Development Goals (SDGs) of the 2030 Agenda are far from being on track to be met. Speeding up the transformation towards a sustainable and climate-neutral world in line with both these global agendas requires faster, more ambitious and coordinated action at all levels of government.

Both agendas are global agreements negotiated by national governments, that to a large extent need to be implemented at the local and regional level. This requires that global, as well as national, goals and plans are translated and adapted to local contexts and needs. This is what can be understood as “localisation”.

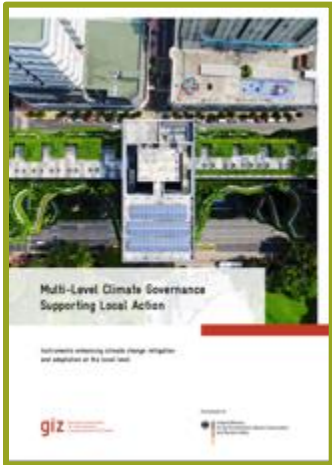
The concept of localisation has been applied longer and more widespread to SDGs than to Nationally Determined Contributions (NDCs) – the main tool to implement the Paris Agreement. A distinct example of localisation are the Voluntary Local Reviews (VLRs), inspired by the Voluntary National Reviews (VNRs).

We look into what the process of localising NDCs can learn from the localisation of SDGs. As a concrete form of localisation, the VNR/VLR relationship, understood as a multi-level governance function, is explored in order to see how it can provide guidance and inspiration for the localisation of NDCs.



<https://collaborative-climate-action.org/localising-ndcs/>

# GIZ: Multi-Level Climate Governance Supporting Local Action



Contact:  
Daphne Frank  
Lisa Lebershausen

## **Instruments enhancing climate change mitigation and adaptation at the local level.**

The concept of multi-level climate governance assumes that a country's different levels of government are mutually dependent when it comes to implementing the Paris Agreement. In fact, the decision on the adoption of the Paris Agreement encourages national governments to work more closely with non-party stakeholders, which include subnational governments. Concretely, national governments partly rely on regional and local governments to implement national climate strategies geared towards narrowing the emissions gap and to adapting to climate change. Conversely, local and regional governments are affected by the legal, institutional and financial instruments and frameworks put in place by higher levels of government. Countries' existing multi-level frameworks may support – or obstruct – local climate action.

Against this background, the present study explores the following question: How can different instruments for multi-level climate governance support the realisation of local climate mitigation and adaptation potentials?

Several dimensions deserve attention in multi-level climate governance. The study distinguishes between multi-level climate governance frameworks, i.e. the overarching governance system within which different levels of government interact in a country, and multi-level climate governance instruments, i.e. the specific platforms, initiatives, funding mechanisms, and action plans that are implemented to support climate action at the local level.

To guide the reader in identifying relevant instruments, the study presents a conceptual framework based on the academic and policy literature: Which governance capacities are strengthened by the instrument? How do different governments engage in multi-level climate governance? Who is involved in multi-level climate governance?

# GIZ: Cities and Climate Change Training Series



## Contact:

[Vaishali Nandan](#)  
[Luciana Maia](#)

*Training tool needs update*

*Another training has also been developed on “How do I implement global Agendas in My City”– Being currently also incorporated into City WORKS*

The **main audience** include middle/senior administration officials, consultants and practitioners in the field of climate change, urban development and environmental management as well as high-level decision makers and elected representatives.

The series started with an introductory training focusing on **sensitisation** of relevant local stakeholders. However, over the years, based on the experiences gained from several applications and on the concrete demand from partners, **additional trainings** have been developed, with the aim of providing more detailed and technical knowledge relevant to the issues of mitigation of and adaptation to climate change.

## 5 Trainings currently available

- **Training: Introductory Knowledge on Cities and Climate Change**
- **Training: Local Urban Governance for Climate Action**
- **Training: Financing Climate Actions in Cities**
- **Training: Urban Waste Management and Climate Change**
- **Training: Flood Risk Management in Cities**

The **methodology** of the trainings focuses on **practice-oriented and interactive learning**. It has the background of the Harvard Case Method, which conveys teaching messages mainly through interactive practical work done by the trainees. The training is usually facilitated by two or more trainers, and is offered to a range of 10 to 25 trainees.

**Different modules** compose each of the trainings and most of them follow the same sequence, including the **elements** (and complemented by games, movies, action learning exercises):

- A brief **introduction** given by the trainer provides the necessary theoretical background and introduces participants to their task in the case work/activity.
- The **case work/activity** gives participants the opportunity to work in groups through the different aspects linked to cities and climate change.
- The **plenary/wrap up discussion** is the space to reflect on what has been learned, to share experiences and for mutual learning. Trainers guide through questions and consequently offer alternatives and corrections where necessary. In a **final reflection**, the participants reassume their own real-life position to link the gained findings to their own experience.

The entire course is designed for a maximum **duration** of 2 to 3 days, for the introductory training, and 1 to 1,5 day for each of the other 4 trainings. Due to its modular structure, the trainings can be ‘tailored’ for shorter training events, or combined for example with real cases examples (presented by practitioners), site visits or other events. The selection of which trainings and which respective module to apply is done according to the training needs of the expected audience and the overall scope available.

To support the learning/teaching activities, a set of **training materials** has been developed:

- A library of **slides** (to be presented by trainer) supports the introductory input for each module.
- The main material to be used by participants is the **training manual**, which contains the instructions and necessary information for the case-works and exercises.
- Participants are also provided with **handouts**, which provide additional information (publications and links) as well as summary of key messages.
- A **Trainer’s Handbook** is also available. Besides the basics on participatory training methods (part 1), it also provides necessary information for running each module as well as the Action Learning exercises (part 2) and some information on running a train of trainers (part 3).

## Other interesting resources



### [World Bank - Guide to Climate Change Adaptation in Cities](#)

This guide on climate change adaptation in cities is intended to offer mayors and other city officials, in developing countries, practical guidance on how to respond to the challenges of climate change adaptation in their cities. It provides a comprehensive overview of key climate adaptation issues that are relevant to cities, offers examples of good practices and successful experiences, and is a useful guide to other available resources and policy tools on the topic.



### [UNDRR - Disaster Resilience Scorecard for Cities](#)

The Scorecard provides a set of assessments that will allow local governments to assess their disaster resilience, structuring around UNISDR's Ten Essentials for Making Cities Resilient. It also helps to monitor and review progress and challenges in the implementation of the Sendai Framework for Disaster Risk Reduction: 2015-2030.



### [ICLEI's Green Climate Cities Handbook for Local Governments](#)

**Measuring, Reporting, Verification (MRV) of Urban Low Emission Development** The methodology is presented in three phases – “Analyze”, “Act”, and “Accelerate” - each unfolding into three steps, in turn detailing guidance in 3 sub-steps. The sub-steps provide a level of detail that helps progress on specific crucial elements. Guidance is generic enough to make it useful in any context, yet specific enough to define actions needed to progress.



### [C40 - Adaptation and Mitigation Interaction Assessment Tool \(AMIA\)](#)

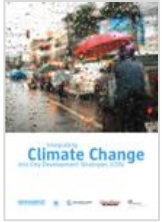
The AMIA tool enables cities to methodically identify potential interactions between climate adaptation and mitigation measures. The tool highlights opportunities and conflicts and provides users with case studies to guide their decision-making.



### [C40/WRI/ICLEI - Global Protocol for Community-scale Greenhouse Gas Emission Inventories](#)

A city-wide GHG inventory enables cities to measure their overall emissions, as well as understand the contribution of different activities within the city. The GPC provides a robust framework for accounting and reporting city-wide GHG emissions.

## Other interesting resources



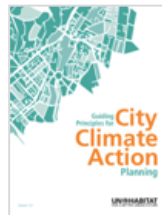
### [UN-Habitat - Integrating Climate Change into City Development Strategies](#)

This guidebook on integrating climate change into city development strategies (CDS) attempts to provide a modest input into the effort of unifying two key thematic areas, climate change and city development strategies. A number of deliverables have been produced during this collaboration, including: an online catalogue to facilitate access to knowledge on cities and climate change, various tools for incorporating climate change into urban policies and practices, analytic and assessment guides, handbook for mayors on climate change adaptation and mitigation in cities. It can also be useful for professionals in the urban development field in cities where local governments lack specific personnel working on town planning.



### [UN-Habitat - Developing Local Climate Change Plans](#)

This tool provides local policy-makers and major stakeholders with a methodology to plan for climate change. These plans must address both mitigation (e.g., reducing the concentration of greenhouse gases in the atmosphere) and adaptation (responding to the impacts of climate change). If they are to be effective, local plans for climate change (both adaptation and mitigation) require the involvement of a variety of stakeholders and a specific focus on the most vulnerable groups.



### [UN-Habitat - Guiding Principles for City Climate Action Planning](#)

The Guiding Principles for City Climate Action Planning reviews typical steps in the city-level climate action planning process in light of a proposed set of globally applicable principles. These principles, shown below, developed through a robust and open multi-stakeholder process, support local officials, planners and stakeholders in climate action planning. These guiding principles are intended to be applied flexibly, together with more detailed 'how to' manuals, to help cities more effectively play their role in reducing greenhouse gas emissions and building climate resilience.



### [World Bank - Building Urban Resilience – Handbook](#)

This report is divided into three major sections designed to give urban planners and practitioners an intuitive and easy way to build elements of resilience into their urban governance and city planning: principles for urban resilience; tools for building resilience, and the practice of urban resilience.



### [A strategic approach to climate action in cities - focused acceleration](#)



### [A strategic approach to climate adaptation in cities - focused adaptation](#)

# Detailed information about these 3 following tools - in the following slides (hidden)



[World Bank/C40 - CURB Tool: Climate Action for Urban Sustainability](#)



[ICLEI ACCCRN Process: - Building urban climate change resilience toolkit for local governments](#)



[UN-Habitat - Planning for Climate Change – Toolkit](#)

This information was compiled for a study by the former [Sector Project City Regions 2030](#)

> [Stocktaking urban support approaches – a directory of tools for sustainable urban development](#)





# Some interesting videos

Cities and Climate Change: Making the Links | Sara Hughes | TEDxUofT

<https://youtu.be/BFxKWB71yE>

Community Design for Climate Change | Alan Plattus | TEDxNatick

[https://youtu.be/\\_dppzdFBQVY](https://youtu.be/_dppzdFBQVY)

CLIMATE CHANGE: How can cities help?

<https://youtu.be/2GO8lt65WXo>

Climate Change and the Future of Cities | Eric Klinenberg

<https://youtu.be/6aBQCZleonc>

Urban Resilience Hub by UN-Habitat

<https://youtu.be/eOjzbLagPvQ>

Climate Action for Cities Campaign

<https://youtu.be/bKTySWWL2nU>

Cities Fit for Climate Change: Sourcebook and Climate-Proof Urban Development Approach

<https://youtu.be/00jqJN79riY>

Planning for Climate Change: A Strategic Values-Based Approach in Sihanoukville

<https://youtu.be/vAoorDDRkoY>

## [Documentary Series: Hot Cities, Surviving the Storm](#)

The world's biggest cities are already victims of climate change. There are real economic and social impacts as climate refugees swell urban populations, food and water supplies are threatened and sea levels rise. "Hot Cities" travels the world from Lagos to Los Angeles, from Shanghai to Surat, from Dhaka to Durban to see if our cities can adapt and survive. 2010; Total 32 movies of ca. 10min; 4 movies for each city, including: Lagos, Dhaka, Dakar, Havana, Lima, Shanghai, Los Angeles and Jakarta

## [Movie: Cities, Design and Climate Change](#)

"With cities contributing upwards of 75 per cent of global carbon emissions, urban design is increasingly important when planning for climate change. This discussion examines the creative urban design solutions coming out of the world's cities. 2010, 1h28min; Speaker: Professor Saskia Sassen, Professor Richard Sennett

# Slides and posters



The global agendas can be very abstract and might not be easy to grasp. Make it easier for your partners, workshop participants or stakeholders to understand the content of the global agendas. Hold a presentation or explain and discuss them in a poster session. Below you can download available drafts of posters and slides.

## Goal

Explain key messages about the climate agenda, its connection to the SDGs and the relevance of mitigation and adaptation to climate change for cities.

## Task

Based on the demands and needs of your target group, decide if the content of presentation will focus on general knowledge or should include more detailed information.

You can then put together a set of descriptions from the slides and poster collection and, if wished, complement it with videos from the video collection.

Depending on the level of knowledge of your target group, additional information and examples can be added.

## Note

A 30 minutes presentations is recommended. Sending out the information / presentation beforehand is also possible.

## Timeframe

0,5 hour

## Output

Fostering a general understanding of the relevance of cities in implementing the climate goals

## References

Several listed previously or in each slide

[Back to tools overview](#)



**United Nations**  
Framework Convention on  
Climate Change

### In a nutshell

The Paris Agreement was endorsed by the 196 national governments who form the Conference of Parties (COP) of the UN Framework Convention on Climate Change (UNFCCC) in December 2015. It commits to holding the increase in global average temperature to well below 2 °C above pre- industrial levels.

#### **Aim and focus:**

Keeping a global temperature rise well below 2 degrees Celsius above pre-industrial level, while striving to cap increase at 1.5 degrees Celsius

**Legal Relevance:** Countries' commitments are called Nationally Determined Contributions (NDCs) which become legally binding as countries formally ratify the Paris Agreement (Article 4)

**Supported by:** signed by 195 member states and ratified by 175 Parties to the Convention

**Implementation period:** 2016 with targets to be renewed on a 5-year basis

**Reporting and review:** All Parties of the Paris Agreement are requested to submit revised NDCs every five year that are recorded in a public register on the UNFCCC website.

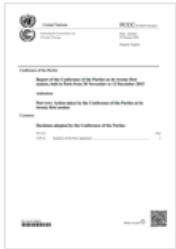
### Key relevance for urban development and governance

- References "cities and subnational authorities" as one of many non- Party stakeholders with no reference to their specific roles, responsibilities, capacities or need for support
- Encourages cities to develop specific agendas for action



**United Nations**  
Framework Convention on  
Climate Change

## Resources



Report of the Conference of the Parties on its twenty-first session  
<http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>



The Paris Agreement - A Critical Analysis of the Role of Cities and Local Governments in the Global Agendas  
<https://www.citiesalliance.org/sites/default/files/ParisAgreement-iiied.pdf>



Sustainable Urbanization in the Paris Agreement  
<https://unhabitat.org/sustainable-urbanization-in-the-paris-agreement>

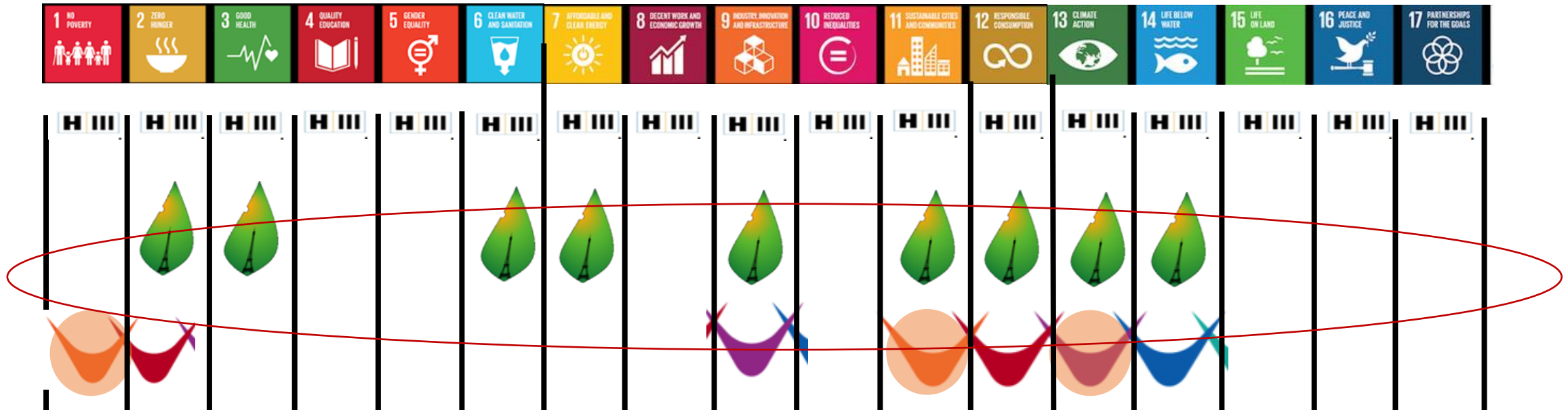
Paris Agreement is the latest step under the UNFCCC that brings all signatory nations together to combat climate change and adapt to its effects. It was agreed during the 21<sup>st</sup> session of the Conference of the Parties (COP 21) in 2015, and came into force in November 2016. Each participating nation put forth an Intended Nationally Determined Contribution (INDC) on how it would address the sources of GHG emissions at the national level to contribute to the collective goal of keeping global temperature rise this century below 2 degrees Celsius.

These INDCs are converted into **legally binding Nationally Determined Contributions (NDCs)** as countries formally ratify the Paris Agreement. For means of reporting, all Parties of the Paris Agreement are requested to submit revised NDCs that are recorded in a public register on the UNFCCC website every five year. While the Paris Agreement does not explicitly mention cities frequently, it acknowledges the importance of stronger and more ambitious climate action, inviting all non-Party stakeholders, including cities and other sub-national authorities, to increase and upscale their efforts for both mitigation and adaptation actions. It also insists on more integrated and holistic approaches aimed to develop and implement systemic action, coupling mitigation and adaptation. These joint efforts are showcased through the Non-State Actor Zone for Climate Action (NAZCA) platform.

According to UN Habitat, most updated NDCs include urban content in in absolute terms and also in comparison with the first analysis realized in 2016. Currently 84% of the NDCs analysed has urban content, and 45% of the NDCs analysed have strong urban content with dedicated headers/section/paragraphs.

# The International Frameworks and the role of LRG

All of the SDGs have targets that are directly or indirectly related to the daily work of local and regional governments. Local governments should not be seen as mere implementers of the agenda. Local governments are policy makers, catalysts of change and the level of government best-placed to link the global goals with local communities.






















































 New Urban Agenda

 Paris Climate Agreement

 Sendai Framework for DRR

 Indicator of Framework used to measure SGD progress.

Sustainable Development Goal		Key Issue for Cities	Specific Targets relevant for Cities	Direct connection to urban challenges	Link to other Agendas
 <b>1 NO POVERTY</b>	End poverty in all its forms everywhere.	Equitable and inclusive territorial and economic development	1.1, 1.2, 1.3, 1.4, 1.5	Fight against poverty specially in slums, access to basic services, resilience	
 <b>2 ZERO HUNGER</b>	Achieve food security and improved nutrition and promote sustainable agriculture	Responsible and efficient food sovereignty and urban growth	2.1, 2.2, 2.3, 2.4	Social inclusion, awareness for urban-rural linkages	
 <b>3 GOOD HEALTH AND WELL-BEING</b>	Ensure healthy lives and promote wellbeing for all at all ages	Equitable access to recreational, cultural and social facilities, better quality of urban environment	3.1, 3.2, 3.3, 3.6, 3.7, 3.9	Health, access to basic services	
 <b>4 QUALITY EDUCATION</b>	Ensure inclusive quality education and promote lifelong learning opportunities for all	Equitable access to recreation, cultural and social facilities, citizens empowerment	4.1, 4.2, 4.3, 4.4, 4.5, 4.7, 4.a	Education, equity, access to basic services	
 <b>5 GENDER EQUALITY</b>	Achieve gender equality and empower all women and girls	Equitable cities, inclusion and protection of vulnerable population, empowerment of women and girls in the city	5.1, 5.2, 5.3, 5.4, 5.5, 5.a, 5.c	Equity, governance	
 <b>6 CLEAN WATER AND SANITATION</b>	Ensure availability and sustainable management of water and sanitation for all	Ensure quality public services, sustainable development and protection of sources and aquifers	6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.b	Access to basic services, governance	
 <b>7 AFFORDABLE AND CLEAN ENERGY</b>	Ensure access to affordable, reliable, sustainable and modern energy for all	Promotion of new technologies and environmentally sustainable and responsible production and mobility	7.1, 7.2, 7.3	Access to basic services, climate change	 Others
 <b>8 DECENT WORK AND ECONOMIC GROWTH</b>	Promote sustained, inclusive and sustainable economic growth and productive employment and decent work for all	Equal productive and employment opportunities in the city	8.3, 8.5, 8.6, 8.7, 8.8, 8.9	Economic development, equity, migration, culture	
 <b>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</b>	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Promotion of inclusive urban economies	9.1, 9.3, 9.4, 9.c	Sustainable transport, access to basic services	
 <b>10 REDUCED INEQUALITIES</b>	Reduce inequality within and among countries	Sustainable urban development, social and ecological function of property?	10.1, 10.2, 10.3, 10.4, 10.7	Fight against poverty specially in slums, resilience, equity, migration, governance	

Sustainable Development Goal		Key Issue for Cities	Specific Targets relevant for Cities	Direct connection to urban challenges	Link to other Agendas
 <p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>	Make cities and human settlements inclusive, safe, resilient and sustainable	Sustainable urban development, social and ecological function of property	11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.a, 11.b, 11.c	Housing, access to basic services, sustainable transport, equity, planning, governance, culture, climate change, fight against poverty specially in slums, resilience, health, development cooperation	    <p>Others</p>
 <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	Ensure sustainable consumption and production patterns	Environmental protection, waste reduction and pollution	12.2, 12.3, 12.4, 12.5, 12.7, 12.8, 12.b	Climate change, governance, planning	   
 <p><b>13</b> CLIMATE ACTION</p>	Take urgent action to combat climate change and its impacts	Focus on adaptation to climate change, reduction of risks and increase resilience, sustainability and reduction of emissions	13.1, 13.3, 13b	Resilience, climate change, governance, planning, equity, development cooperation	    <p>Others* Carbon Cities Registry, Compact of Mayors</p>
 <p><b>14</b> LIFE BELOW WATER</p>	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Environmental protection, waste reduction and pollution	14.1, 14.2, 14.5, 14.b	Climate change	   
 <p><b>15</b> LIFE ON LAND</p>	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and preserve land degradation and halt biodiversity loss	Environmentally sustainable development in balance with ecosystems	15.1, 15.2, 15.5, 15.9, 15.b	Climate change, planning	   
 <p><b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Right to the city, strengthening of governance, empowering citizens, appropriate regulatory and institutional frameworks	16.1, 16.5, 16.6, 16.7, 16.10	Governance, health	 
 <p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Strengthening international, regional and local cooperation, transfer of knowledge and promotion of good practices	17.1, 17.14, 17.16, 17.17, 17.18, 17.19	Governance, development cooperation, fight against poverty specially in slums	 

Mitigation = the causes of climate change are removed by reducing GHG emissions



„To avoid the unmanageable“

Adaptation = adjustment in natural or human system in response to actual or expected effects, which moderates harm or exploits beneficial opportunities



„To manage the unavoidable“

**Climate Paris Agreement: Long-term mitigation and adaptation goals - Different policies responses at global, national, regional and local levels**

***„Perhaps the biggest threat to the 2030 Agenda is climate change. The Sustainable Development Goals, from poverty eradication and ending hunger to conserving biodiversity and peace, will be unattainable if climate change is not urgently addressed,,***





# SIX KEY POINTS OF THE PARIS CLIMATE AGREEMENT

The 31-page document that details a landmark agreement reached in Paris on 12 December 2015 could be a turning point in the struggle to contain global warming. The historic pact, approved by 195 countries, will take effect from 2020.



To keep global **temperature** increase below 2C (3.6F) and to pursue efforts to limit it to 1.5C.



186 countries submitted plans detailing how they reduce their **greenhouse gas pollution** through 2025 or 2030.



Overall assessment of how countries are doing in cutting their emissions compared to their **national plans** – starting in 2023, every five years.



**\$100 billion** a year in climate finance for developing countries by 2020, with a commitment to further finance in the future.



**Rich countries** to engage in absolute reductions in emissions, developing ones to continue enhancing their mitigation efforts.



Countries should reach global peaking of **greenhouse gas emissions** as soon as possible.

**Source:** UNEP, Global Trends in Renewable Energy Investment 2015



## GLOBAL GOALS / EFFORTS

Global temperature limit (Art. 2)

Long-term goal on mitigation (Art. 4.1)

Global goal on adaption (Art. 7.1)

Mobilizing climate finance (Art. 9.3)

Technology (Art. 10)



## NATIONAL EFFORTS

Mitigation

Adaptation



## COOPERATION

Capacity-building

Policy coordination

Mobilization of support



## TRANSPARENCY FRAMEWORK

To enhance transparency of action and support, implementation and compliance



## GLOBAL STOCKTAKE

To assess progress against the purpose of the Paris Agreement and its long-term goals

First global stocktake to take place in 2023, and every 5 years thereafter

# Climate change casues and impacts / solutions visualized

## CLIMATE CHANGE CAUSES & IMPACTS



## SOLUTIONS: MITIGATION & ADAPTATION

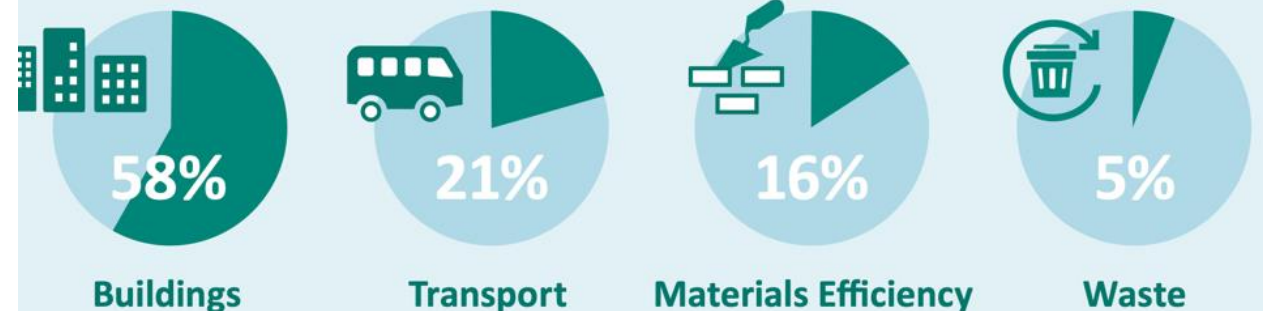


## Cities are critical because they are both the problem and the solution.

- Cities consume roughly two thirds of resources and energy and emit 75% of energy-related greenhouse gases .
- They generate around 80% of GDP .
- Their location and density make them especially vulnerable, for instance because of rising sea levels, extreme weather events, heat waves and the arrival of climate refugees .
- Their density also creates opportunities for infrastructure and services .
- Urban areas are often a driving force behind economic development and a breeding ground for innovation .
- Cities can also serve as laboratories for sustainable solutions, whether new technologies, new economic systems (e .g . shared economy) or sustainable lifestyles .

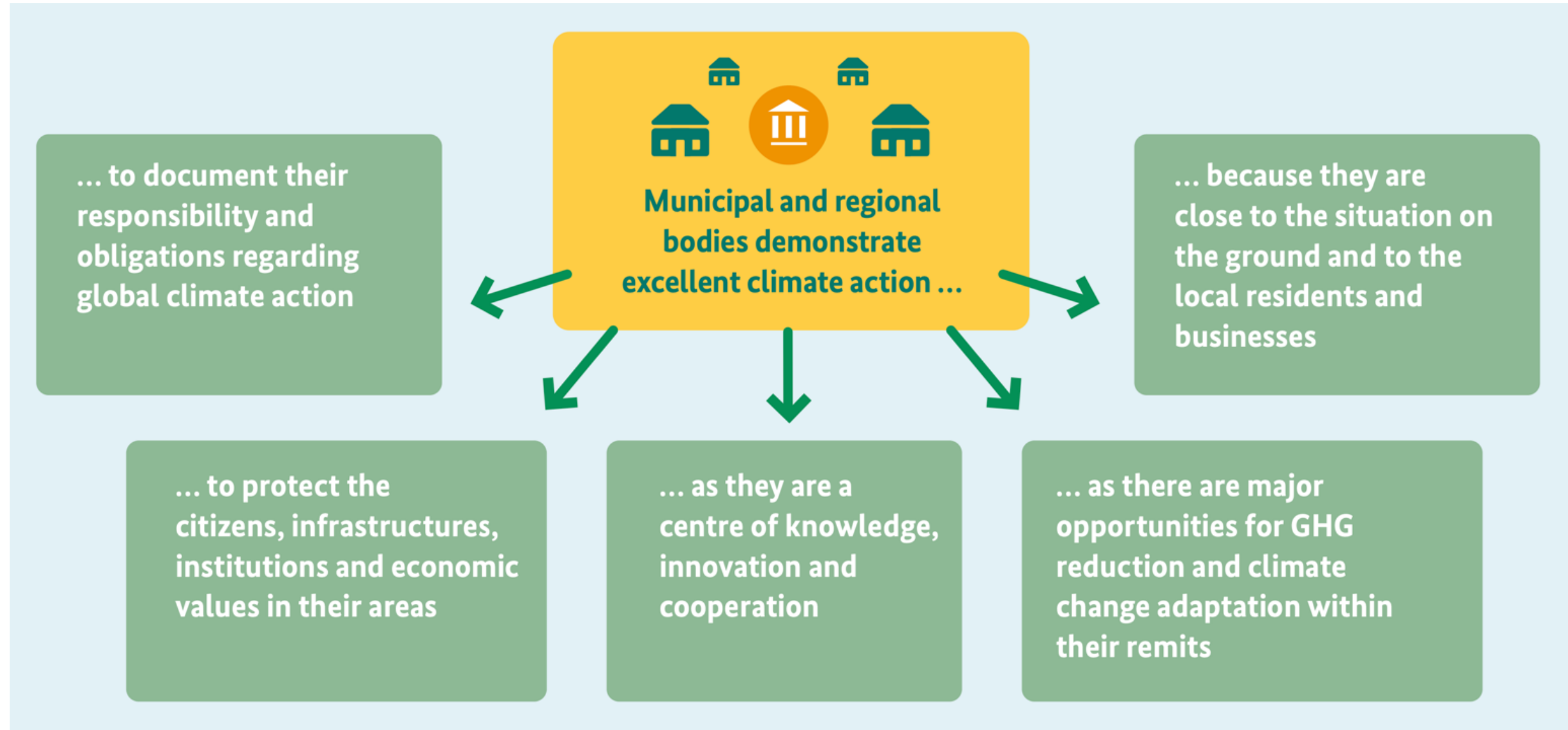
### Urban Potential for Action

Technically feasible low-carbon measures could cut emissions from urban areas by almost 90% by 2050

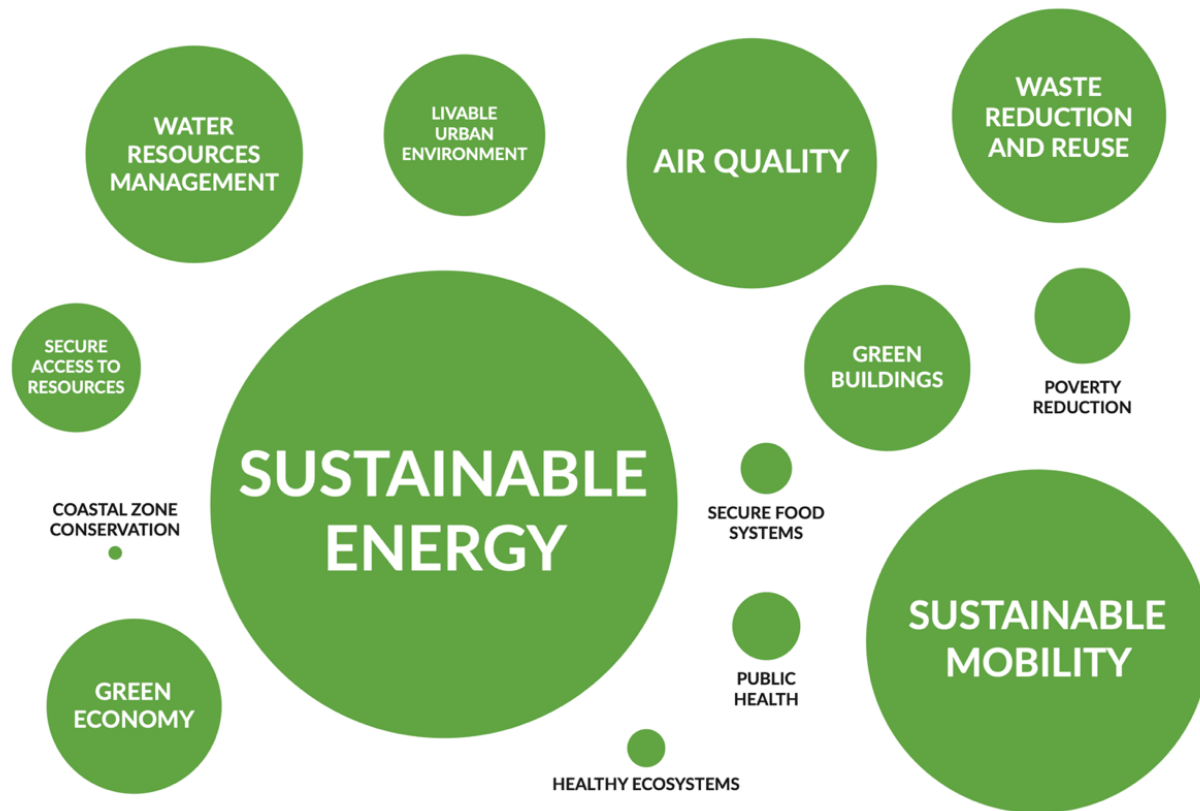


This overview from the Climate Emergency – Urban Opportunity report illustrates municipalities' significant potential for action in key sectors . Find out more: <https://urbantransitions.global>

# Why cities and regions lead the way in climate action



# Advancing Sustainable Development Through a Climate Lens







ICLEI

<https://e-lib.iclei.org/wp-content/uploads/2018/12/cCR-report-web.pdf>







**Table 5**  
Synergies (green circles) and trade-offs (red circles) between climate mitigation action and SDGs in the action area of cities (own compilation, based on Gonzales-Zuñiga *et al.*, 2018c).

## Advancing decarbonisation

### Inclusive low-carbon mobility




- Low-carbon mobility reduces air pollution and related non-communicable diseases. 
- Easily walkable and cyclable cities promote physical exercise. 
- Affordable public transport counteracts inequalities among city residents. 
- Public transport reduces the death toll of traffic accidents and increases access to safe and affordable transportation. 

### Resilient low-carbon buildings and infrastructure

- Investments in resilient and low-carbon buildings and infrastructure can contribute to providing access to basic services, such as water and sanitation. 
- Investments in resilient and low-carbon buildings and infrastructure can contribute to providing access to basic services, such as affordable energy. 
- Investments in resilient and low-carbon buildings and infrastructure can contribute to providing access to affordable housing. 
- Denser cities with adequate green spaces can contribute to reducing heat stress. 
- Investments in resilient and low-carbon infrastructure can attract investments and contribute to economic productivity. 
- Demand for housing can lead to conversion of farmland and peri-urban green areas into built environments, disturbing ecosystem services through conversions of local ecosystems. 

## Boosting resilience

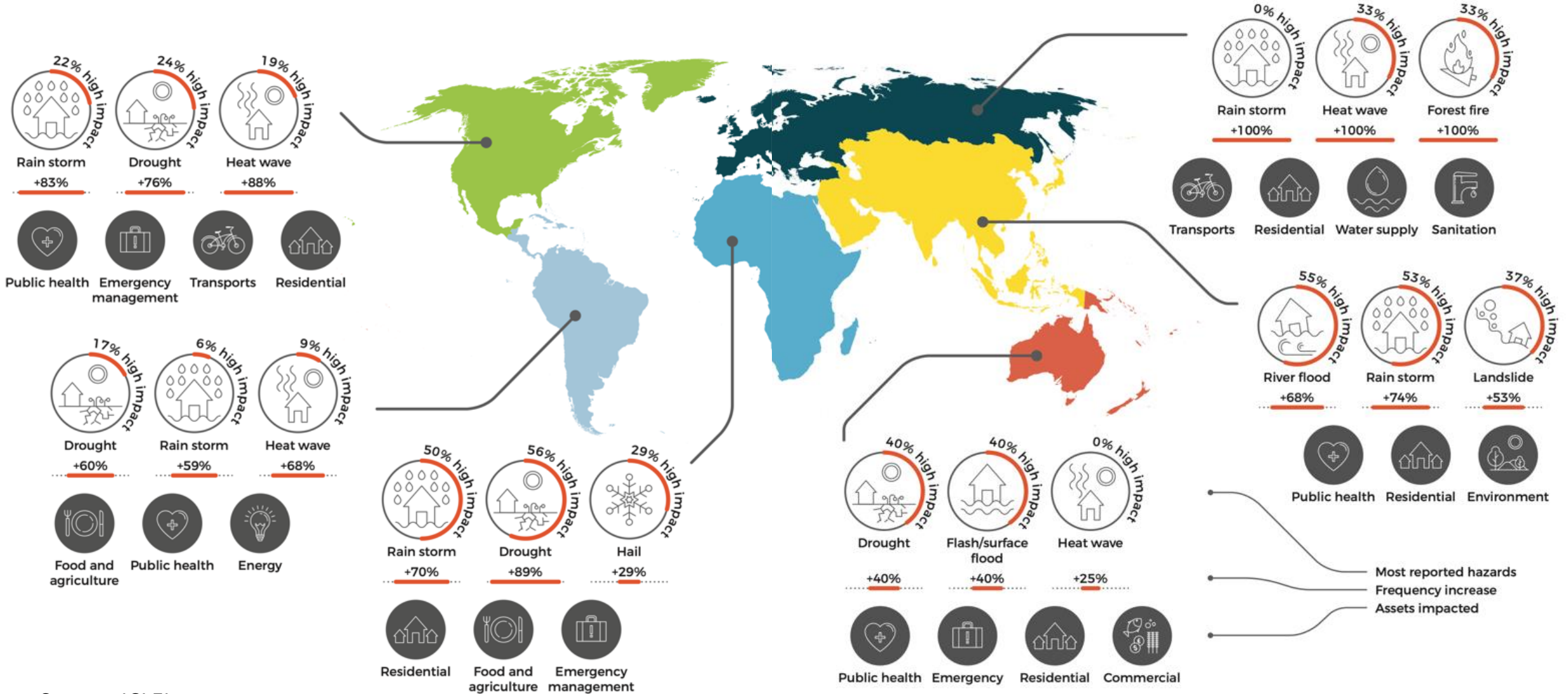
### Resilience against everyday disasters and climate risks

- Storm water drainage, early warning systems, effective disaster management and emergency services can safeguard basic services like health care. 
- Storm water drainage, early warning systems, effective disaster management and emergency services can safeguard basic services like water and sanitation. 
- Storm water drainage, early warning systems, effective disaster management and emergency services can safeguard economic productivity. 

**Table 6**  
Synergies (green circles) between climate adaptation action and SDGs in the action area of cities (based on Gonzales-Zuñiga *et al.*, 2018b).

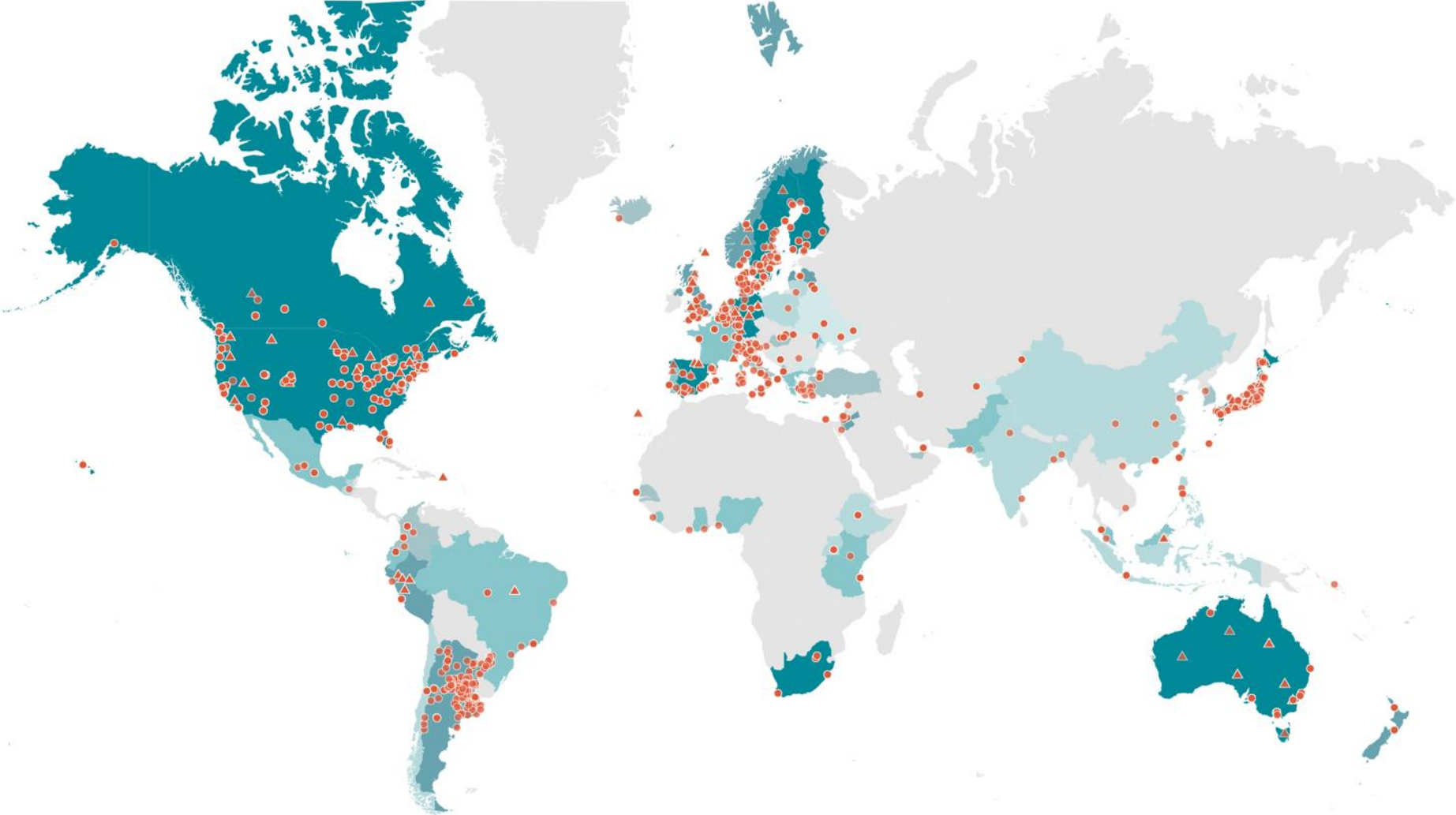
[https://www.die-gdi.de/uploads/media/Report\\_DIE\\_NewClimate\\_ENGLISH\\_FullReport.pdf](https://www.die-gdi.de/uploads/media/Report_DIE_NewClimate_ENGLISH_FullReport.pdf)

# Hazard Mapping Worldwide | Cities are Culprits and Victims Alike



Source: ICLEI

# Map of cities and regions pledging net-zero emissions targets



Percentage of national population with net-zero targets

<1%	15-35%
1-5%	35-50%
5-15%	>50%

● City  
▲ Region

Map of cities and regions pledging net-zero emissions targets  
(Source: NewClimate Institute and Data-Driven EnviroLab, 2020, 15)



# Collaborative Climate Action



## Collaborative Climate Action (CCA) ...

... is politically intended, well-organised cooperation across different levels of government to achieve climate goals – ideally jointly defined and implemented. Favourable framework conditions, fulfilment of obligations at all levels and a joint review of target achievement are important.

# Picture Collection



Images say more than a thousand words. Global agendas might be abstract and seem to be far away, but spotting issues addressed by them in regular urban situations makes it easier for your target group to relate to them and understand their direct interference with daily life. You can either use images from the City WORKS materials or use photos of common situations in your own city, e.g. made by participants.

## Goal

Use pictures to connect urban situations to climate issues.

## Tasks

By using different pictures, the aim of the presentation is to visually show how nearly all challenges at the local level are related to global agendas in specific to climate change adaptation and mitigation issues.

**Step 1:** Decide about the setting (for smaller groups it is recommended to use print outs – ideally in A3; for bigger groups it may be advisable to either split them into small groups and let them discuss along printed images or show a digital image via screen to everyone)

**Step 2:** Prepare question: What agenda/SDG do you spot in this image?

**Step 3:** Let participants discuss among each other and present the results of the findings to the whole group.

## Materials

**Additional picture collection below** / prepare slides or coloured prints (A4 or A3) of selected images

## Note

The exercise can be done in a rather superficial manner by just quickly going over the images and collecting some answers from participants. Yet, you could also let participants go into more detail by offering cards for writing down the specific agenda/SDG and pin it on a meta board in the correct place of the image.

## Timeframe

15 to 30 minutes

## Output

Understanding of global agendas in day to day urban situations

## References

Creative commons sources of pictures such as unsplash and pixabay

The link to the images can be found on the slides

Pictures collection from the City WORKS website is already a good base.  
Some additional pictures are listed below

Pictures can also be used in the introduction round

Participants are asked to pick one picture they most connect to the topic and explain why

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<https://unsplash.com/search/city?photo=1DPIP44atys>



<https://www.pexels.com/photo/aerial-view-of-city-with-high-rise-building-at-night-time-155534/>



uren Livingston



[https://unsplash.com/collections/141500/climate-impacts?photo=J\\_CrLml\\_5zk](https://unsplash.com/collections/141500/climate-impacts?photo=J_CrLml_5zk)

<https://pixabay.com/de/flut-wetter-regentage-starker-regen-965092/>





<https://pixabay.com/de/architektur-gebäude-fahrzeuge-stadt-1837176/>



<https://pixabay.com/de/solar-panel-array-dach-home-haus-1591358/>



<https://www.pexels.com/photo/grey-white-yellow-concrete-houses-during-daytime-52567/>

<https://pixabay.com/de/stra%C3%9Fe-szene-slum-stadt-wohnung-19941/>





<https://pixabay.com/de/gebäude-der-lift-baustelle-1804030/>

<https://pixabay.com/de/mülldeponie-abfallwirtschaft-abfälle-879437/>





<https://unsplash.com/photos/6xeDIZgoPaw>

[https://unsplash.com/photos/Z3\\_uSvERPfM](https://unsplash.com/photos/Z3_uSvERPfM)







<https://pixabay.com/de/philippinen-slums-manila-321674/>

<https://unsplash.com/photos/MKAbwqp9CvA>



# Concept Mapping – SDGs and Climate goals



## Goal

Understand connection and interdependencies of SDGs and climate goals

## Tasks

1: List here the most relevant global climate goals for your city

2: List here the most relevant global SDG goals for your city

3: Analyse how these two sets of goals relate to each other (synergies and trade-offs)

Can certain measures contribute to the achievement of both goals?

How can measures be improved to contribute to SDGs without increasing emissions?

Try to draw a concept map, in which you connect the climate goal to the SDGs and vice versa.

4. Explore NDC – SDG Connections with the tool „NDC-SDG Connection“

You can look at connections on a global scale, but also specifically to your country context.

What does this tool tell you?

5. Look in detail into the connections for SDG 11.

Discuss the concept of co-benefit in regard to climate actions. How does this could help you to prioritize actions?

## Materials

Exercise can be done with paper and pen tools or also virtually using an online whiteboard (such as miro or mural)

## Note

This does not have to be city specific, but a country-wide perspective is also possible. The use of this tool assumes a good understanding of the climate change aspects as well as the SDGs goals

## Timeframe

45 - 90 minutes

## Output

Concept map that can be city specific

## References

- [NDC-SDG Connections | SEI](#)
- [NDC-SDG Connections](#)
- [NDC-SDG Connections: Bridging Climate and the 2030 Agenda](#)
- [NDC-SDG Connections: SDG 11: Sustainable cities and communities](#)
- [NDC Explorer](#)
- [A guide to SDG interactions: from science to implementation](#)
- [A toolkit for mapping relationships among the Sustainable Development Goals \(SDGs\)](#)
- [SDG Interlinkages Analysis & Visualisation Tool](#)

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# Interconnected agendas

## Paris Climate Agreement

Mitigation

Adaptation

Both

SDG: 1.5, 2.4, 11.b,

13 (13.1, 13.2, 13.3, 13.a, 13.b),

## Sendai Framework

Disaster Risk Reduction

Adaptation

SDG 1.5, 11.5, 11.b, 13.1

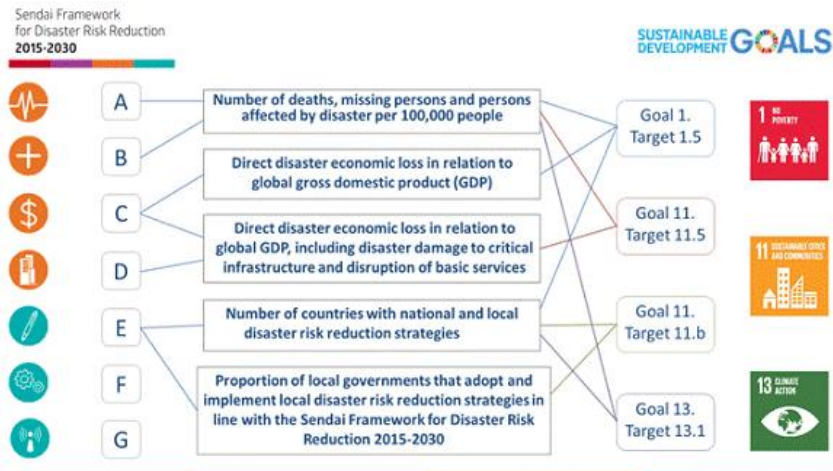
Climate  
Agenda

## Sustainable Development Goals

[NDC-SDG Connections](#)

[NDC Explorer](#)

[SDG Interlinkages Analysis & Visualisation Tool](#)



**„Perhaps the biggest threat to the 2030 Agenda is climate change. The Sustainable Development Goals, from poverty eradication and ending hunger to conserving biodiversity and peace, will be unattainable if climate change is not urgently addressed „**



## Steps – concept mapping

Step 1. List here the most relevant global climate goals for your city

Step 2. List here the most relevant global SDG goals for your city

Step 3. Analyse how these two set of goals relate to each other (synergies and trade-offs)  
Can certain measures contribute to the achievement of both goals?  
How can measures be improved to contribute to SDGs without increasing emissions?

Try to draw a concept map, in which you connect the climate goal to the SDGs and vice versa.

Step 4. Explore NDC – SDG Connections with the tool „NDC-SDG Connection“

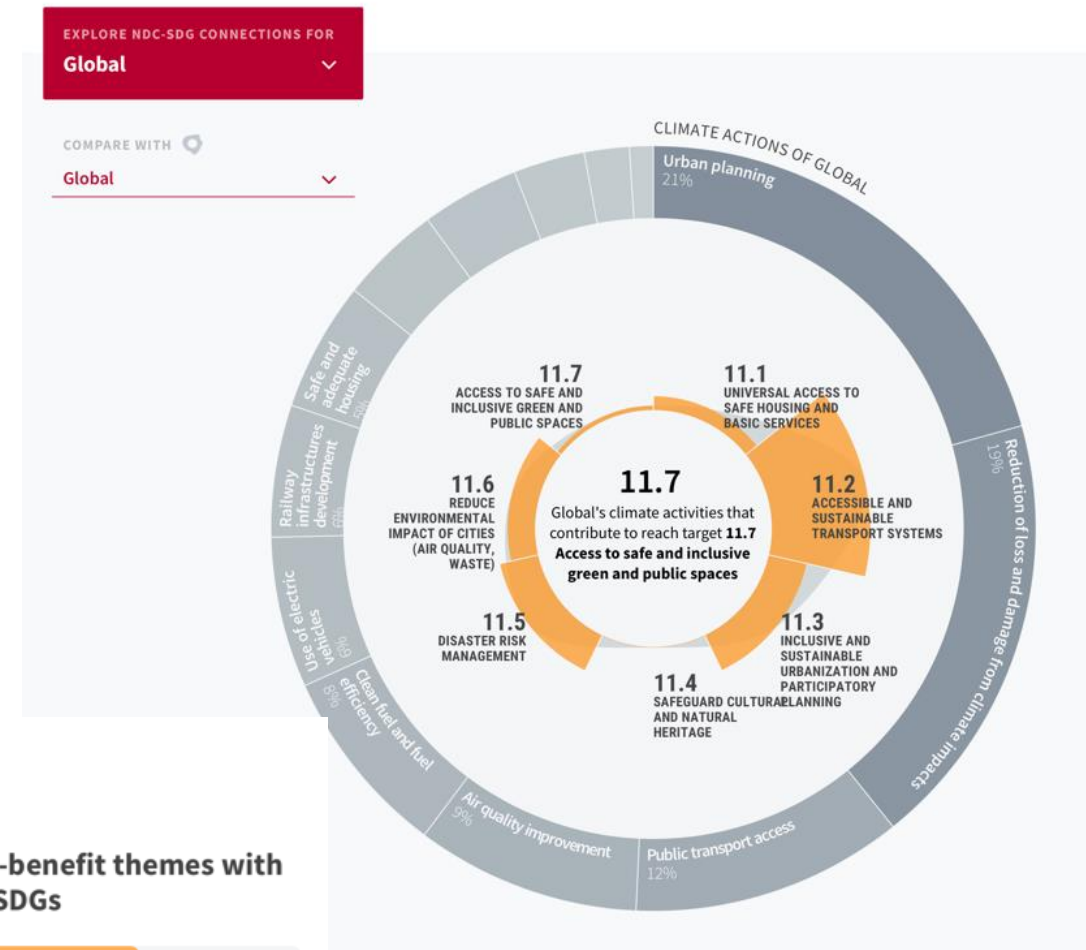
You can look at connections on a global scale, but also specifically to your country context.

What does this tool tell you? How can you use it?

# Steps – concept mapping

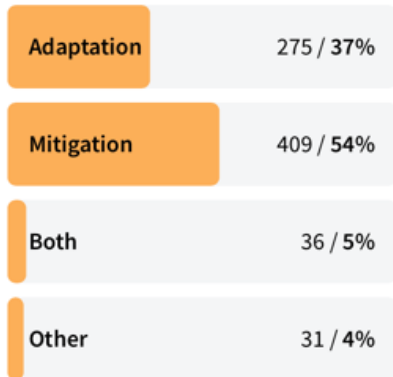
Step 5. Look in detail into the connections for SDG 11.

Discuss the concept of **co-benefit** in regard to climate actions. How does this could help you to prioritize actions?



## Analysis of SDG 11 across all countries' NDCs

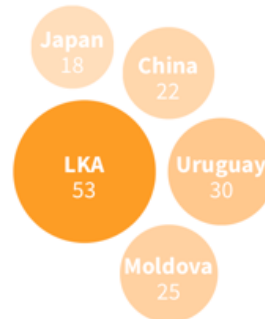
### Type of climate action



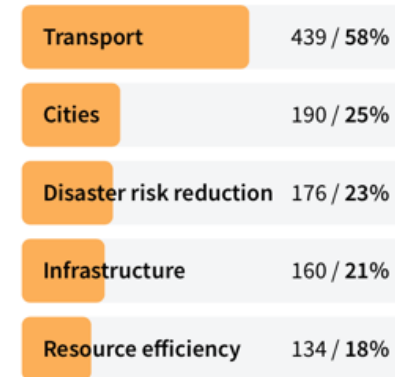
### Percentage of targets that are quantifiable



### Top countries by number of climate activities



### Top co-benefit themes with other SDGs



## NDC-SDG Connections

## PHASE II. Dive deep

### Step 2 – Understand current situation



<b>Brainstorm challenges/barriers and opportunities</b> ( <a href="#">Page 63</a> )	Identify (and analyse in detail) challenges and opportunities for local action in your city
<b>Localise Issues in the Map</b> ( <a href="#">Page 66</a> )	Locate the main challenges and opportunities in your city with regard to sustainable urban development and climate change mitigation and adaptation
<b>Review current plans and instruments</b> ( <a href="#">Page 68</a> )	Analyse / review current plans and policies to identify already existing contributions to climate change mitigation and adaptation and brainstorm ways to further strengthen these contributions
<b>Corner game on challenges</b> ( <a href="#">Page 70</a> )	Discuss with peers about different challenges in implementing climate agendas locally
<b>Canvas – mitigation and adaptation sectors</b> ( <a href="#">Page 73</a> )	Identify areas related to mitigation and adaptation with high priority for action, and where cities mandates are strongest
<b>GHG Inventory (ICLEI)</b> ( <a href="#">Page 79</a> )	Provide an overview about current existing resources on greenhouse gas inventory and two simple templates to analyse important data (government and community)
<b>Risk and Vulnerability Assessment (C40)</b> ( <a href="#">Page 87</a> )	Provide an overview about current existing resources on vulnerability / risk assessment / adaptive capacity tools with a focus on the Climate Change Risk Assessments (CCRA) that are in line with the C40 Climate Action Planning Framework



<https://localising-global-agendas.org/city-works-toolkit/understand-current-situation>

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# Brainstorming challenges/barriers and opportunities



If participants know their city already well, try this method and brainstorm challenges and opportunities for development in your city. Through their knowledge, you can quickly detect which issues are the most pressing in your community. This analysis helps to find out in which areas future projects can be located.

## Tasks

1: Invite all participants from your workshop to think about the following questions and to write their answers on cards of different colours (up to 5 challenges/barriers and up to 5 opportunities, with only one issue per card):

- What are the most pressing issues that need to be solved in your city?
- What are existing opportunities that could be explored?

2: Each participant briefly lists their issues, and one facilitator in the group clusters the issues along similar/common categories.

3: Now, participants can prioritize issues by using dots (e.g. each participant gets two dots and choose along the cluster issues).

4: From the list of prioritised challenges and opportunities, participants are now asked to relate the measures to mitigation of greenhouse gases, adaptation to climate change or disaster risk reduction. If relevant, asked to define the SDGs that relate to the issues at hand (it can be more than one).

Feel free to use the existing template for this step.

Focus of the analysis here is related to mitigation and adaptation, you could still add other agendas.

5. In a further step, you can also perform a **detailed analysis** of specific challenges and opportunities by answering the questions listed in template 2.

## Materials

Pin boards, cards, pins, markers; dots for prioritisation; Template 1 and Template 2

## Note

This exercise is ideal when different cities are participating. However, it is also possible to apply it for only one city. In this case try to create 2 to 4 groups of participants to allow for some discussion.

Ideally the group should be composed of experts from different city departments (planning, finance, mobility, education, health, public works, etc) as well as different stakeholders (civil society, academia, NGOs etc).

## Timeframe

1 to 2 hours

## Output

Visualisation and prioritisation of challenges and opportunities for action

## References

ICA – Integrated Climate Action – PAKLIM / ICLEI, 2010

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# Template 1

Prioritised Issue - Challenge/Opportunity	Link to 2030 Agenda SDG goals/principles	Link to Mitigation – reduction of green House Gases (yes/no)	Link to Adaptation to the effects of climate change (yes/no)	Link to New Urban Agenda/ National Urban Policy	Link to Disaster Risk Management



## Template 2

Challenge / Barrier	
<ul style="list-style-type: none"> <li>What is the challenge / barrier?</li> </ul>	
<ul style="list-style-type: none"> <li>What resources are needed to overcome that barrier / challenge? (e.g. time, money, knowledge) Be as specific as possible.</li> </ul>	
<ul style="list-style-type: none"> <li>Do you know of any resource that already exists that could help you overcome this barrier / challenge? If so what is it and how would it meet your need?</li> </ul>	
<ul style="list-style-type: none"> <li>Who has knowledge (or other resources) that would be valuable in regard to overcoming this barrier / challenge? Consider the nature of the challenge (e.g. scientific, social, operational)</li> </ul>	
<ul style="list-style-type: none"> <li>What is the best way to access (someone with that) knowledge? (e.g. verbally, in a guide, electronically)</li> </ul>	
<ul style="list-style-type: none"> <li>What is the plan to overcome this barrier / challenge? What resources and tools do you need?</li> </ul>	
<ul style="list-style-type: none"> <li>Other comments</li> </ul>	

Opportunities	
<ul style="list-style-type: none"> <li>What is the opportunity?</li> </ul>	
<ul style="list-style-type: none"> <li>What resources are needed to take advantage of this opportunity? (e.g. time, money, knowledge) Be as specific as possible.</li> </ul>	
<ul style="list-style-type: none"> <li>Do you know of any resource that already exists that could help you? If so what is it and how would it meet your need?</li> </ul>	
<ul style="list-style-type: none"> <li>Who has knowledge (or other resources) that would be valuable in regard to take advantage of this opportunity?</li> </ul>	
<ul style="list-style-type: none"> <li>What is the best way to access (someone with that) knowledge? (e.g. verbally, in a guide, electronically)</li> </ul>	
<ul style="list-style-type: none"> <li>What is the plan to make good use of this opportunity? What resources and tools do you need?</li> </ul>	
<ul style="list-style-type: none"> <li>Other comments</li> </ul>	

# Localise Issues in the Map



In the previous session you analysed the challenges and opportunities in your city. Now ask yourself in which areas of your city these issues are most important and locate your findings in a map. This helps you to identify the neighbourhoods where challenges may have to be addressed more urgently than in other parts of the city. It is important to analyse the surrounding areas as well and think of additional challenges and opportunities that may exist in these specific local contexts.

## Goal

Localise the main challenges and opportunities in your city with regard to sustainable urban development.

## Tasks

**Step 1:** Prepare a printed map of your city, ideally in a scale of 1:10.000 or 1:12.500 (e.g. a satellite image in a reasonable resolution; it would be good to be able to recognize different physical/topographic/road features).

**Step 2:** Now localise the main challenges and opportunities in your city identified during the exercise before. If possible, use different colours and dots to do so.

**Step 3:** Discuss in small groups which **climate challenges and opportunities** go beyond spatial spots? If wished, you can discuss about the reasons for these challenges and start collecting ideas for overcoming them.

**Step 4:** If not already done before, write down to which SDGs or other relevant global goals these are related to.

## Materials

Map of the city in proper resolution and size, Dots, post-its and markers

## Note

This exercise is ideal when different cities are participating in a workshop, but also possible to be applied for only one city (then form 2 to 4 different groups). Ideally the group should be composed by experts from different city departments (planning, finance, mobility, education, health, public works, etc) as well as different stakeholders (civil society, academia, NGOs etc).

**HINT:** To work with a city map is highly recommended throughout the entire tools from awareness raising to understanding current situation, to identifying and prioritizing measures

## Timeframe

1 – 2 hours

## Output

City map with visualised and prioritised issues

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## Examples Palestine and Egypt



# Corner Game



Not only is it important to link existing plans with global agendas / climate goals, but also to face the challenges which are already in your way or are most likely to occur. By discussing the following challenges with peers, coping strategies can be detected and implemented.

## Goal

Understand the key outcomes of the climate goals and how local governments can foster implementation processes and face challenges.

## Tasks

**1:** Local governments often struggle to act on sustainable development in general / on climate actions in specific due to a number of overarching challenges. Write the challenges that are listed below on cards and place them in different corners of the workshop room.

**2:** Briefly explain the challenges to your workshop participants. Then let them choose the category they find most pressing when it comes to implementing climate actions at the local level. Ask them to go to the respective corner in the room where this challenge is placed and let them discuss the following questions with their peers:

Why do you think this is the most pressing challenge?

Why is this relevant in your context?

Can you think of ideas of how to overcome the challenge?

Do you think there are other pressing challenges?

**3:** Let them collect and write down the findings from their discussion.

## OPTION 1

**Challenge 1 - Coordination challenge:** how can we bring together the right stakeholders at the right time in the right place?

**Challenge 2 - Coherence-challenge:** There will be many co-benefits among the SDGs and other agendas, where addressing one goal helps address others at the same time. However also many trade-offs. For example, biodiversity could be threatened if forests are cut down to expand agricultural production for food security. Each of these issues has many competing stakeholder interests attached to them.

**Challenge 3 -** A final key challenge is ensuring responsibility and accountability for progress towards meeting the SDGs and other global goals. Mechanisms to do this need to link across local, national and international scales.

## OPTION 2

**Challenge 1 – Mandates:** Questions of subsidiarity and political will underpin the ability of local level actors to take action.

**Challenge 2 – Finance:** Direct access to international finance by city governments can be challenging, national funding streams may be limited, and capacities to raise local revenue may be low.

**Challenge 3 – Data:** Gaps remain in the collection and analysis of data, particularly disaggregated data at city level. Data needs will grow, for example for climate forecasts and evidence-based decision making.

**Challenge 4 – Capacity:** Limited technical knowledge and human resources among local actors, including in urban planning and governance, will hamper effective implementation of plans.

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# Templates

<b>Challenge</b>	<b>Priority</b>	<b>Why is this relevant in your context?</b>	<b>Ways of overcoming the challenge</b>
Governance/stakeholder involvement			
Competing interests / trade-offs			
Accountability for action, indicators / monitoring			

<b>Challenge</b>	<b>Priority</b>	<b>Why is this relevant in your context?</b>	<b>Ways of overcoming the challenge</b>
Mandate			
Finance			
Data (Indicators and monitoring)			
Capacity			

# Review current plans and instruments



You want to understand from a strategic as well as sectoral perspective what your city is already doing to achieve global and national climate goals? Then have a look at already existing instruments and development plans and analyse their interlinkages with global agendas, more specifically climate goals. Find out how they relate to the climate aspects and what could be done to make the linkage even stronger.

## Goal

Analyse / review current plans and policies to identify already existing contributions to climate change mitigation and adaptation and brainstorm ways to further strengthen the contributions

## Tasks

For several existing plans, instruments, measures, answer following questions:

- **Does the measure contribute positively or negatively to the mitigation of climate change?**
- **Does the measure contribute positively or negatively to the adaptation to climate change?**
- How can the measures be improved to maximize positive effects and minimize negative ones
- Optional: Can the measure be adapted/improved in light of the Agenda 2030 principles (leave no one behind, shared responsibilities, accountability, integrated approach, universality)?

If your city would like to undergo a more detailed review and analysis of current policies and local development plans in light of global agendas in order to identify areas for improvement and alignment, apply the following steps:

- 1: Together with your city officials, decide on which strategic and sectoral plans, by-laws, processes, and/or initiatives are relevant in this context and shall be reviewed.
- 2: Collect information about the departments and/or persons responsible in each case as well as the available documents and other references.
- 3: Review the documents by looking concretely on their respective goals and measures, and list how they relate to climate goals
- 4: Develop ideas for improving the analysed plans, goals and measures of your city to enhance the linkages and alignment to the climate goals.

## Materials

Template: Rapid assessment of the alignment of existing plans, strategies and/or policies to climate goals

## Note

The templates need to be adapted to conform to the policy areas/sectors from the chosen plans that will be analysed, such as national development plans and priorities, subnational development plans, or sectoral plans.

## Timeframe

For each policy area / sector you might take at least 30 to 60 minutes for a superficial analysis

## Output

Visualisation of specific plans / instruments from different policy areas and their relation to mitigation and adaptation to climate change

## Reference

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# Template

Policy Area	Specific instrument	Does the measure contribute positively or negatively to the <u>mitigation (M)</u> of climate change? How?	Does the measure contribute positively or negatively to the <u>adaptation (A)</u> to climate change? How?	How can the measures be improved to maximize positive effects? (M and A)	How can the measures be improved to minimize negative effects? (M and A)
Include here the policy area / sector					
<b>Policy Area / Sector</b> ↓					
Education					
Health					
HR Development and Management					
Employment					
Renewable Natural Resources					
Tourism					
Trade, Industries and Mines					
Energy					
ICT and Media					
Transport					
Roads and Bridges					
Construction					
Human Settelement and Housing					
Emerging social challenges					
Sports					
Preservation and promotion of culture					
Conservation of the environment					
Good governance					
Budgeting					

**Mitigation** of climate change: reduce GHG emissions  
**Adaptation** to climate change: reduce vulnerability/risk, reduce exposure to impacts

<b>SDG</b> <i>(Target to be added if wished)</i>	<b>Thematic area/ sector, as identified in key local government planning documents</b>	<b>Long-term vision document</b>  Identify closest goal/target presented in document addressing the issues in the corresponding SDG goal/target	<b>Medium-term national /subnational development plan</b>  Identify closest goal/target presented in document addressing the issues in the corresponding SDG goal/target	<b>Sectoral plan</b>  Identify closest goal/target presented in document addressing the issues in the corresponding SDG goal/target	By comparing (national) goal with the corresponding SDG goal / target, indicate:  <b>Is this (domestic) goal/target aligned with SDG goal/target? (yes/no)</b>	<b>Institution responsible for target implementation</b>
SDG 1 - No Poverty						
SDG 2 - Zero Hunger						
SDG 3 - Health						
SDG 4 - Education						
SDG 5 - Gender						
SDG 6 - Water & Sanitation						
SDG 7 - Energy						
SDG 8 - Growth & Decent Work						
SDG 9 - Infrastructure						
SDG 10 - Inequality						
SDG 11 - Sustainable Cities						

<https://localising-global-agendas.org/city-works-toolkit/understand-current-situation/review-local-plans-and-policies/>



# Canvas – Mitigation and Adaptation Sectors



Even without having a detailed **greenhouse gas emission inventory** or a **vulnerability/risk assessment**, it is possible, in an intuitive way, to start identifying the most pressing areas/sectors where actions for mitigation and adaptation is needed at local level.

## Goal

Identify the areas/sectors related to mitigation and adaptation with high priority for action, and areas/sectors where cities mandate are strongest

## Tasks

- 1: Briefly explain the different sectors responsible for GHG emissions and therefore relevant for mitigation in the urban context and briefly explain the different sectors relevant to adaptation in the urban context (if not happened before through other tools)
2. Use the prepared canvas to collect the priorities and mandates for mitigation and adaptation from a large group of stakeholders.
3. Discuss results with the group, find commonalities and differences between individuals answers

## Materials

Prepare online white board or prints (A4 or A3) of canvas.

## Note

Involve as many stakeholders as possible and facilitate a consensus building among them. Stakeholders need to understand well the difference between adaptation and mitigation.

## Timeframe

30 – 60 minutes

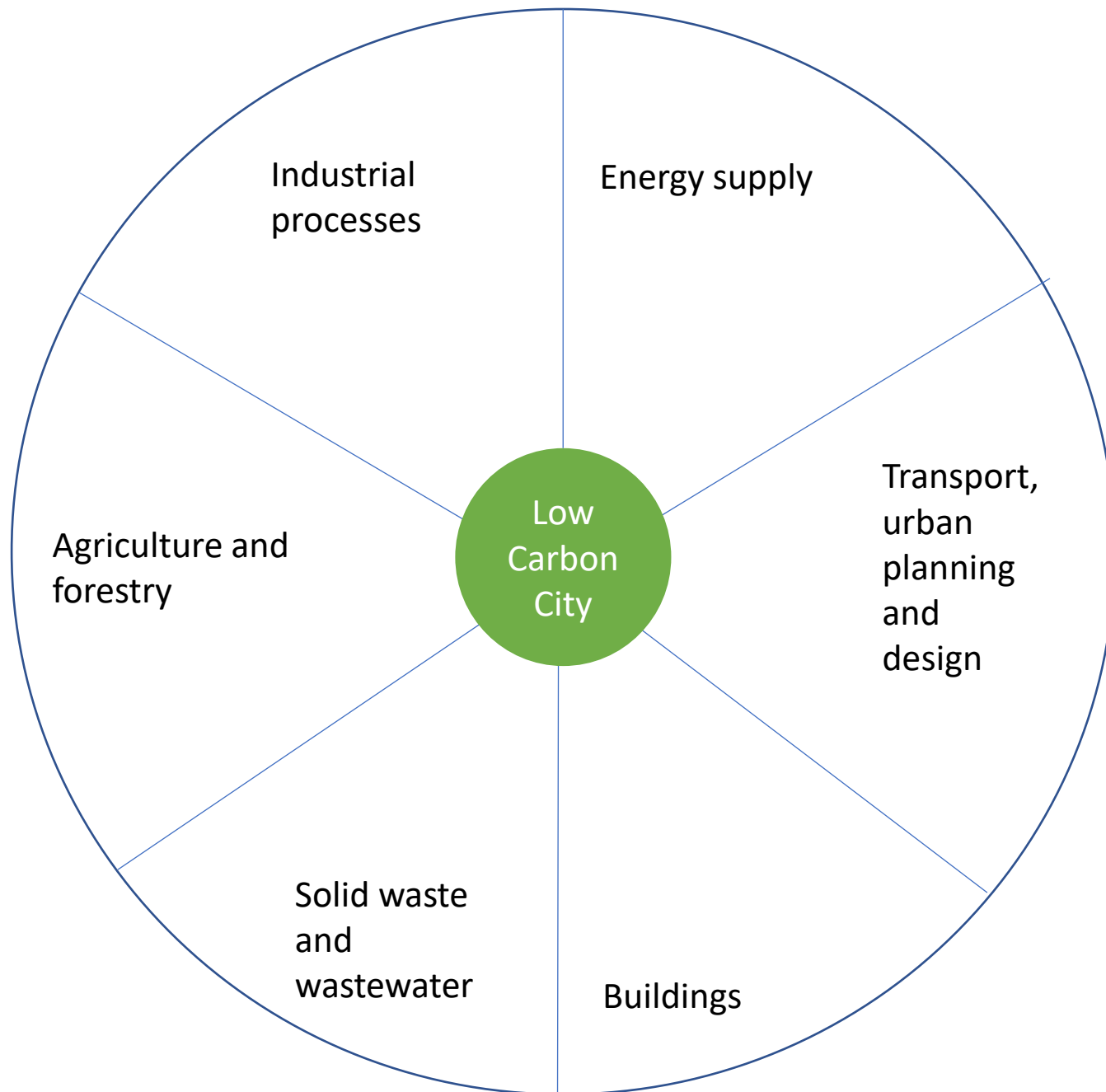
## Output

Prioritized areas of highest potential for mitigation/adaptation in your city and areas/sectors with strong mandate to take action

## References

[Summary for Policy Makers](#)

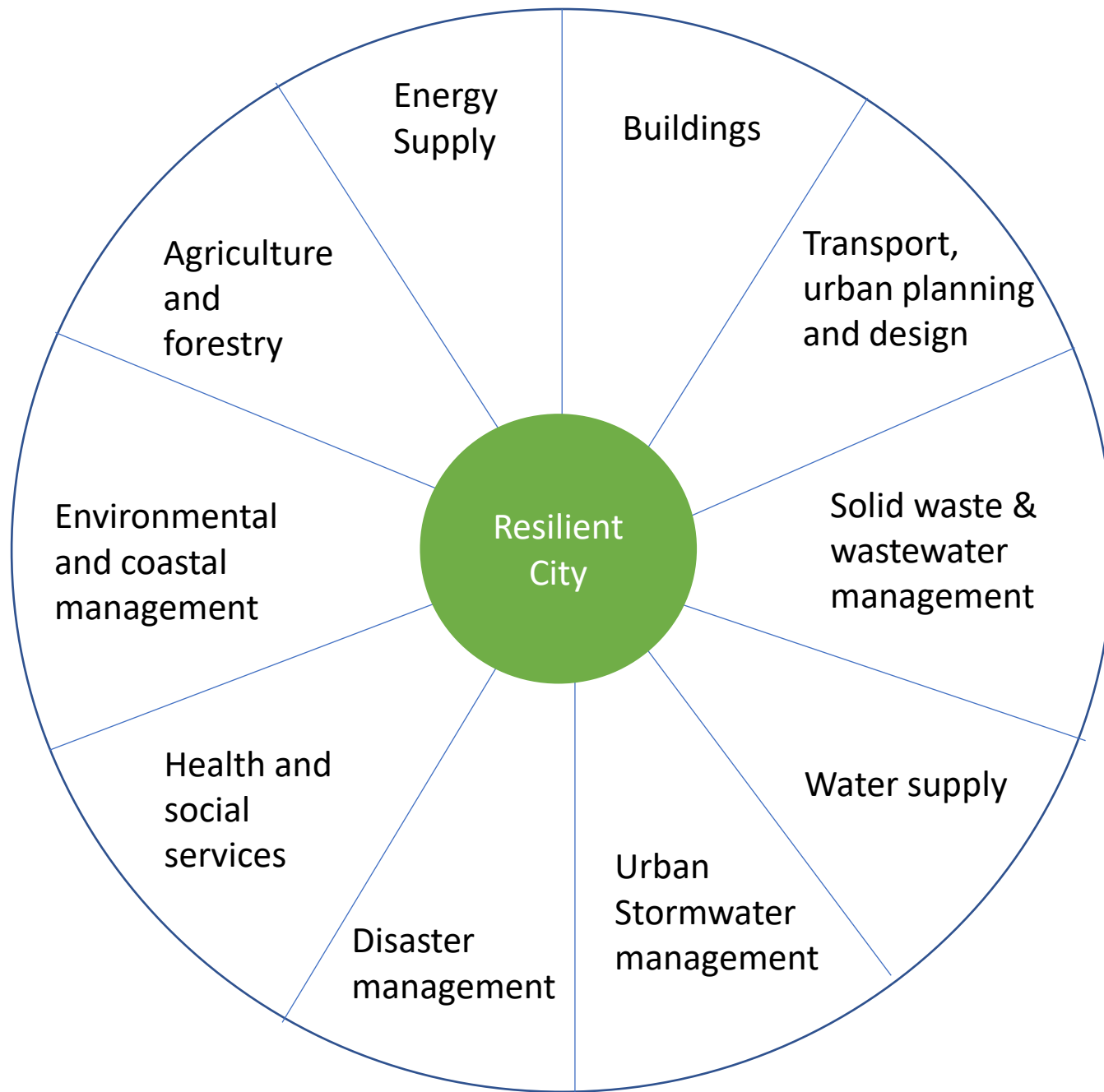
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**What are, in your opinion, the sectors with highest potential for mitigation (GHG emission reduction) in your city?**

**Repeat the analysis for: What are, in your opinion, the sectors where your city has the strongest mandate to take action?**

**Can you identify measures for mitigation already being considered in several planning / financing instruments?**



**What are, in your opinion, the sectors with highest potential / strongest demand for adaptation in your city?**

**Repeat the analysis for: What are, in your opinion, the sectors where your city has the strongest mandate to take action?**

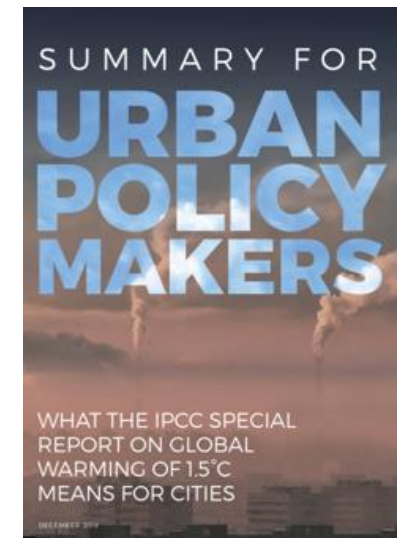
**Can you identify measures for adaptation already being considered in several planning / financing instruments?**

**Figure 7. Feasibility Assessment of Urban-Relevant Mitigation Options**

**Mitigation**

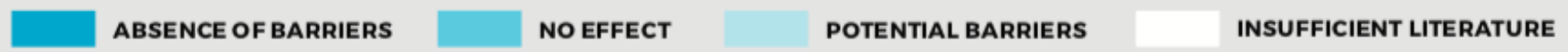
SYSTEM	MITIGATION OPTION	ECONOMIC	TECHNOLOGICAL	INSTITUTIONAL	SOCIO-CULTURAL	ENVIRONMENTAL	GEOPHYSICAL	CONTEXT
ENERGY SYSTEM TRANSITIONS	Solar PV	High	High	Medium	High	High	High	Cost-effectiveness affected by solar irradiation and incentive regime.
	Bioenergy	Medium	High	Medium	High	Medium	High	Depends on availability of biomass such as municipal solid waste and capability to collect it. Distributional effects depend on the agrarian (or other) system used to produce feedstock.
	Electricity storage	High	High	High	High	High	High	Batteries universal but grid flexible resources vary with area's level of development.
LAND & ECOSYSTEM TRANSITIONS	Reduced food wastage & efficient food production	High	High	High	High	High	High	Will depend on the combination of individual and institutional behaviour.
	Dietary shifts	Low	Medium	Low	High	High	Low	Depends on individual behaviour, education, cultural factors and institutional support.
URBAN &	Land-use & urban planning	High	High	High	High	High	High	Varies with urban fabric, not geography or economy; requires capacitated local government and legitimate tenure system.
	Electric cars and buses	High	High	High	High	Low	High	Varies with degree of government intervention; requires capacity to retrofit 'fuelling' stations.
	Sharing schemes	High	High	High	High	High	High	Historic schemes and universal new ones depend on ICT status; undermined by high crime and low levels of law enforcement.
	Public transport	High	High	High	High	High	High	Depends on presence of existing 'informal' taxi systems, which may be more cost effective and affordable than capital intensive new build schemes, as well as local government capabilities.

In the Summary for Urban Policy Makers, a group of researchers and organisations analysed the outcomes of the IPCC Special Report and what these mean for cities. This overview shows the potential mitigation and adaptation effects of different urban systems/sectors



<b>URBAN &amp; INFRASTRUCTURE SYSTEM TRANSITIONS</b>	Non-motorised transport	[Progress bar: 6 segments, 5 dark blue, 1 white]						capabilities. Viability rests on linkages with public transport, cultural factors, climate and geography.
	Aviation & shipping	[Progress bar: 6 segments, 4 dark blue, 1 light blue, 1 white]						Varies with technology, governance and accountability.
	Smart Grids	[Progress bar: 6 segments, 5 dark blue, 1 light blue]						Varies with economic status and presence or quality of existing grid.
	Efficient appliances	[Progress bar: 6 segments, all dark blue]						Adoption varies with economic status and policy framework.
	Low/zero-energy buildings	[Progress bar: 6 segments, 4 dark blue, 1 light blue, 1 white]						Depends on size of existing building stock and growth of building stock.
<b>INDUSTRIAL SYSTEM TRANSITIONS</b>	Energy efficiency	[Progress bar: 6 segments, all dark blue]						Potential and adoption depends on existing efficiency, energy prices and interest rates, as well as government incentives.
	Bio-based & circularity	[Progress bar: 6 segments, 3 dark blue, 1 light blue, 2 white]						Faces barriers in terms of pressure on natural resources and biodiversity. Product substitution depends on market organisation and government incentivisation.

**Barriers to feasibility**



Source: Modified from SRI.5, Chapter 4, Table 4.11

**Figure 6. Feasibility Assessment of Urban-Relevant Adaptation Options**



**Barriers to feasibility**



Source: Modified from SRI.5, Chapter 4, Table 4.12

# GHG Inventory

Greenhouse gas inventories are emission inventories of greenhouse gas emissions that are developed for example at the local level for different sectors. The data in the GHG emissions inventory is usually presented using the IPCC format (seven sectors presented using the Common Reporting Format).

## Goal

Provide an overview about current existing resources on greenhouse gas inventory and two simple templates to analyse important data (government and community)

## Tasks

**Participants can become acquainted with relevant literature beforehand (C40, World Bank, ICLEI, World Resource Institute, all listed in the next pages)**

The aim of this analysis is to get an understanding of where data exists at the local government and at community level sectors that enable the calculation of GHG emissions.

The idea is to find out following aspects / guide the audience through the table, cell by cell, sector by sector:

- What data exists (energy consumption data, waste data, contextual/indicator data)
- Who has the data?
- How we can access the data
- When we can get the data
- The steps/process required to make this a procedure so it becomes part of local government internal systems and local government can then compile inventories annually.

## Note

The template can be applied in small groups (5- 6 people) or as a facilitated discussion with a large group (<20 people).

## Timeframe

30 – 60 minutes

## Output

Collection and analysis of important data (for local government sectors and community sectors)

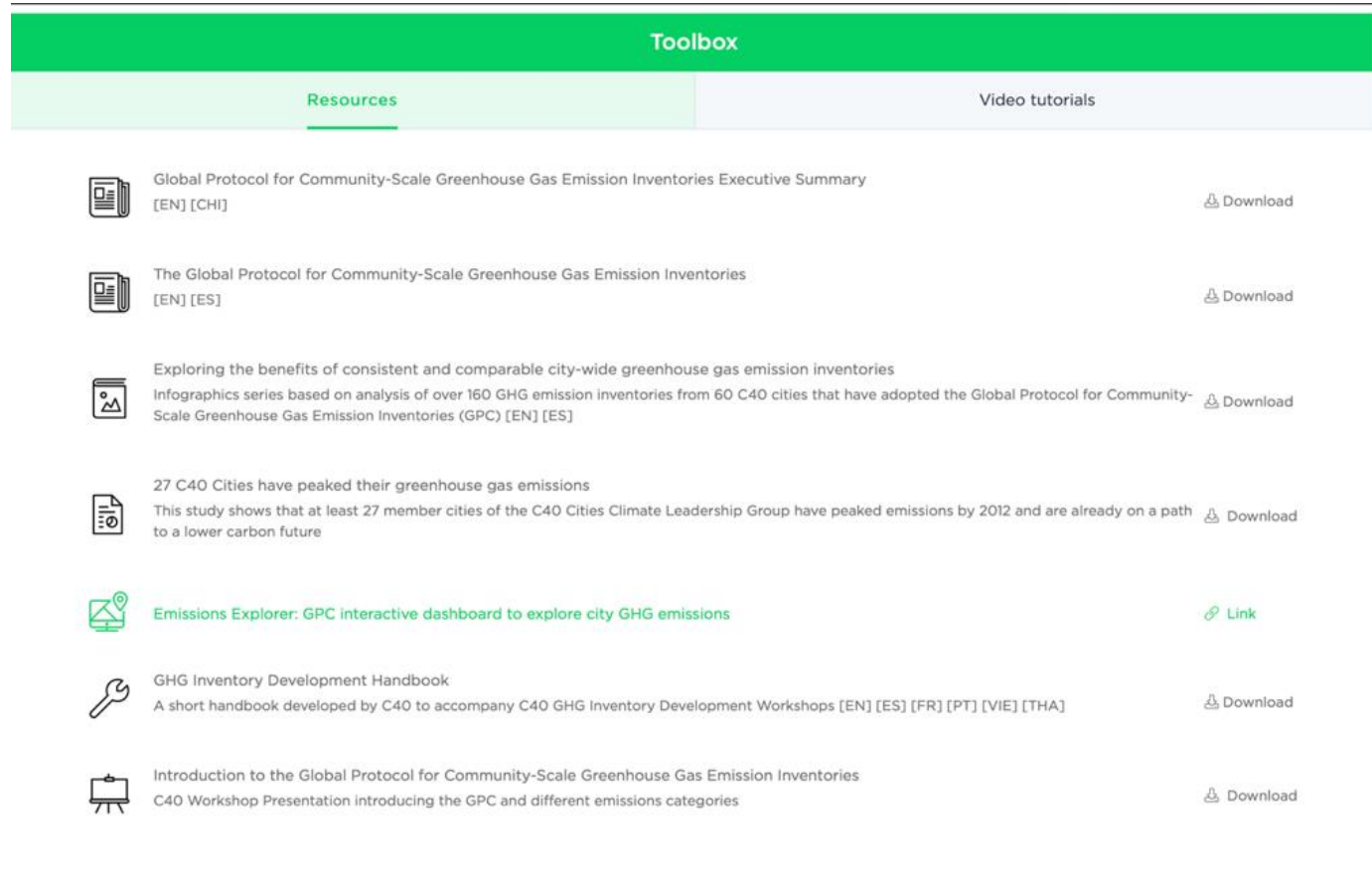
## References

ICA Framework / Developed by GIZ PAKLIM with ICLEI oceania

[Back to tools overview](#)

A lot of tools, resources and references are available related to GHG inventory

<https://resourcecentre.c40.org/resources/reducing-ghg-emissions>



The screenshot shows the 'Toolbox' section of the C40 Resource Centre website. It features a green header with the word 'Toolbox' and two sub-tabs: 'Resources' (which is active) and 'Video tutorials'. Below the tabs is a list of seven resource items, each with an icon, a title, a description, and an action link (Download or Link).

Icon	Title	Description	Action
	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories Executive Summary	[EN] [CHI]	Download
	The Global Protocol for Community-Scale Greenhouse Gas Emission Inventories	[EN] [ES]	Download
	Exploring the benefits of consistent and comparable city-wide greenhouse gas emission inventories	Infographics series based on analysis of over 160 GHG emission inventories from 60 C40 cities that have adopted the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) [EN] [ES]	Download
	27 C40 Cities have peaked their greenhouse gas emissions	This study shows that at least 27 member cities of the C40 Cities Climate Leadership Group have peaked emissions by 2012 and are already on a path to a lower carbon future	Download
	Emissions Explorer: GPC interactive dashboard to explore city GHG emissions		Link
	GHG Inventory Development Handbook	A short handbook developed by C40 to accompany C40 GHG Inventory Development Workshops [EN] [ES] [FR] [PT] [VIE] [THA]	Download
	Introduction to the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories	C40 Workshop Presentation introducing the GPC and different emissions categories	Download

[Global Protocol for Community-Scale Greenhouse Gas Emission Inventories Executive Summary](#)

[World Bank/C40 - CURB Tool: Climate Action for Urban Sustainability](#)

[UN-Habitat - Planning for Climate Change – Toolkit](#)

[Urban Greenhouse Gas Modeling Tools](#)



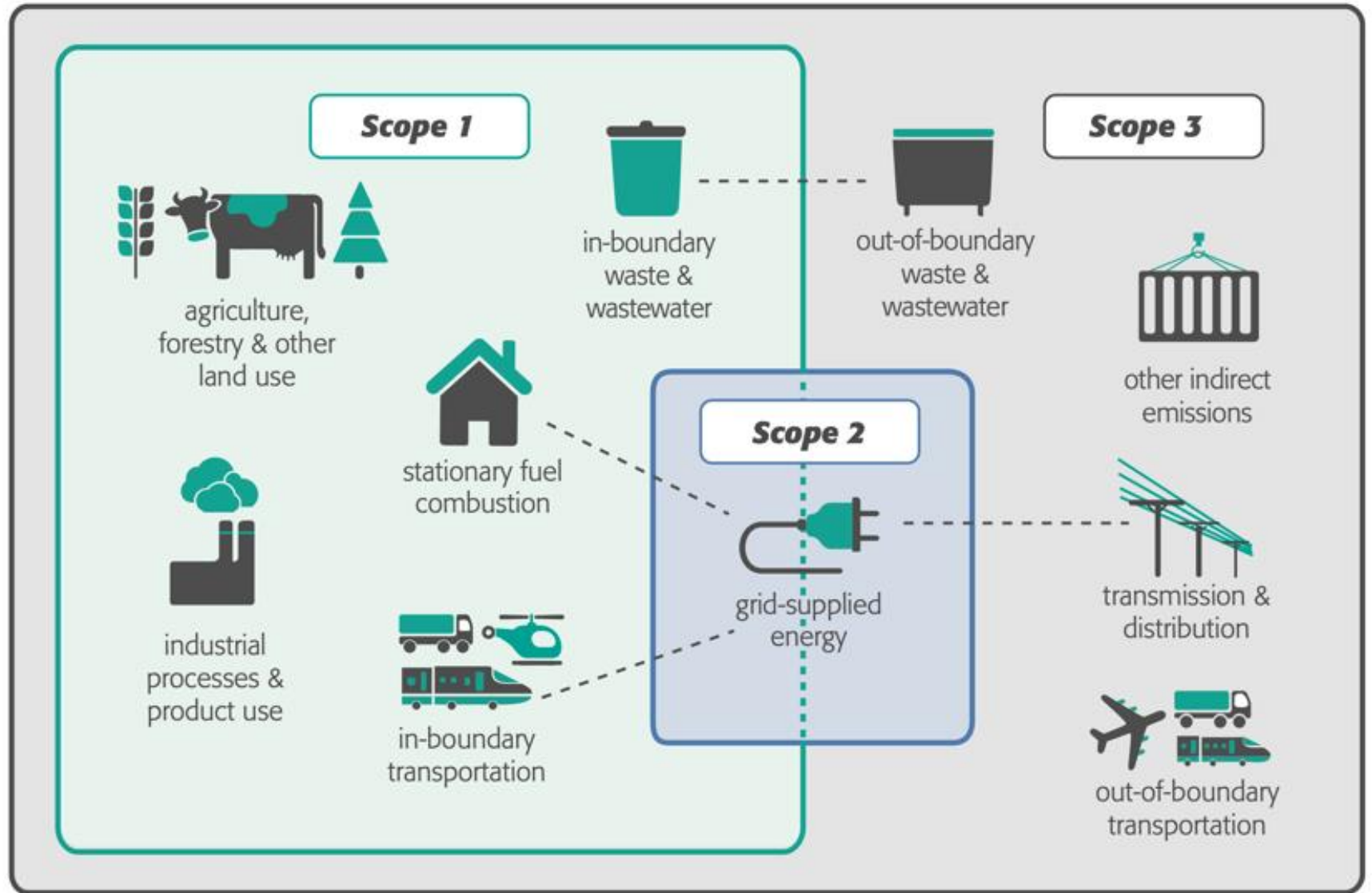
Local Government Sector	What data is required?	Contextual Information	Who has the data?	How can we get this data?	When can we get this data?	How can we institutionalize data collection?
Buildings						
Vehicle fleet						
Street lighting						
Waste						
Water / sewage pumping						
Other						
Other 2						81

Sector	have appropriate data?	set?	used to estimate local emissions?	this data?	this data?	institutionalize data collection?
Residential						
Commercial						
Industrial						
Transport						
Agricultural emissions / others						
Land use, land use change and forestry / others						
Waste						

# Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

EXECUTIVE SUMMARY

An Accounting and Reporting Standard for Cities

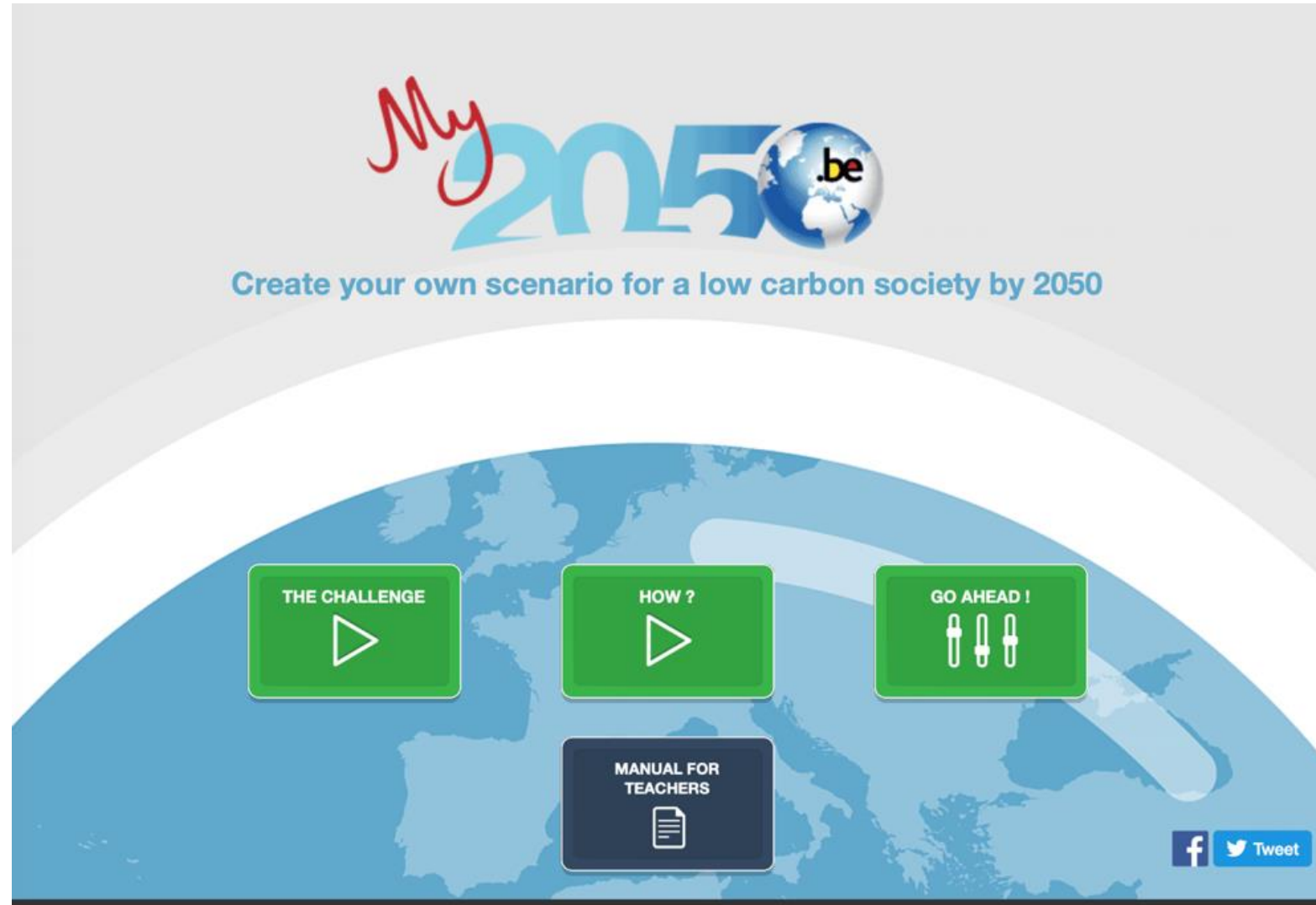


— Inventory boundary (including scopes 1, 2 and 3) — Geographic city boundary (including scope 1) — Grid-supplied energy from a regional grid (scope 2)

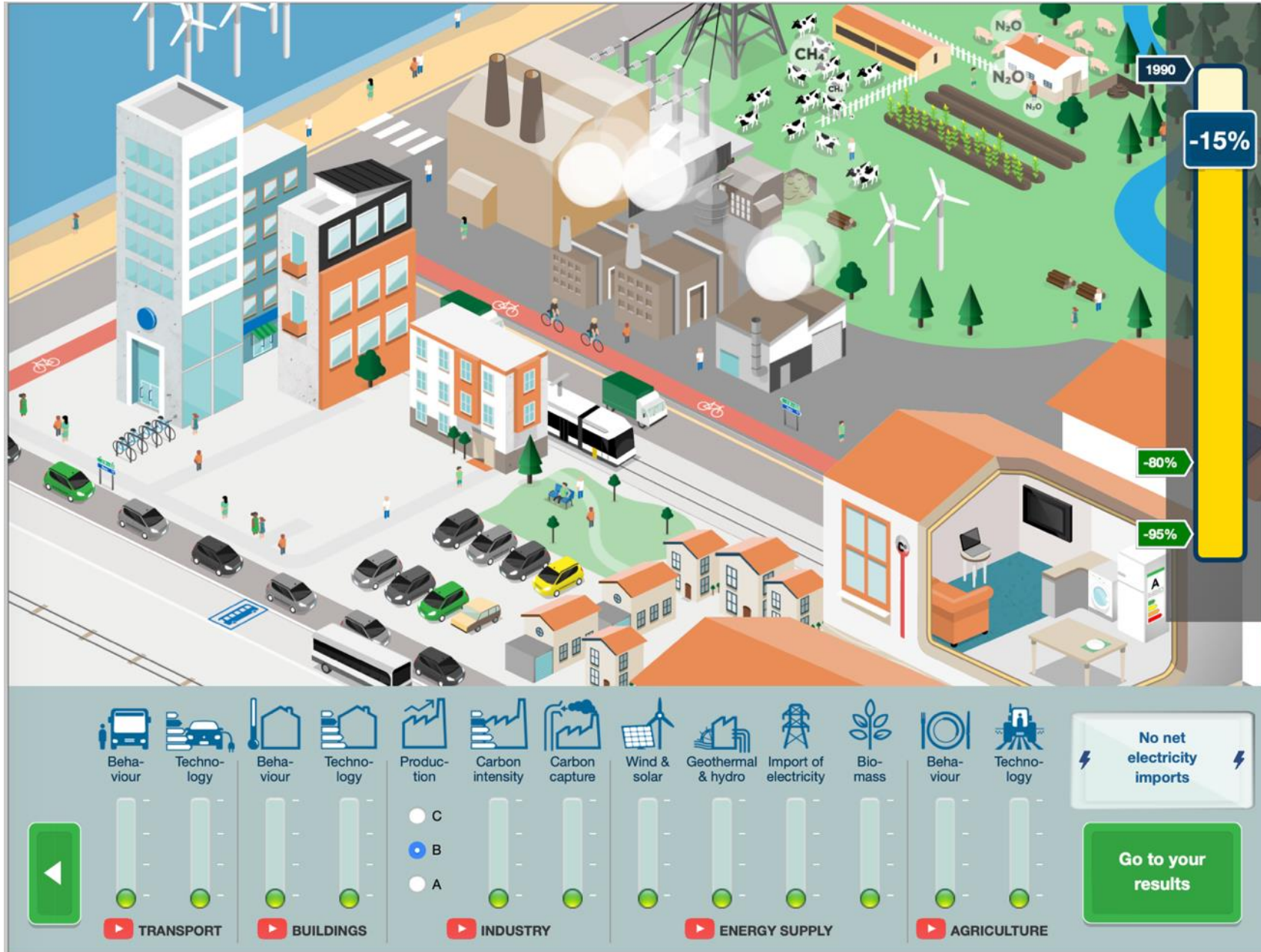
# Interesting tool: My 2050 – Create your own scenario for a low carbon society

## My2050 provides...

- insight into the **possible changes in the different sectors** (transport, buildings, industry, energy supply and agriculture).
- the possibility to **develop your own transition scenario** by selecting ambition levels for the various "levers" in these sectors. Each choice is immediately visible in the virtual landscape.
- a simultaneous calculation of **the emission reduction** of this scenario for our country in 2050.0.
- **analyses of this scenario** with regard to emission reductions, energy demand and net import and export of electricity, and also calculates its costs.
- **clear information** through 7 animations (about amongst others the challenges and solutions in the various sectors) and 13 info sheets (one for each lever).).
- **a manual for teachers** for optimal use in class (from the 3<sup>rd</sup> year onwards).
- the possibility to **save, compare and distribute your scenario** through the social medias



# My 2050 – Create your own scenario for a low carbon society



# Personal GHG Inventory

Of course many emissions in a city are related to infrastructure / technological options available (energy production, buildings, transport, industry, waste management, etc).

However, a city is also the sum of its citizens emissions, and the carbon footprint of each citizen from their lifestyle choices being mobility, consumption, diet, all this also impact the climate. These are tools to get a feeling of how much one person emits (also depending on their existing privileges and social conditions) but should not be seen as an excuse for not focusing on bringing forward systemic changes e.g. related to overall energy or agriculture systems that are highly CO<sub>2</sub> intensive.

When you analyse your carbon footprint you can become aware of different actions and areas of choice where you can start making a positive difference.

Below is a (non-exclusive) list of possible calculators (country specific or not)

- <https://calculator.carbonfootprint.com/calculator.aspx> - allows you to choose the country
- <https://footprintcalculator.henkel.com/en>
- [https://co2.myclimate.org/en/footprint\\_calculators/new](https://co2.myclimate.org/en/footprint_calculators/new)
- [https://uba.co2-rechner.de/en\\_GB/](https://uba.co2-rechner.de/en_GB/)
- <https://www.conservation.org/carbon-footprint-calculator#/>
- <https://www3.epa.gov/carbon-footprint-calculator/> and <https://www.epa.gov/ghgemissions/household-carbon-footprint-calculator>

# Vulnerability and Risk Assessment



Based on different projected climate hazards/impacts, taking into consideration the socio-economic, demographic and environmental conditions, an assessment of risk and vulnerability to certain areas can be performed.

## Goal

Provide an overview about current existing resources on vulnerability / risk assessment / adaptive capacity tools with a focus on the Climate Change Risk Assessments (CCRA) that are in line with the C40 Climate Action Planning Framework

## Tasks

**Participants can become acquainted with relevant literature beforehand (C40, ICLEI/ACCCRN, UNDP, UNDRR)**

- **C40 Climate Change Risk assessment screening (page 89)**
- ICLEI / ACCCRN – Especially Phase 3 -Tool 3.1, 3.2, 3.3 (page 90)
- UN Habitat / Planning for climate change – several tools from Module A. (page 90)
- UNDRR - Disaster Resilience Scorecard for Cities (page 91)

A comprehensive and user-friendly tool is the **Climate Change Risk assessment screening** developed by C40. It is an excel-based tool consisting of two sheets. One explanatory, and one fillable template. The screening template accompanies the C40 Climate Risk Assessment Guidance document to support cities in developing Climate Change Risk Assessments (CCRA) that are in line with the C40 Climate Action Planning Framework. For cities that already have a CCRA report, this screening template helps them to identify any existing gaps and to strengthen and update their CCRA as necessary. Five key steps are described to be followed when using the screening template.

## Note

The template is organised in an easy-to-follow format, capturing all components of the C40 CCRA guidance document for a comprehensive and transparent screening process.

## Timeframe

30 – 60 minutes

## Output

Risk or vulnerability assessment, adaptive capacity assessment

## References

C40 Climate Change Risk assessment screening / Cities Climate Change Risk Assessment Guidance

[Back to tools overview](#)



# Risk / Vulnerability assessment & Adaptive Capacity assessment




<https://resourcecentre.c40.org/resources/assessing-risks-in-cities>

## Assessing risks in cities

Modern urban infrastructure systems for the energy, transportation, telecommunications, water/ wastewater, solid waste, and food sectors are highly interdependent. Climate change is projected to cause adverse ripple effects in these systems due to an increase in the magnitude and frequency of extreme weather events. C40 has developed the **C40 Infrastructure Interdependencies + Climate Risks Report** to summarises the efforts of a sample of city governments and other public agencies around the world to understand the cascading impacts of climate change on interconnected infrastructure systems at the urban scale, together with the **C40 Climate Change Risk Assessment Guidance** - a guidance document to help cities conducting a climate change risk assessment in line with Global Covenant of Mayors and C40 Cities requirements.

Toolbox

Resources

- 
C40 Infrastructure Interdependencies + Climate Risks Report
This report summarises the efforts of a sample of city governments and other public agencies around the world to understand the cascading impacts of climate change on interconnected infrastructure systems at the urban scale
Download
- 
C40 Climate Change Risk Assessment Guidance
A guidance document to help cities conducting a climate change risk assessment in line with Global Covenant of Mayors and C40 Cities requirements
Download
- 
C40 Climate Change Risk Assessment Screening Template
A detailed template to compare a city's climate risk assessment with C40 Climate Change Risk Assessment Guidance
Download



[ICLEI ACCCRN Process: - Building urban climate change resilience toolkit for local governments](#)

[UN-Habitat - Planning for Climate Change – Toolkit](#)

[UNDDR - Disaster Resilience Scorecard for Cities](#)



# C40 Risk assessment screening – excel based

Title of Assessment	Comments / Summary					
Institution						
Year						
Scope						
C40 CHECKLIST		Has the criteria been met?			SOURCE, PAGE REF	REMARKS/GAPS
		NO	LIMITED	YES		
<b>A. INTRODUCTION AND GENERAL CONTENT</b>						
#Essential	Boundary of assessment is equal or greater than the city boundary			Yes		
	Data sources are robust and clearly indicated		Limited			
	Stakeholders / relevant actors to input into the assessment are defined	No				
	Glossary is included					
	Leading/coordinating team in the city clearly defined					
#Best Practice	Goals and objectives of the assessment clearly defined in Introduction					
	Summary setting out the main findings included					
<b>B. CONTEXT, PAST CLIMATIC EVENTS AND TRENDS</b>						
<b>B.1. Demographic and socio-economic context and key future trends</b>						
#Essential	Overview of the city's contextual social & economic data, trends, projections provided					
#Best Practice	Population/demographics (e.g. age profiles, life expectancy, immigration) included					
	Socio-economic development (e.g. housing affordability, energy demand/access, water demand/access, undernourishment, poverty, Social Progress Index etc.) status and trends presented					
	Future trends (e.g. emerging technologies; innovations and disruptors enabling transformational action) are explained					
<b>B.2. Environmental context and projected trends</b>						
#Essential	Description of administrative and physical geography as relevant to climate change is included					
#Best Practice	Global climate trend - short description in context of country-wide impacts & governance is included					
	Assessment made of past and recent climatic trends in the city					
	Future climate change scenario's identified based on at least 3 different GHG emissions pathways (e.g. BAU, current policy trajectory, ambitious reductions) - including likelihood and frequency of high intensity events					
	City's current environmental quality (e.g. water, biodiversity, air etc.)					
	Additional information on Resource Management (e.g. waste, food, deforestation etc.) presented					
<b>B.3. Major Climate Hazards that occurred in the past</b>						
#Essential	Scale of major hazards that occurred in the past indicated, including description of impact including loss of human lives and economic losses (direct and indirect, if possible), environmental & other impacts spatially specified					
	Current risk level of historical hazards (likelihood x impact or probability x consequence) indicated					
	Intensity and frequency of each hazard explained					
	All relevant sectors, assets, or services most impacted by the hazard and magnitude of impact is indicated					
	Vulnerable population groups most affected by the hazard are identified					
<b>C. PROJECTED CLIMATE HAZARDS AND IMPACT</b>						
<b>C.1. Projected Climate Hazards</b>						
#Essential	Description included of expected future hazards and expected impacts, environmental and other impacts spatially specified					
	Risk level of projected climate hazards (likelihood x impact or probability x consequence) identified					
	Expected intensity, frequency, and timescale of the hazard included					
	All relevant sectors, assets, or services that are expected to be most impacted by the hazard and magnitude of the impact for each of them is indicated					
	Qualitative assessment made of vulnerable population groups expected to be most impacted by future hazards					

[Click here to download the tool.](#)



[Click here for guide.](#)

# ICLEI / UN Habitat approaches (several tools along phases or modules)

## PHASE 1: ENGAGEMENT

- Tool 1.1: Forming a Climate Core Team
- Tool 1.2: Forming a Stakeholder Group
- Tool 1.3: City Baseline Questionnaire: Impacts & Responses to Climate Change
- Tool 1.4: Climate Ready Review
- Tool 1.5: Developing a Communication Plan
- Tool 1.6: Relevant International Initiatives

## PHASE 2: CLIMATE RESEARCH AND IMPACTS ASSESSMENT

- Tool 2.1: Climate Exposure: Projections & Scenarios
- Tool 2.2: Urban Systems Analysis
- Tool 2.3: Risk Assessment
- Engagement checklist

## PHASE 3: VULNERABILITIES ASSESSMENT

- Tool 3.1: Vulnerable Places and People
- Tool 3.2: Assessing the Adaptive Capacities of Urban Systems
- Tool 3.3: Data Gap Analysis
- Engagement checklist

## PHASE 4: CITY RESILIENCE STRATEGY

- Tool 4.1: Resilience Interventions
- Tool 4.2: Prioritisation of Resilience Interventions
- Tool 4.3: Integration into City Plans
- Tool 4.4: City Resilience Strategy
- Engagement checklist

## REFERENCE TOOLS

- Reference tool 1: City presentation
- Reference tool 2: Shared Learning Dialogue
- Reference tool 3: Mapping Tool Support
- Reference tool 4: UNISDR Local Government Self-Assessment Tool (LGSAT)
- Reference tool 5: Durban Adaptation Charter
- Reference tool 6: Carbons Climate Registry
- Reference tool 7: Urban Climate Resilience Planning Framework
- Reference tool 8: Consequence Scale: Local Government Example
- Reference tool 9: Menu of Climate Adaptation Actions
- Reference tool 10: Intervention Mapping



## Module A: What's happening?

- Tool 1-A Framing the challenge questionnaire
- Tool 1-B Getting organized worksheet
- Tool 1-C External assistance assessment
- Tool 2-A Stakeholder identification worksheet
- Tool 2-B Stakeholder analysis matrix
- Tool 3-C Stakeholder "Terms of Reference" worksheet
- Tool 3-A Weather and climate change summary
- Tool 3-B Climate change observation template
- Tool 3-C Climate change influence diagram
- Tool 3-D Overview – exposed people, places, institutions and sectors
- Tool 3-E Hazard mapping (exposure mapping)
- Tool 3-F Socio-demographic sensitivity assessment
- Tool 3-G Sensitive places mapping
- Tool 3-H Community-based sensitivity mapping
- Tool 3-I Sensitivity thresholds
- Tool 3-J Sensitivity assessment summary
- Tool 3-K Climate threat plotting
- Tool 3-L General adaptive capacity assessment
- Tool 3-M Hazard-specific adaptive capacity assessment
- Tool 3-N Rapid institutional assessment questionnaire
- Tool 3-O Summary vulnerability rating matrix
- Tool 3-P Summary vulnerable population by sector
- Tool 3-Q Vulnerability Assessment Report outline

## Module B: What matters most?

- Tool 4-A Issues identification and organization
- Tool 4-B Issues to objectives
- Tool 4-C Objectives analysis – relevance to climate change
- Tool 4-D Objective indicators (descriptive)

## Module C: What can we do about it?

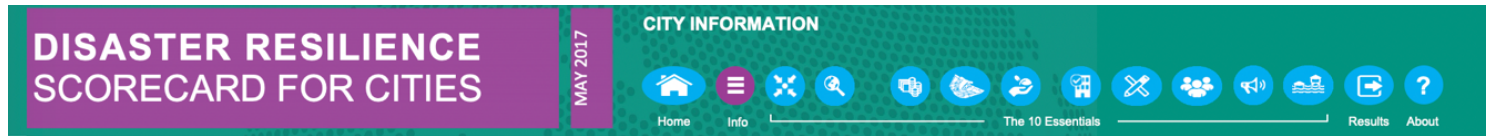
- Tool 5-A Option identification worksheet
- Tool 5-B Objectives to options worksheet
- Tool 5-C Organizing options worksheet
- Tool 5-D Screening and ranking options
- Tool 6-A Direct ranking options
- Tool 6-B Technical ranking matrix
- Tool 6-C Objective ranking and weighting matrix
- Tool 6-D Weighted ranking matrix
- Tool 7-A Institutional - governance checklist
- Tool 7-B Action plan worksheet
- Tool 7-C Climate Change Action Plan table of contents

## Module D: Are we doing it?

- Tool 8-A Indicator development worksheet
- Tool 8-B Monitoring framework worksheet
- Tool 8-C Evaluating actions against objectives worksheet
- Tool 8-D Evaluation questions

# UNDDR - Disaster Resilience Scorecard for Cities – Excel based

The Scorecard provides a set of assessments that will allow local governments to assess their disaster resilience, structuring around UNISDR’s Ten Essentials for Making Cities Resilient. It also helps to monitor and review progress and challenges in the implementation of the Sendai Framework for Disaster Risk Reduction: 2015-2030.



This Assessment	Response
City name	
Type of city (municipality, metropolitan areas, etc)	
Country	
Date of assessment	

City Profile (Required)	Response	Source Date
Title of the highest level of authority (e.g. Mayor, etc)		
Total city population:		
City square kilometers:		
Population density (per square kilometer):		
Population that are youth (15-24) (%):		
Population that are senior citizens (65+) (%):		
Gender (female-headed households):		
Literacy rate (% literate population):		
Poverty rate (% population not in poverty):		
Ave. household income (USD):		
Residents who are not citizens (%):		
Most likely (probable) known disaster risk:		
Most severe disaster (known):		

City Profile (Optional)	Response	Source Date
Total number of households:		
Persons per unit:		
Cost of living (USD):		
Country's GDP per capita (USD)		
Gini coefficient:		
City product per capita (USD):		

Local Government Disaster Risk Reduction and Resilience Team	Response
Name of person leading / coordinating completion of the scorecard assessment:	
Organization:	
Contact details:	
Willingness to share results or be used as an example / case study by UNDDR and partners:	

Stakeholder Information
Please list all stakeholders that have supported this assessment below.

## Instructions

- This tool accompanies the Disaster Resilience Scorecard for Cities - Detailed Level Assessment. The scorecard is available for download [here](#).
- Start by completing the 'City Information' on this tab. It might be helpful to find this information ahead of a Scorecard workshop.
- If the "Most likely (probable) known disaster risk" and "Most severe disaster (known)" has not yet been identified, the city can use the QRE tool (available [here](#)).
- The Scorecard can be completed collaboratively at a Scorecard workshop, clicking through each of the 10 Essentials using the navigation buttons at the top of each screen.
- Each of the 10 Essentials has a set of questions, comments and responses. For each question, select the most appropriate response. There are additional fields to add notes, actions, action owners and timescales.
- Once complete, the 'Results' tab summarise the score for each of the 10 Essentials.
- Further information can be requested from the staff and partners listed on the 'About' tab.



## PHASE II. Dive deep

### Step 3 – Identify measures for local climate action



<b>Brainstorming measures based on sectors / functions</b> ( <a href="#">Page 93</a> )	Collect ideas for measures for most relevant mitigation and adaptation fields (or based more concretely on the GHG inventory / vulnerability assessment)
<b>Brainstorming measures based on challenges and opportunities</b> ( <a href="#">Page 100</a> )	Collect ideas for climate measures for previously identified challenges and opportunities
<b>Brainstorming measures based on governing roles</b> ( <a href="#">Page 104</a> )	Collect ideas for climate measures along governing roles (self-governing, governing by self-governing, governing through enabling, governing by provision, governing by authority)



<https://localising-global-agendas.org/city-works-toolkit/identify-measures/>

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# Brainstorming measures based on sectors / functions



In a previous session, you have identified the most relevant sectors for mitigation and adaptation in your city. Now it is time to think about concrete measures in each of the sectors / fields of action / functions.

## Goal

Identify short-, medium- and long-term measures for different mitigation and adaptation sectors/areas.

## Tasks:

1. Have a look at the two canvases prepared in the exercise of mitigation and adaptation sectors in **Phase II, Step 2**
2. Use the prepared tables to collect, based on the **highest priorities** for mitigation and adaptation, short-, medium-, and long-term measures related to each sector / area
3. If you want to analyse (list activities your city can implement) both issues (mitigation and adaptation) at the same time you can also look at the different city **functions (Template C)**
4. Discuss results with the group

## Materials

Prepare online whiteboard or prints (A4 or A3) of relevant templates.

## Note

Involve as many stakeholders as possible to get different perspectives from the sectors. This exercise is also recommended when different cities are participating, so they can get mutual inspiration regarding the different measures.

**For mitigation, you can do the same exercise but looking e.g. at the GHG inventory from local government / community areas (template M2, M3) / For adaptation you can look from the perspective of hazard/impact, risks or adaptive capacity perspective (A2)**

## Timeframe

30 to 180 minutes

## Output

Table/list of short-, medium- and long-term measures along different areas/sectors of mitigation and adaptation.

## References

Several listed previously.

[Back to tools overview](#)

Sectors	Short-term measures low hanging fruits	Medium-term measures	Long-term measures	Other comments
Energy supply				
Transport, urban planning and design				
Buildings				
Solid waste and wastewater				
Agriculture and forestry				
Industrial processes				

Local Government Sector	Short-term measures / low hanging fruits	Medium-term measures	Long-term measures	Other comments
Buildings				
Vehicle fleet				
Street lighting				
Waste				
Water / sewage pumping				
Other				
Other 2				

Community Sector	Short-term measures / low hanging fruits	Medium-term measures	Long-term measures	Other comments
Residential				
Commercial				
Industrial				
Transport				
Agricultural emissions / others				
Land use, land use change and forestry / others				
Waste				
Others				96



Adaptation sector	Short-term measures / low hanging fruits	Medium-term measures	Long-term measures	Other comments
Energy supply				
Transport, urban planning and design				
Buildings				
Solid waste and wastewater				
Agriculture and forestry				
Water supply				
Urban stormwater management				
Disaster management				
Health and social services				
Environmental and costal management				

# Measures – Entry points: Hazard / impact in the local area

Template A2.

Hazard / impact	Short-term measures	Medium-term measures	Long-term measures	Other comments
Increased storm intensity				
Water scarcity				
Heat waves				
Include others based on vulnerability assessment				

# Template C



Function	What can my city do in regard to mitigation?	What can my city do in regard to adaptation?
<b>Macro Level Strategies</b>		
Development planning		
Economic development		
Tourism		
Major markets		
Informal economy		
<b>Planning</b>		
Regional land use planning		
Local land use planning		
Land allocation		
Land surveying		
Titling, provision of tenure		
<b>Housing and Facilities</b>		
Housing		
Social / low income housing		
Comunity upgrading		
Cultural facilities		
Parks, recreation facilities		
<b>Roads and transport</b>		
Roads and bridges		
Traffic management		
Public transit, buses, etc		
Street lighting		
Street cleaning		
Car parking		
<b>Security and emergency services</b>		
Police protection / security		
Fire services		
Emergency rescue services		
Ambulance services		
<b>Water and sewerage</b>		
Water supply system		
Drainage / flood protection		
Piped sewerage system		
Solid waste collection		
Solid waste disposal		
<b>Social services</b>		
Education, primary and secondary		
Health		
Welfare assitance		
Child care services		
<b>Energy</b>		
Electricity supply		
Gas supply		
<b>Miscellaneous</b>		
Libraries		
Business licensing		
Local agriculture		

# Brainstorming measures based on challenges / opportunities



In a previous session, you have identified the most pressing challenges and opportunities in your city. Based on these, you can now further brainstorm / identify concrete measures to tackle these challenges, or that make use of existing opportunities in your city.

## Goal

Identify short, medium and long term measures for different challenges and opportunities.

## Tasks:

1. Have a look at the brainstorming exercise on challenges/barriers and opportunities from Phase 2, step 2,
2. Use the prepared tables to collect, based on the highest challenges (and most important opportunities), short, medium, and long term measures related to each sector / area
3. Discuss results with the group

## Note

Involve as much stakeholders as possible to get different perspectives from the sectors.

This exercise is also recommended when different cities are participating, so they can get mutual inspiration regarding the different measures.

## Materials:

Markers, cards, boards, brown-paper / Prepare online whiteboard or prints (A4 or A3) of the tables.

## Printouts

## Timeframe

30 to 60 minutes

## Output

Table/list of short, medium and long term measures along different areas/sectors of mitigation and adaptation.

## References

Several listed previously.

[Back to tools overview](#)

# Brainstorming measures based on challenges / opportunities

Challenges	Short-term measures / low hanging fruits	Medium-term measures	Long-term measures	Other comments
Include the prioritized challenge from step 2.				
Include the challenge				
x				
x				
x				
x				

# Brainstorming measures based on levels of governance



In a previous session, you have identified the most pressing challenges and opportunities in your city. Based on these, you can now further brainstorm / identify concrete measures to tackle these challenges, or that make use of existing opportunities in your city.

## Goal

Start collection of activities / measures/action/projects ideas for implementing global agendas along the different **governance roles** (namely self-governing, governing through enabling, governing by provision, governing by authority)

## Tasks:

1. Prepare a poster with the heading on roles of local government and related policies/activities.
2. Recollect the main outcomes from last step on the current situation in your city and challenges and gaps for implementing the global agendas,
3. With that in mind, brainstorm about different policies / activities / measures / projects relevant for your city along the different roles (self governing, governing through enabling, governing by provision, governing by authority).

Variation of the exercise: You can think about measures along the different **types of instruments** available to cities :

- regulation / formal instruments,
- economic instruments
- communication / informal instruments
- organizational development

## Note:

It is interesting to prepare examples for each role. Brainstorming could be performed in smaller / buzz groups (3 to 8 participants) or also in plenary format guided by facilitator

## Materials:

Markers, cards, boards, brown-paper / Printouts (template)

## Timeframe

60 minutes

## Output

Visualized collection activities / measures/action/projects

## References

Bulkeley - Roles of Local Government

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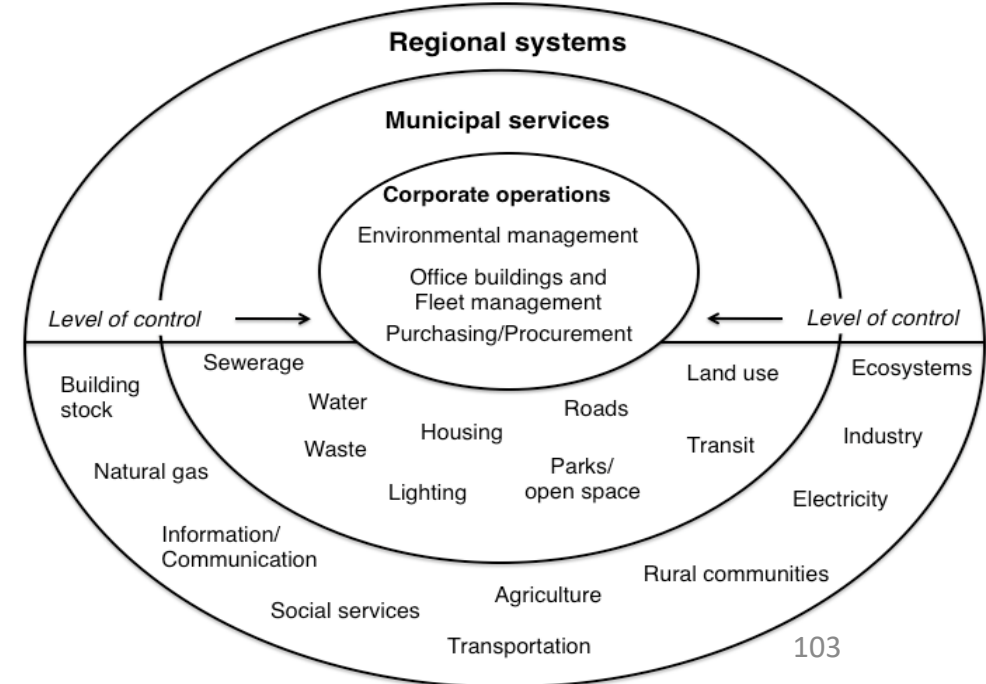
# Governing Roles

Table 1: Modes of urban climate governance and sectors of climate change mitigation			
Self-governing	Governing through enabling	Governing by provision	Governing by authority
<b>Energy</b>			
Energy efficiency schemes and use of CHP within municipal buildings (e.g. schools) Procurement of energy-efficient appliances Purchasing of green energy Eco-house and renewable energy demonstration projects	Campaigns for energy efficiency Advice on energy efficiency to businesses and citizens Promotion of the use of renewable energy	Clean energy service provision Energy service companies Provision of incentives and grants for energy-efficiency measures	Strategic energy planning to enhance energy conservation Ordinances on the mandatory use of renewable energy Energy efficiency requirements in zoning ordinances
<b>Transport</b>			
Mobility management for employees Green fleets	Education campaigns Green travel plans Quality partnerships with public transport providers	Public transport service provision Provision of infrastructure for alternative forms of transport Logistics centres for goods transport	Transport planning to limit car use and provide walking and cycling infrastructure Workplace levies and road-user charging
<b>Waste</b>			
Waste prevention, recycling, and reuse within the local authority Procurement of recycled goods	Campaigns for reducing, reusing and recycling waste Promotion of the use of recycled products	Waste service provision Installations for recycling, composting and 'waste to energy' facilities Recycling, composting and reuse schemes	Regulations on methane combustion from landfill sites
<b>Urban Planning and Land Use</b>			
High energy-efficiency standards and use of CHP in new public buildings Demonstration projects – house or neighbourhood scale.	Guidance for architects and developers on energy efficiency and renewables		Strategic land use planning to enhance energy efficiency and the utilisations of renewables Planning of sites for renewable installations Strategic land-use planning to enhance public transport
Based on: Bulkeley/Kern 2006: 2243.			

Bulkeley / Kern

<u>Role</u> <small>(Bulkeley and Kern, 2006)</small>	<u>Policies/Activities</u> <small>(Martinet et al, 2009)</small>
<u>Self-Governing</u>	Operation of [local government] municipal infrastructures- "Getting your own house in order"
Governing through enabling	a) Voluntary actions and government serving as role model b) Information promotion, and raising awareness
Governing by provision	Operation of [citizen] municipal infrastructures
Governing by authority	Regulation based on legal responsibilities and jurisdiction
Governing through leadership	Target setting

Variation: look also at the levels of control



# Brainstorming measures based on roles

<b>Role</b>	<b>Self governing</b>	<b>Governing through Enabling</b>	<b>Governing by Provision</b>	<b>Governing by Authority</b>	<b>Governing through Leadership</b>
INCLUDE AREA					
INCLUDE AREA					
INCLUDE AREA					



## PHASE II. Dive deep

### Step 4 – Prioritise measures for local climate action



Quick feasibility check ( <a href="#">Page 106</a> )	Simplified assessment of feasibility of the different measures brainstormed in the previous step.
Interaction mitigation / adaptation actions ( <a href="#">Page 109</a> )	Get acquainted with the adaptation and mitigation interaction assessment tool (AMIA tool) from C40.



<https://localising-global-agendas.org/city-works-toolkit/prioritise-measures/>

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# Quick feasibility check



Prioritising areas for action can be difficult. There are different issues at play when trying to choose a certain project over others in an informed, transparent and accountable decision-making process. Among other aspects, it is important to have a good understanding about the feasibility, practicability, risks and opportunities of selected measures.

Thus, the following exercise can be quite complex and time demanding. Yet it should also involve the understanding of different stakeholders. However, some simple steps might help to get a good understanding of different aspects that are relevant when trying to evaluate and prioritise projects

## Goal

Simplified assessment of feasibility of the different measures brainstormed in the previous step.

## Task

Use the template provided below and assess whether potential measures or projects previously identified have low, medium or high feasibility according to different categories (political, financial, environmental, and technical feasibility and national priorities). Try to involve as many stakeholders as possible and facilitate an integrated discussion with them.

## Note

Beyond assessing the feasibility from low to high, you can also include comments and detailed information about the category.

Other possible criteria: Effectiveness, efficiency, cost-benefit, flexibility in case of uncertainty  
Availability of co-benefits or absence of trade-offs / conflicts, does no harm

## Material:

Markers, cards, boards, brown-paper / Printouts (template)

## Timeframe

1 – 2 hours

## Output

Overview of feasibility of potential measures

## References

[CDIA Pre-feasibility Study Guidelines](#) –

A pre-feasibility study will contain a review of sector investment options and priorities, initial scoping and costing of the identified investment project, measures for addressing social, and environmental (e.g. climate change) concerns and designing the governance and financing structures for implementation.

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Potential measure / project	Financial feasibility	Social feasibility	Technical feasibility	Political feasibility	Environmental feasibility	Contribution to National Strategies
Include here the measure / project to be assessed						

# Interaction mitigation / adaptation actions



The AMIA tool enables cities to methodically identify potential interactions between climate adaptation and mitigation measures. The tool highlights opportunities and conflicts and provides users with case studies to guide their decision-making

## Goal

Get acquainted with the adaptation and mitigation interaction assessment tool (AMIA tool) from C40.

## Tasks

The tool is designed to assist in **maximizing synergies and minimizing counter productive interactions** between their climate change mitigation and adaptation plans and actions.

The excel-based tool is composed by an introduction sheet, a set up sheet, a results sheet and a case-studies and example sheet.

Discussion about / in-depth analysis of the tool can be two-fold:

- Meta-level: a brief moderated exchange about potentials and limitations for use
- Practice oriented: it is also possible to apply the tool directly with a concrete case.

## Materials

Laptops with the excel file if in workshop setting;

## Timeframe

60 – 90 minutes

## Output

Different interactions based on provided mitigation and adaptation measures

## References

AMIA tool and other C40 tools  
[Download the excel file here.](#)

Check also:  
C40 Action Selection and Prioritisation (ASAP) Tool and resources  
<https://resourcecentre.c40.org/resources/action-selection-and-prioritisation>

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### Adaptation and Mitigation Interaction Assessment Tool

This tool is designed to assist cities in maximizing synergies and minimizing counter-productive interactions between their climate change mitigation and adaptation plans and actions.

You will provide a list of mitigation and adaptation actions (measures, projects, programs, or strategies), and the tool will assess interactions such as:



**Synergies:** Actions that reduce both carbon emissions and climate risk.



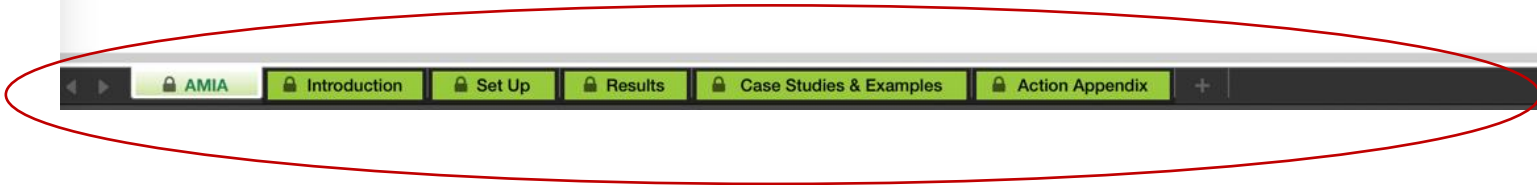
**Trade-offs:** Actions with contrary effects on mitigation and adaptation, i.e., mitigation actions that increase risk or adaptation actions that increase emissions.



**Mal-investment:** Actions that can be undone or rendered less effective by the effects of climate change if they are not sufficiently resilient.



**Piggybacking:** Actions that are complementary when designed and/or implemented together, e.g., projects with opportunities to add additional mitigation or adaptation actions at a small marginal cost.



This sheet provides an introduction and overview schematic for navigating the AMIA tool.



In this sheet, you select adaptation and mitigation actions for the tool to analyze. Move actions you wish to analyze from the Selection List on the left to the Analysis List on the right, and then click "Analyze Actions."

**Adaptation Action Selection**

Climate Hazard Filter:  Category Filter:

Search:

- (Artificial) lakes/reservoirs
- Air conditioning
- Building vulnerability assessments
- Cisterns
- Cool pavements
- Cooling centres

**Mitigation Action Selection**

Sector Filter:  Category Filter:

Search:

- Aircraft - fuel switch to biofuels
- Aircraft efficiency
- Airport operations improvement - alternative fuel aircraft taxi towing
- Airport operations improvement - flight/taxi congestion management
- Airport operations improvement - mandatory continuous descent approach
- Airport operations improvement - reduce GHG emissions from ground operations
- Behaviour change program

Buttons: Clear Filters, Clear Search, Select All, Unselect All, Add to Analysis List

**Analysis List: Adaptation and Mitigation Actions**

Buttons: Analyze Actions, Clear Selected, Clear All

# Results

C40 CITIES AMIA Introduction Set-up Results Case Studies & Examples Export to PDF Directions

*In this sheet, each of your selected actions has been evaluated for potential adaptation-mitigation synergies and trade-offs, as well as mal-investment risk and piggybacking opportunities. These are highlighted in the table below, along with descriptions of the interactions. Double click cells with "(Case Study)" to read a case study on the interaction -- these are in bold and underlined.*

Type	Action Name	Description	Synergy Potential	Trade-off Potential	Mal-Investment Risk	Piggybacking Opportunities
------	-------------	-------------	-------------------	---------------------	---------------------	----------------------------

# Cases

C40 CITIES AMIA Introduction Set-up Results Case Studies & Examples Export to PDF Show All Case Studies

*In this sheet you can view case studies of identified interactions. Click "Show All Case Studies" to view the full list.*

	<b>Combining sewer work with implementing climate mitigation and adaptation measures</b> Rotterdam, Netherlands
<b>Associated Actions</b>	<ul style="list-style-type: none"> <li>- Separated sewers and storm drains</li> <li>- District-scale new clean energy development (heating/cooling/power) - district Energy (heating/cooling/co-generation)</li> <li>- Permeable pavement</li> <li>- Tree planting in public spaces</li> <li>- District cooling network</li> </ul>
<b>Primary Interaction</b>	Piggybacking
<b>How the action was implemented</b>	In the Rotterdam neighbourhood Reyerdijk, the sewer system is planned to be renovated. These construction activities will be used as an opportunity to implement adaptation and mitigation measures.
<b>Description of identified interaction and process to identify</b>	Since the streets must be opened for the sewer work, this is a good opportunity to also implement a heat distribution network. Instead of using gas, residual heat can be used for heating the buildings in the neighbourhood. When the sewer work is done, the old pavement will be replaced by water-permeable pavement or vegetation. This project hasn't been completed yet.
<b>The result(s) of the primary interaction</b>	The heat distribution network reduces GHG emissions. The permeable pavement and vegetation lead to more infiltration capacity of the soil for rainwater.
<b>Reference</b>	City of Rotterdam
<b>Photo of action</b>	

## PHASE III. Turn words into action

### Step 1 – Plan for local action



<b>Climate Action Plan</b> ( <a href="#">Page 113</a> )	Prepare a rough plan to take specific actions towards mitigation and adaptation to climate change in your city.
<b>Vertically Integrated Action Tool (VIA) / C40</b> ( <a href="#">Page 124</a> )	Get acquainted with the Vertically Integrated Action Tool (VIA) / C40. The C40 VIA tool is used for analysing the alignment between city and other levels of government on climate change mitigation and adaptation.
<b>Recommendations for localizing NDCs</b> ( <a href="#">Page 128</a> )	Provide recommendations to move towards a localization of NDCs and to improve governance capacities / instruments for multi-level climate governance for your city.



<https://localising-global-agendas.org/city-works-toolkit/plan-for-action/>

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# Climate Action Plan



A climate change action plan describes short to long term strategy, including strategic goal, operational targets and specific measures, to reduce GHG emissions and adapt to the impacts of climate change at your local level. It should be based on your own realities and consider the most pressing challenges.

## Goal

Prepare a rough plan to take specific actions towards mitigation and adaptation to climate change in your city.

## Tasks

1. Define strategic goal and operational targets for each relevant sector (government and community sectors) - Template 1.A and 1.B
2. Assess mitigation and adaptation policies and measures for government / and community operations – Template 2.A and 2.B

Based on previous tasks, now you should:

3. identify actions to manage greenhouse gas emissions from government operations / and community (Template 3.A) and identify actions to respond to priority climate impacts (Template 3.B)

## Materials

Markers, cards, boards, brown-paper / printouts (templates as described above), or prepared in a virtual whiteboard.

## Timeframe

60 to 180 minutes

## Note

Involve as much stakeholders as possible to get different perspectives from the sectors. This exercise is also recommended when different cities are participating, so they can get mutual inspiration. Include one example to make it easier for participants to grasp the differences between strategic, operative levels

## Output

Understanding of the VIA tool, potentials and limitation and applicability in your local context.

## References

**ICA – Integrated Climate Action Planning, PAKLIM 2010**

Several as seen in additional slides after templates

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Define strategic goals and operational targets for each relevant sector (government and community sectors) -  
Template 1. A

Sector	Strategic goal	Operational targets
Buildings and Facilities		
Vehicle Fleet		
Street lighting		
Water and wastewater		
Waste		
Other		
Residential		
Commercial		
Industrial		
Transportation		
Other		

Sectors can also differ according to other given structures

Priority climate impact	Sector affected	Strategic goal	Operational targets

Sectors can also differ according to other given structures

# Assess mitigation and adaptation policies and measures for government operations (Template 2.A)

Sector	Key <b>mitigation</b> technologies and practices currently available	Policies, measures and instruments shown to be effective	Key constraints (-) or opportunities (+)	Key <b>adaptation</b> technologies and practices currently available	Policies, measures and instruments shown to be effective	Key constraints (-) or opportunities (+)	Links and synergies between <b>mitigation</b> and <b>adaptation</b>
Buildings and Facilities							
Vehicle Fleet							
Street lighting							
Water and wastewater							
Waste							
Other							

# Assess mitigation and adaptation policies and measures for community operations (Template 2.B)

Sector	Key <b>mitigation</b> technologies and practices currently available	Policies, measures and instruments shown to be effective	Key constraints (-) or opportunities (+)	Key <b>adaptation</b> technologies and practices currently available	Policies, measures and instruments shown to be effective	Key constraints (-) or opportunities (+)	Links and synergies between <b>mitigation</b> and <b>adaptation</b> technologies, policies, measures and instruments
Residential							
Commercial							
Industrial							
Transportation							
Agriculture							
Waste							
Other							

Identify actions to manage greenhouse gas emissions (government and community) – Template 3.A

Sector	Sector Strategy	Target	What actions will be implemented	How will the actions be implemented	Who is responsible for implementing actions	What is the timeframe	Priority/Budget
Buildings and Facilities							
Vehicle Fleet							
Street lighting							
Water and wastewater							
Waste							
Other							
Residential							
Commercial							
Industrial							
Transportation							
Other							

Identify actions to respond to priority climate impacts – Template 3.B

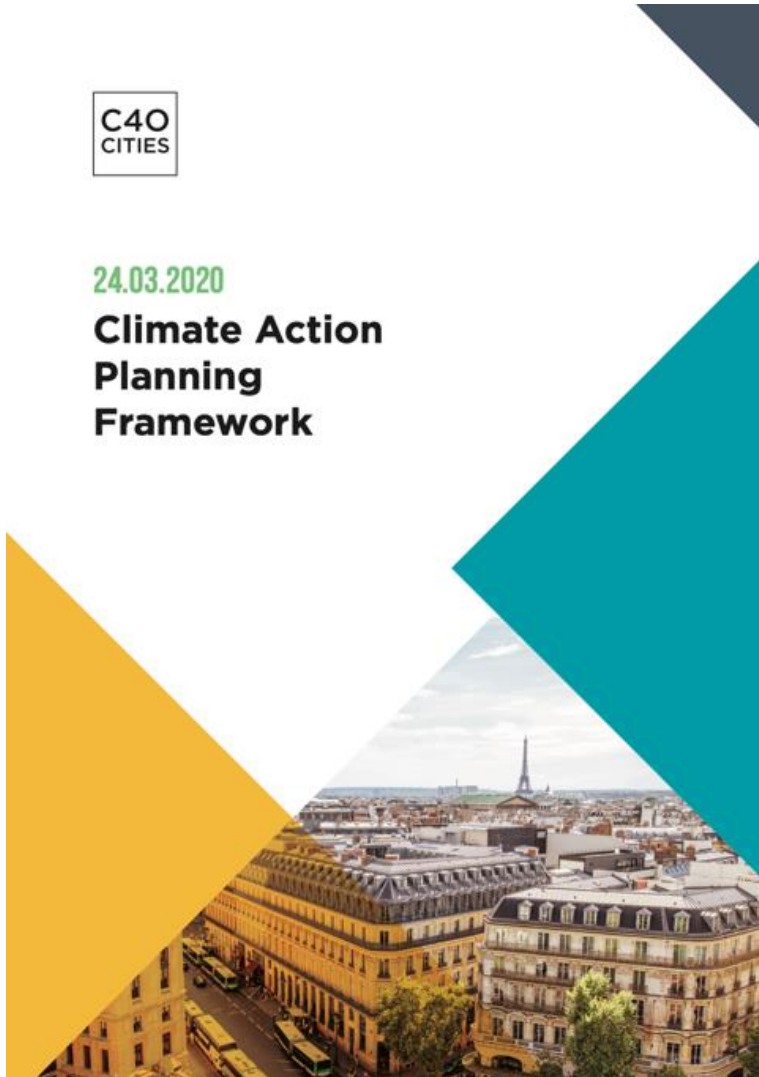
<b>Climate Impact</b>	<b>Target Condition</b>	<b>Sectors Affected</b>	<b>Strategy</b>	<b>What actions will be implemented</b>	<b>How will the actions be implemented</b>	<b>Who is responsible for implementing actions</b>	<b>What is the timeframe</b>	<b>Priority/Budget</b>

# C40 – Climate Action Planning Framework



24.03.2020

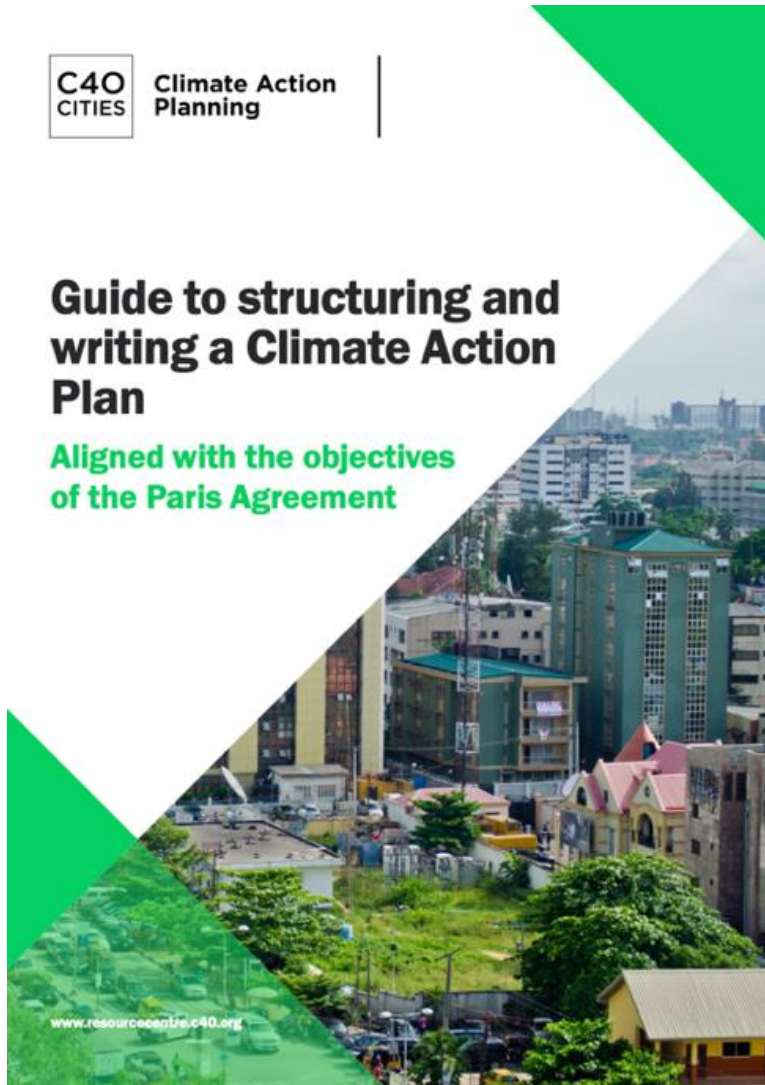
## Climate Action Planning Framework



00	<b>Context.....</b>	<b>3</b>
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02	<b>Key components of climate action planning.....</b>	<b>5</b>
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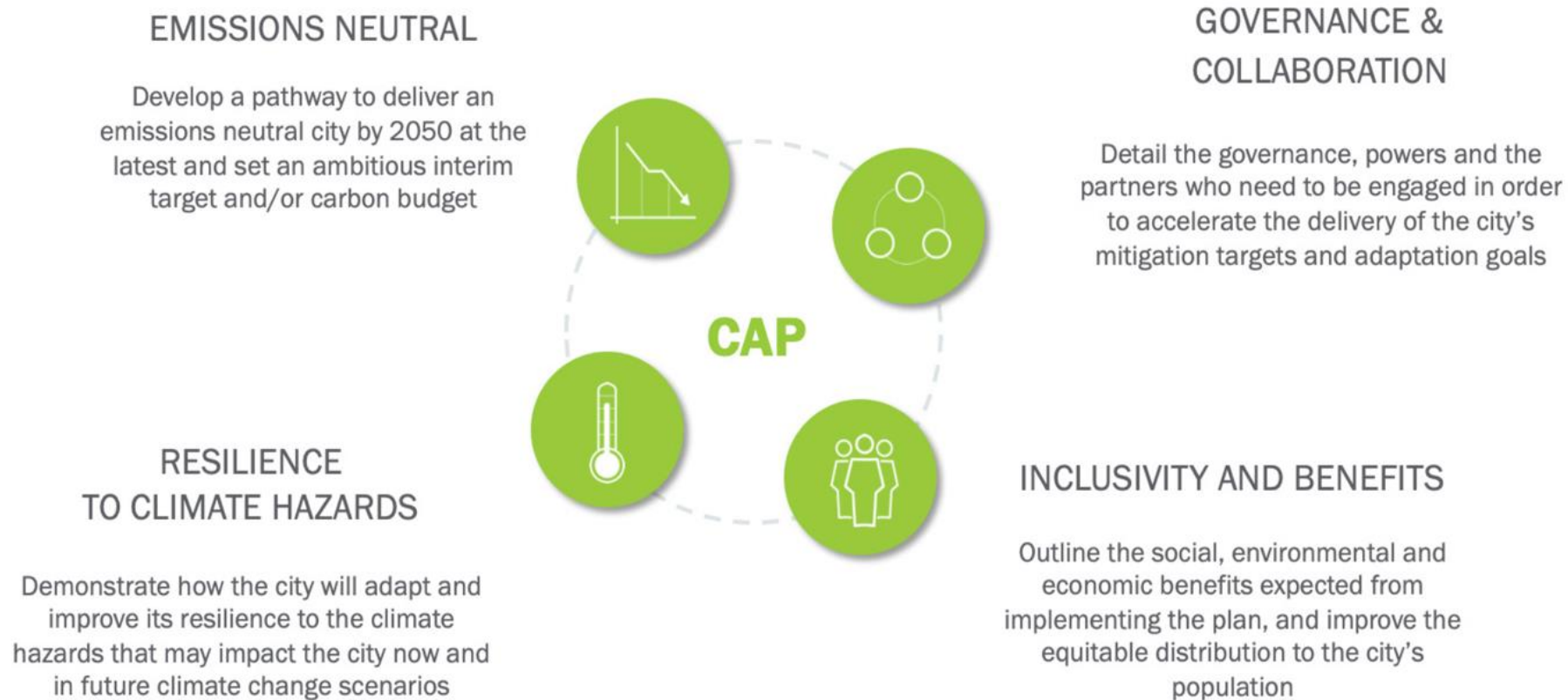
# C40 – Guide to structuring and writing a Climate Action plan



This document is a guide for city government staff who are tasked with structuring and writing a Climate Action Plan that is aligned with the objectives of the Paris Agreement. This guide includes tips for organising a plan document, selecting content, and designing graphics to communicate complex information. Guidance is provided by way of best practices from a range of published Climate Action Plans across the globe.

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# Climate Action Plan – Key components



# CONTENTS OF A CLIMATE ACTION PLAN

## CAP SECTIONS

Generally, Climate Action Plans cover similar topics and technical components. For an effective plan, it is important to include:

- ◆ a vision or commitment statement to set the stage for action,
- ◆ background information to provide context around why action is important,
- ◆ key aspects of the evidence base used to inform climate actions,
- ◆ an action plan that is detailed, implementable, and measurable in terms of progress, and
- ◆ information on the wider social, environmental and economic benefits of climate actions.

These different components can be shared and communicated in different ways but are typically included in a single Climate Action Plan or across a series of documents.

### Contents of a prototypical Climate Action Plan

CAP Section	Description
<b>Executive summary</b>	The executive summary provides an overview of the Climate Action Plan, highlighting key commitments, goals and strategies, as well as an overview of the planning process. For some projects, the executive summary is a standalone document that is primarily intended for decision-makers and the general public, with more technical and process-oriented documents provided as annexes or separate documents.
<b>Preamble and commitments</b>	The preamble introduces the plan, providing more detail on the city commitments than an executive summary. This section often starts with a commitment or endorsement letter from a Mayor or city council. The preamble will tell readers why the city is developing a CAP and how it connects to local efforts and other local priorities, as well as regional, national and/or global climate efforts. Leading cities seek to design climate actions that meet the needs of their communities, such as improving health and wellbeing, increasing economic prosperity and promoting education and skill development. This section will also include an endorsement of the Paris Agreement and will often also start with a commitment or endorsement letter from a Mayor or city council.
<b>Vision</b>	This section includes a vision statement (the anchor point of any strategic plan) and introduces the plan's focus areas and priorities, allowing each city to showcase its own unique view and connect the plan to other city efforts. The plan's goals can be introduced in this section to help summarise the intent of the plan. This section is often used by cities to briefly describe the stakeholder engagement process, which can be further elaborated on in its own section or an annex, and how the input was integrated into the plan.
<b>City context</b>	This section of the plan describes the city, along with any relevant contextual information. It provides an opportunity for cities to introduce background information on key social, environmental and economic priorities. This will set a foundation and focus for inclusive and equitable climate goals and actions. Effective CAPs also include a summary of relevant national, regional and local laws, regulations, policies or plans to set the baseline for future climate action in the city. Additional contextual information may include physical and administrative boundaries and powers as well as governance structure and responsibilities.

### Contents of a prototypical Climate Action Plan,

CAP Section	Description
<b>GHG emissions, inventory, and trajectories</b>	Once the context is set, the plan presents information on the city's GHG emissions. The GHG emissions inventory will provide a thorough understanding of the main activities which contribute to city GHG emissions that will help inform the CAP. The inventory establishes base year emissions, upon which reduction targets may be based. The inventory is also a key input into modelling potential future emissions. For understanding future emissions without mitigation actions, a plan should include a business-as-usual emissions trajectory, taking into account population growth and other factors.
<b>Climate risks</b>	In this part of the plan, a city should present its current and projected climate hazards and impacts, risk and vulnerabilities, ideally linking it to relevant non-climatic characteristics, transitions and trends in the city such as digitalisation, rapid urbanisation, increasing housing prices, ageing population, etc. as these may compound or reduce projected climate impacts. This section addresses both infrastructure and social sensitivities, a critical perspective for achieving an inclusive Climate Action Plan. The climate risks section, especially when it includes references to impacts of past extreme weather events, creates a sense of urgency and will provide the foundation and focus for adaptation goals and actions.
<b>Goals and targets</b>	This section introduces the goals and targets for mitigation and adaptation and provides an explanation for how they were chosen and why they are important, as well as goals and/or targets for the wider benefits of climate actions. Goals and targets for wider benefits can be included within mitigation and adaptation goals and targets, but they are not mutually exclusive. The following Action Roadmap section will provide the detail on how a city plans to achieve the goals and targets. The goals and targets of a CAP may sometimes be integrated into the Action Roadmap section and/or the preamble.
<b>Action Roadmap</b>	The Action Roadmap section presents the strategies and actions for mitigation and adaptation, recognising the wider benefits of climate action. This section often begins with a GHG emissions trajectory and adaptation pathway that maps out the plan's actions and expected reduction in emissions over time. The main purpose of this section is to present the climate actions, benefits and impacts, milestones and implementation details, as well as to set out how the strategies and actions identified in the CAP could deliver on the emissions trajectories and targets that have been established. The actions can be organised by "mitigation" and "adaptation" or through a cross-cutting approach organised by "sectors," "themes," "priority areas" or "other topics". The Action Roadmap can also identify any connections or interdependencies between actions. Some of these integrated actions maximise efficiency while minimising investment. Implementation details such as responsible departments or agencies, timeframe and funding opportunities should be included with the actions.
<b>Monitoring, evaluation and reporting</b>	The monitoring, evaluation and reporting section is where a city communicates its process for measuring success and adjusting priorities over time. For priority actions, it may be useful to use indicators as a measurement of progress. Broader measures for reporting could include community-wide emission reductions, risk reductions and/or equitable benefits achieved. This section sets up a commitment to report the above, revisit a CAP periodically, and publish future updates to the CAP.
<b>Conclusion</b>	The conclusion section is often short (usually one page or less) and includes a brief summary of the Climate Action Plan content and leaves the readers, and all those that will implement the actions, with a call to action.
<b>Annex</b>	The annex section will include any detailed or technical information that supports the content in the main body and transparency on how the plan was developed but is not critical to the primary plan narrative. This section will vary greatly between cities and plans, depending on the climate action planning process and needs of a city. In some cases, cities prefer to publish this information as separate documents.

# C40 - Vertically Integrated Action Tool (VIA)



It is important that cities are able to analyse the vertical integration of actions. The C40 VIA tool is used for analysing the alignment between city and other levels of government on climate change mitigation and adaptation.

## Goal

Get acquainted with the Vertically Integrated Action Tool (VIA) / C40

## Tasks

1. Go to C40's [Climate Action Planning Resource Center](#) and get familiar with the new tools for cities to analyze their vertical integration and facilitate their climate action planning. Tools focus on (1) **diagnosing vertical barriers and enablers**, (2) **developing** a vertical integration **response strategy** and (3) supporting **protocol agreements** that enhance vertical integration for accelerated climate action.

These tools (available for download [here](#)) include a

- **Vertical Integration Guide** (pdf)
- **Vertically Integrated Action Tool** (VIA Tool; excel) and User Guide (pdf)
- Vertical Integration Response Strategy Guiding Framework (pdf)
- Vertical Integration Protocol Agreement Template and Guide
- Video tutorials

2. Get familiar with the excel-based tool. The VIA tool facilitates 3 levels of analysis, from strategic to sector and lastly to action analysis. It can be used to undertake a step-wise deepening of analysis across the three components. Alternatively, any one of the analysis components can be completed independently of the others.

3. Discussion about / in-depth analysis of the tool can be two-fold:

- Meta-level a brief moderated exchange about potentials and limitations for use
- Practice oriented: it is also possible to apply the tool directly with a concrete case.

## Materials

Laptops with the excel file if in workshop setting; / 3-pager about the tool

## Timeframe

30 to 60 min

## Output

Understanding of the VIA tool, potentials and limitation and applicability in your local context.

## References

C40 Resource centre and materials about the Vertically Integrated Action Tool (VIA)

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# Vertical Integration of climate policies in cities VIA Tool



The **C40 VERTICALLY INTEGRATED ACTION (VIA) Tool** is used for analysing the alignment between city and other levels of government (i.e. state/provincial or national) on climate change mitigation and adaptation (*otherwise known as "vertical integration"*). The VIA Tool results can be used to inform the development of ambitious, implementation-focused city Climate Action Plans (CAPs). It is designed to facilitate diagnosis of how improved alignment between cities and state/national governments could help facilitate delivery of accelerated climate action. Users should decide before starting to use the Tool whether they are analysing alignment between the city and the state (provincial) government, or the city and national government.

The VIA Tool facilitates 3 levels of analysis, from strategic to sector and lastly to actions analysis. It can be used to undertake a *step-wise deepening of analysis across the three components*. Alternatively, *any one of the analysis components can be completed independently* of the others. Users can therefore operate the VIA Tool flexibly, depending on what they need to know.

**CROSS-CUTTING ANALYSIS:** maps the current extent of alignment between city and state/national government on climate change mitigation and adaptation. The analysis is done separately for climate mitigation and climate adaptation across seven climate themes: (i) Joint climate change target and goal setting, (ii) Political alignment, (iii) Policy alignment, (iv) Institutional alignment, (v) Financing climate action, (vi) Capacity and skills, and (vii) Information and knowledge. *The Cross-cutting Analysis can be undertaken at any point in the CAP preparation process.*

**SECTOR ANALYSIS:** diagnoses how city and state/national government alignment on climate change is enabling or constraining climate action in priority sectors. The analysis process starts with ranking the most important sectors for achievement of the city's Climate Action Plan targets. The next step evaluates the level of alignment in the selected sectors. The analysis focuses on the following six themes: (i) Political alignment, (ii) Policy & powers alignment, (iii) Institutional alignment, (iv) Financing climate action, (v) Capacity and skills, or (vi) Information and knowledge. The Sector Analysis can be undertaken once the city's climate mitigation and adaptation targets/goals have been determined. This requires a greenhouse gas footprint to have been calculated, and technically feasible emissions reductions modelled to within set timeframes. It also requires a climate risk/vulnerability assessment to have been undertaken to determine key climate risks and impacts over set time periods and the sectors that will be most affected or needing to respond.

**ACTIONS ANALYSIS:** pinpoints the vertical integration barriers preventing implementation of key city climate actions. The results can be used to help cities identify actions where vertical alignment barriers can be easily resolved, and those which need more time and effort to overcome. Barriers are identified across the same six themes used in the Sector Analysis. The Actions Analysis can be undertaken when defining CAP actions, or to inform CAP implementation planning. Cities should already have an idea of the actions that they want to include in their CAP in order to undertake the actions-level analysis using the VIA Tool.

The VIA Tool is owned by C40 Cities Climate Leadership Group.

<https://resourcecentre.c40.org/resources/coordination-across-government>



# Vertical Integration of climate policies in cities

The functioning and highlights of these tools in brief:

- In general, the paper clusters the main “vertical barriers and enablers” for collaborative climate action along five issues:
  - (1) Financing climate action,
  - (2) Political alignment,
  - (3) Institutional and policy alignment,
  - (4) Access to information, knowledge and technology and
  - (5) Access to capacity and skills
- It features a considerable number of **best practice examples across the world** for effective vertical alignment along the above issues
- It calls for the **decentralization** of decision-making as an “important foundation for vertical integration.” (p. 3)
- Quotes **CUT Report**, stating that “the majority (65%) of urban emissions abatement potential is either under the primary authority of local governments, or can be achieved through local government collaborative action with national and state governments” (p. 4)
- Using the **VIA Excel tool**, cities can evaluate their vertical alignment with national or provincial levels by selecting answers to a number of questions. Results are presented immediately in well-designed graphs.
- The tool offers analysis along three different levels: **Strategic Cross-cutting Analysis**, **Sector Analysis** and **Actions Analysis**
- Following the analysis, the **Guiding Framework** can then be used to explore how the city could respond to key vertical integration barriers and opportunities.
- Finally, the guide provides **template agreements** and protocols to formalize cooperation between different institutions

## CROSS-CUTTING ANALYSIS

VERTICALLY  
INTEGRATED  
ACTION

HOME

CROSS-CUTTING ANALYSIS

RESULTS

SECTOR ANALYSIS

RESULTS

ACTIONS ANALYSIS

RESULTS

### INSTRUCTIONS:

**Step 1 - Decide on the Context of the Analysis-** You can use the tables below to map the current extent of alignment between city and state (regional or provincial) OR national (country) government on climate change mitigation and adaptation. Decide on this context before starting to answer the questions in the table - capture your answer by selecting from the drop down list in the blue bar above Table 1.

**Step 2 - Complete the Cross-Cutting Analysis Tables -** There are two tables on this page: Table 1 - Climate Mitigation, Table 2 - Climate Adaptation. You can complete one or both tables. Answer the questions by selecting answers from the drop-down lists in the answers column. ANSWER ALL QUESTIONS IN THE TABLE. A score between 1 and 4 will be generated based on the answers selected. Higher scores indicate greater levels of alignment between city and State/National government. The USER COMMENTS column is optional for recording why a certain answer was selected. Note that it is not compulsory to complete this column.

**Step 3 - View the Results -** The scores from Table 1 and Table 2 are presented as graphs on the CROSS-CUTTING ANALYSIS > RESULTS page.

# Vertical Integration of climate policies in cities

## SECTOR ANALYSIS



HOME

CROSS-CUTTING ANALYSIS

RESULTS

SECTOR ANALYSIS

RESULTS

ACTIONS ANALYSIS

RESULTS

### INSTRUCTIONS:

**Step 1 - Decide on the Context of the Analysis-** You can use the tables below to map the current extent of alignment between city and state (regional or provincial) OR national (country) government on climate change mitigation and adaptation. Decide on this context before starting to answer the questions in the table - capture your answer by selecting from the drop down list in the blue bar above Table 1. You also need to choose the timeframe of the mitigation and adaptation targets that you will use to rank the relative importance of the sectors. Select the timeframe from the drop down lists in the rows at the top of Tables 1 and 2.

**Step 2 - Sector Ranking -** Sectors most important for the city's Climate Action Plan targets are ranked for further analysis . If you have used the C40 Pathways Modelling Tool, use the summary tables from Pathways to inform your ranking of the mitigation sector priorities. Select answers to the questions from the drop-down lists in Table 1 (Mitigation) and Table 2 (Adaptation). You can complete one table or both, depending on your interest. Answers selected generate a score of between 0 and 5 per sector. Higher scores indicate sectors with greater importance for city climate mitigation / adaptation targets. To the right of Tables 1 and 2, sectors are shown in a "ranked list". Sectors most important for meeting targets/goals are at the top. Scores of 0 are not displayed as they have no role in achieving the targets/goals. **NOTE: Table 1: if the table cells in the "ranked list of mitigation sectors" turn dark gray, it is because you have selected answers adding up to more than 100% of the city's emissions reductions requirements. Revise your answers and the "ranked list" table will be corrected.**

**Step 3 - Sector Analysis -** Choose which sectors to analyse further - any number of sectors can be chosen. To analyse a sector, click on the sector name buttons in Table 1 or 2. You will be taken to the relevant Sector Analysis Table. Answer the questions in these tables by selecting answers from the drop-down lists. Answer selections will generate a score of between 1 and 4. Higher scores indicate greater levels of city and state / national government alignment. Bear in mind the timeframes of the targets/goals that you originally selected as this might influence your choice of answers.

**Step 4 - View the Results -** Sector Analysis scores are automatically used to generate outputs on the ACTIONS RESULTS page.

## ACTIONS ANALYSIS



HOME

CROSS-CUTTING ANALYSIS

RESULTS

SECTOR ANALYSIS

RESULTS

ACTIONS ANALYSIS

RESULTS

### INSTRUCTIONS:

**Step 1 - Decide on the Context of the Analysis -** You can use the tables below to map the current extent of alignment between city and state (regional or provincial) OR national (country) government on climate change mitigation and adaptation. Decide on this context before starting to answer the questions in the table - capture your answer by selecting from the drop down list in the blue bar above Table 1.

**Step 2 - Select Actions -** Use your cursor to tick the check-boxes next to the Climate Actions that you wish to analyse listed in Table 1 (Mitigation Actions) Table 2 (Adaptation Actions) and Table 3 (Cross-sector Actions). You can input your own actions in the blank spaces in the table. Remember to tick the check-box next to any action that you add. A maximum of 10 actions can be selected across all three tables. These are automatically added to the ACTIONS LIST to the right of Table 1.

**Step 3 - Analyse Actions -** Once you have selected all the actions you wish to analyse, click on the "ANALYSE SELECTED ACTIONS" link box below the ACTIONS LIST. Your selected actions will be pre-populated into the tables on the Actions Analysis page. To analyse each action, use your cursor to tick all the vertical integration barriers that apply. Select a weight from the drop-down list for each of the barriers you have selected. A "weighted score" is then automatically generated for each barrier you have selected.

**Step 4 - View the Results -** The scores for each of the actions analysed are automatically used to generate graphical outputs on the ACTIONS RESULTS page.

# Recommendations for localizing NDCs



The main tool to turn the global goals of the Paris Agreement into action are the **Nationally Determined Contributions** (NDCs). Local governments across the globe have primary authority over about one third of the potential for urban climate change mitigation, therefore they have a great impact on implementing the NDCs. However, many local governments are still not linking their local measures to the NDCs and a series of recommendations can help to move towards a localization of NDCs and to improve governance capacities / instruments for multi-level climate governance

## Goal

Provide recommendations to move towards a localization of NDCs and to improve governance capacities / instruments for multi-level climate governance for your city.

## Tasks

1. Based on the [Policy Brief - Localising NDCs with inspiration from the 2030 Agenda](#), first of all, gain a good understanding of the **three parts of Localising NDCs** and what this could mean for your local setting (Template 1.A) and to identify, based on the **different recommendations** (set 1 - national and local level) what actions you can take forward in short and long term (Template 1.B).
2. Based on the publication [Multi-Level Climate Governance Supporting Local Action](#) you are invited in this step to get a detailed look into recommendations / rationale at different levels regarding different government capacities / instruments. You can, alone or in a group, read the recommendations / rationale and think about how your city can take this forward, in the short and long run (initial ideas) – Template 2.
3. If you want, you can also have a look at the set of overall recommendations 3 - Collaborative Climate Action – A prerequisite for more ambitions climate action for wrapping up.

## Materials

Markers, cards, boards, brown-paper / printouts (templates as described above), or prepared in a virtual whiteboard.

## Timeframe

60 to 120 minutes

## Note

Involve as many stakeholders as possible to get different perspectives. Involve also other levels of government if possible. This exercise is also recommended when different cities / different countries are participating, so they can get mutual inspiration.

## Output

Develop your own recommendations to move towards the localization of NDCs and improvement of governance capacities / instruments for multi-level climate governance

## References

- [Multi-Level Climate Governance Supporting Local Action](#)
- [Collaborative Climate Action – A prerequisite for more ambitions climate action](#)
- [Policy Brief - Localising NDCs with inspiration from the 2030 Agenda](#)

[Back to tools overview](#)



# Template 1A. Three parts of Localising NDCs

Three parts of Localising NDCs	what does this mean for your local setting?
<p>1. During the <b>development or updating of an NDC</b>, the inclusion of subnational governments by the national government early in the process is key to on the one hand gain knowledge of sub- national potential, on the other hand include subnational views in order to lay the groundwork for effective implementation. One point is to secure buy-in from a wide range of subnational actors – not just subnational governments, but also other stakeholders with a local presence (for example, civil society and business), to increase the scope for successful implementation. Various forms of involvement can be envisaged and may vary in terms of degree of institution- alisation and timing (one-time or recurrent), depending on capacities and resources. Examples of interaction with stakeholders include:</p> <ul style="list-style-type: none"> <li>a) Stakeholder dialogues</li> <li>b) Written consultations</li> <li>c) Inclusion in preparatory or consultative bodies</li> </ul>	
<p>2. During the <b>implementation of NDCs</b>, a large part of the work needs to take place at subnation- al level. In areas such as innovative mobility solutions, access to renewable energy and others, cooperation between levels of government is indispensable for effective implementation.</p> <p><b>National and regional governments can:</b></p> <ul style="list-style-type: none"> <li>a) Co-develop investment plans that address regional and/or local needs</li> <li>b) Develop project pipelines for subnational implementation</li> <li>c) Provide access to national or international finance or funding for subnational implementation</li> <li>d) Support capacity development and provide technical expertise and data</li> </ul> <p><b>Local and regional governments can:</b></p> <ul style="list-style-type: none"> <li>e) Compare local/regional plans with national targets and align themselves accordingly – or even exceed these targets</li> <li>f) Develop implementation plans at local/regional level</li> </ul>	
<p>3. Advocacy and <b>positive interplay through cooperation across levels of government</b>. The in- terplay between national and subnational levels can be used to raise climate ambition in two ways:</p> <ul style="list-style-type: none"> <li>a) Bottom-up: many municipalities, cities, states and regions are taking climate action on a far more ambitious level than their national governments. These subnational governments can demonstrate that deeper greenhouse gas emission cuts and equitable resilience building are possible and actually achievable, thereby both inspiring and putting pressure on the national government to raise its ambitions.</li> <li>b) Top-down: national governments can use their power – both regulatory and financial – to incentivise subnational governments and push them into action. They can also identify and scale-up successful subnational examples across the country.</li> </ul>	

# Template 1B. Recommendation local/national level and short/long term ideas (Set 1)

Recommendations	Short-term ideas	Long-term ideas
<p>At local level:</p> <ol style="list-style-type: none"> <li>1. Address interlinkages between the 2030 Agenda and the Paris Agreement and capitalise on synergies for effective and efficient use of resources. Also expect to deal with incoherencies and clashing demands. SDGs can be a reference framework in terms of integrated, horizon- tal and vertical sustainable development policies and planning and of stakeholder engage- ment.</li> <li>2. Use existing or create new coordination mechanisms with regional and national levels of government and with other local actors.</li> <li>3. Learn from and be inspired by other subnational actors. Horizontal cooperation can also positively influence international processes.</li> <li>4. Require contractors (for example, energy services) to perform their services in a way that is compatible with the goals of the Paris Agreement.</li> <li>5. Assess the likely impact of policy change in localised NDCs on both women and men, given gender roles and gender relations, their constraints and decision-making power. This could also be done for LGBTQ communities, ethnic and religious minorities, and different age groups.</li> <li>6. A shared regional localisation strategy can be a good way of ensuring that smaller cities (with more limited capacity) are also part of the process.</li> </ol>		
<p>At national level:</p> <ol style="list-style-type: none"> <li>1. Incorporate the efforts of subnational governments, many of whom are already showcasing that deeper greenhouse gas cuts are, in fact, achievable, in both developing or updating NDCs and in implementing them. However, subnational governments are not only imple- menting bodies but also cooperation partners in both phases.</li> <li>2. Co-design localisation strategies that create the necessary framework conditions and reduce existing incoherencies between national regulations and between sectoral policies. National climate plans need to be aligned with SDG strategies and enhance the role and responsibili- ties of subnational governments.</li> <li>3. Improve the multi-level governance architecture or create new coordination mechanisms both for climate action and for implementation of the 2030 Agenda, strengthening the participation of subnational governments in all phases. Discussing targets, strategies, instru- ments and indicators together creates ownership and buy-in amongst those involved.</li> <li>4. Expand (access to) financial support for subnational governments, which often have limited resources and limited scope for finding funding.</li> <li>5. Support joint efforts for monitoring and data disaggregation to strengthen national and local capacities to assess potential and progress.</li> <li>6. Facilitate and support peer to peer exchange and mutual learning among local governments and their networks, to disseminate good practices and create emulation.</li> </ol>		<p>130</p>

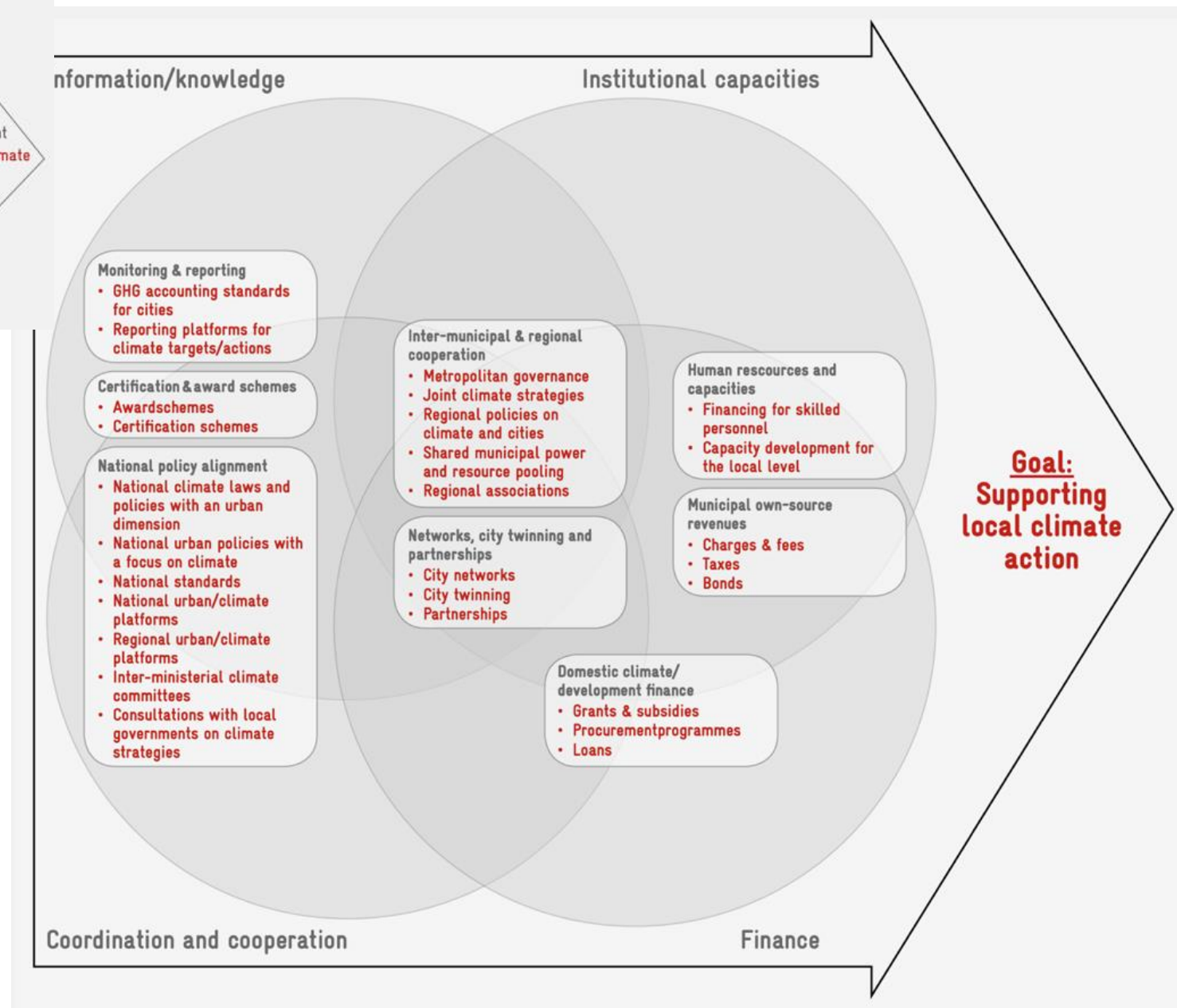
Governance capacities	Instruments		
<b>Information and knowledge</b>	Monitoring and reporting	Certification and award schemes	
<b>Finance</b>	Municipal own-source revenues	Domestic climate and development finance	
<b>Coordination and cooperation</b>	National policy alignment	Inter-municipal and regional cooperation	Networks, city twinning and partnerships
<b>Institutional capacities</b>	Human resources and capacities		

Goal:  
Supporting the development of the local climate action policy field

## Recommendations (set 2.) Governance capacities / instruments for multi-level climate governance

Refer to recommendation  
chapter pg. 82 ff

[Multi-Level Climate Governance Supporting Local Action](#)



Governance capacities	Instrument	Recommendations / Rationale	How can your city take this forward? Initial ideas
<p><b>Information and knowledge</b></p>	<p>Monitoring and reporting</p>	<ul style="list-style-type: none"> <li>• <u>Recommendation:</u> Government and international partners/cooperation should support the development of national programmes for city-scale GHG emissions inventories as well as local vulnerability assessments to ensure that the data collected is comparable and can be aggregated. This may also include (financial) support for adequately trained local personnel that are able to collect and analyse relevant data. National governments should also ensure that relevant available data — e.g. national statistics — is spatially disaggregated to allow for comparisons of progress at the sub- national level. International partners should support the identification of monitoring and reporting methodologies that lead to useful comparable data for mitigation and adaptation efforts at the local level.</li> <li>• All levels: Information and knowledge are key strategic requirements to enable action at different levels.</li> <li>• Local: Based on data from GHG sources and on climate change impacts, local governments are able to identify the key entry points and priorities for action.</li> <li>• National: National governments are able to conduct progress-tracking and monitoring of implementation through data generated at the local level. This information in turn can be used as evidence for future policy decisions.</li> <li>• International: Urban data can contribute to the implementation of the Paris Agreement through better understanding of local emissions levels.</li> </ul>	
	<p>Certification and award schemes</p>	<ul style="list-style-type: none"> <li>• <u>Recommendations:</u> National governments looking to establish long-term institutionalised processes supporting local climate action that contributes to the achievement of national targets should consider the introduction of certification schemes. Depending on the design of such certification schemes, they can also encourage the establishment of municipal climate management teams to guide local climate action in the long term. In addition, national and local governments can consider introducing certification and award schemes in certain sectors to encourage investment and innovation.</li> <li>• Local: On-the-ground climate solutions are recognised (and ideally supported financially). Depending on the sector addressed, local governments can communicate arising co-benefits to other local governments.</li> <li>• National: National governments obtain insights on solutions on the ground that can inform further national policies. National governments can more- over incentivise, recognise and identify standards, processes and benchmarks.</li> <li>• Private sector: Based on the nature of the schemes, private sector players may have significant incentives to contribute to and benefit from innovative solutions.</li> </ul>	

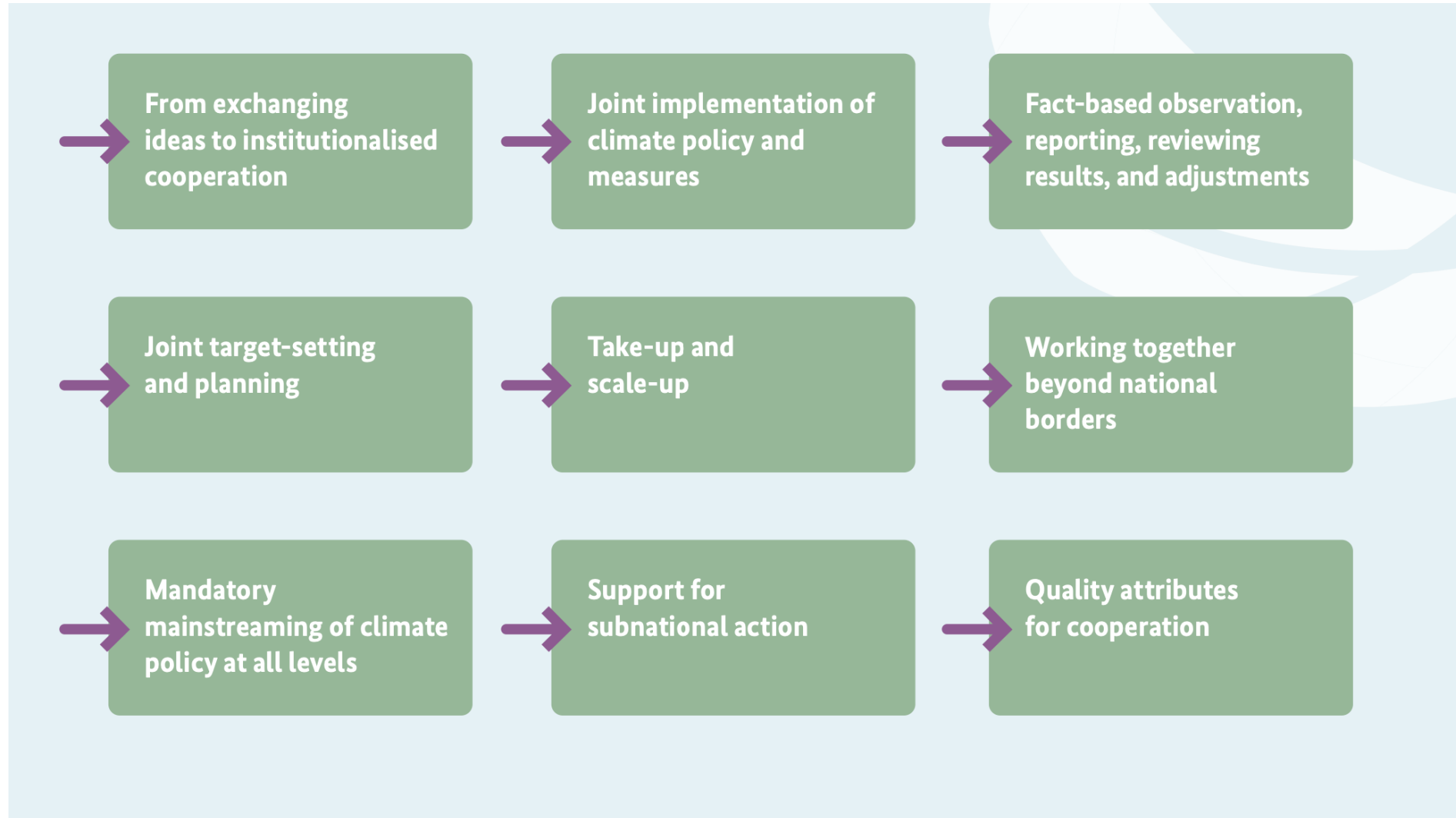
Governance capacities	Instrument	Recommendations / Rationale	How can your city take this forward?
<b>Finance</b>	Municipal own-source revenues	<ul style="list-style-type: none"> <li>• Recommendations: The overall principle of adequate fiscal decentralisation (not only strictly linked with tasks related to climate change mitigation and adaptation) should be upheld and provisions for its implementation should be established and put into practice by the national government. This clearly also has important repercussion to the climate change policy field, when local government tasks are related to climate change adaptation (for instance water service delivery, spatial planning and storm water management) and/or mitigation (for instance public transport planning and provision, waste management). National governments can help to strengthen the resource base of local governments for targeted functions related to climate policy that are particularly important in the country's NDC.</li> <li>• Moreover, national governments and/or relevant partners should carry out assessments examining the extent to which existing domestic policy and regulatory frameworks allow or impede municipal resource-raising power. In addition, processes of "climate-sensitive local budgeting" may be supported, depending on the degree of fiscal, administrative and public sector decentralisation enabled by higher levels of government. Local governments should carry out assessments of financial needs and opportunities to leverage own resources. In addition, local governments should raise awareness and communicate to their constituencies the socio-economic benefits that local climate action has.</li> <li>• Local governments gain more independence of intergovernmental transfers (or even international transfers) for policy formulation and improve their resource base for climate action.</li> <li>• National: National governments can identify modifications in the domestic framework that can enable a better local revenue base for climate action. To the extent that local governments use their opportunities to generate own-source revenues for climate action in innovative ways, national governments can also promote successful innovations for adoption by other local governments.</li> </ul>	
	Domestic climate and development finance	<ul style="list-style-type: none"> <li>• Recommendation: National governments should consider a financial needs assessment for local climate action as a pillar of NDC implementation. Based on this assessment, an investment plan (cross-cutting, sector specific) and/or specific funding arrangements can be established to support local climate activities.</li> <li>• Local: Local governments benefit from financing sources that complement the existing locally-owned resource base.</li> <li>• National: National governments can capitalise on the potential of local climate action by relying on and complementing existing municipal climate finance structures, or providing alternative sources of funding where the leeway for municipal own source revenues for climate action is too limited. This can complement NDC implementation measures at the national level to achieve intended mitigation and adaptation results.</li> </ul>	

Governance capacities	Instrument	Rationale	How can your city take this forward?
<b>Coordination and cooperation</b>	National policy alignment	<ul style="list-style-type: none"> <li>• Recommendation: National, regional and local governments should initiate processes of policy coordination to help them define how to move from short-term objective to long-term targets and identify what role the different levels should play. Such processes should also aid in the identification of the concrete measures to be taken at different levels to ensure an enabling environment that is conducive to climate action.</li> <li>• All levels: Processes of national policy alignment can help to establish clear mandates and responsibilities for different levels regarding implementation of NDCs.</li> <li>• Local: Consultation and coordination processes allow insights from local governments to be included in national policies.</li> <li>• National: These processes allow feedback and the evaluation of the effectiveness of national policies on the ground.</li> </ul>	
	Inter-municipal and regional cooperation	<ul style="list-style-type: none"> <li>• Recommendation: National governments should create rules and regulations in the domestic administrative and policy framework that are conducive to enable effective inter-municipal and regional co-operation. In addition, it can assess, when necessary, whether inter-municipal and regional instruments reshaping competences across jurisdictions are doing so in a manner aligned with democratic legitimacy.</li> <li>• Local: Efficiency of local service delivery can be improved through the reduction of costs and economies of scale and scope. Inter-municipal and regional cooperation also allows local governments to bundle their expertise and power and to assure control over relevant assets and functions across boundaries.</li> <li>• National and regional: Governance effectiveness can be increased through coherent regional strategies.</li> </ul>	

Governance capacities	Instrument	Rationale	How can your city take this forward?
<b>Coordination and cooperation</b>	networks, city twinning and partnerships	<ul style="list-style-type: none"> <li>• <u>Recommendation</u>: Local governments looking to establish partnerships and combine their voice with those of other partners should assess whether joining such networks and partnerships is beneficial. Considering the regional biases in the membership of city networks mentioned in section 3.3.3, city networks should endeavour to communicate their tangible benefits — such as proven learning and diffusion of good practice — to a wider membership. National governments and international partners should recognise the value of city networks as a partner that can aggregate the concerns of local governments and communicate them to higher levels of government, and assist local governments in understanding and localising the Paris Agreement and NDCs. This implies, for example, supporting strong national city networks that have a broad and inclusive membership — not just the largest cities in a country.</li> <li>• <i>Local</i>: Constructive relations with domestic and transnational peers facilitate exchanges of experiences and peer learning amongst local governments. Participation in networks may also be of value to local governments to the extent that it increases recognition and prestige.</li> <li>• <i>National</i>: Domestic partnerships and networks can be a valuable partner to involve the voice of local government in consultations.</li> </ul>	
<b>Institutional</b>	Human resources and capacities	<ul style="list-style-type: none"> <li>• <i>Recommendation</i>: National and local governments should ensure that adequate personnel working on climate change is attracted to the public sector and included in their budgets. Through its university system and national public administration academies, national governments should ensure high-quality education of skilled engineers, architects and public sector staff to prepare them to deal with climate change uncertainty, cross-cutting planning and specific technical issues related to climate change mitigation and adaptation. International partners should continue supporting on-the-job capacity development for government officials in all departments of the local, regional and national level on climate issues.</li> <li>• <i>All levels</i>: Skilled personnel and sufficient staff in the public sector are a necessary condition for local climate action.</li> <li>• <i>Local</i>: Adequate personnel enables local governments, inter alia, to make use of available funding instruments, to develop and implement locally-owned local climate action plans on the ground, to connect climate change priorities meaningfully with their service delivery and socio-economic mandates and to respond to the needs of their local constituencies.</li> <li>• <i>National</i>: Supporting training of municipal employees at the local level makes local governments effective partners in implementing NDCs. At the national level, e.g. ministerial employees need to have sufficient capacities and knowledge to be able to effectively coordinate climate policy across different ministries.</li> </ul>	

## Recommendations set 3. Collaborative Climate Action requires a political will and good processes

Successful cooperation across levels of government is not contingent on money, external support or internationally set rules. A political will to engage in cooperation is crucial.





## PHASE III. Turn words into action

### Step 2 – Keep track of progress



Data for climate indicators ( <a href="#">Page 138</a> )	Understand the need for good indicators along the strategic / operational goals and what data sets are available at the local level as well as collect ideas for building integrated data platforms
International tools ( <a href="#">Page 141</a> )	Gain an overview about available international tools related to monitoring / reporting / evaluation of climate related action.



<https://localising-global-agendas.org/city-works-toolkit/keep-track-of-progress/>

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# Data for climate indicators

It is often said that you can only manage what you can measure. Indicators describe the status quo of local sustainability and thus form the basis for the development of targets, which in turn form the "heart" of a strategy. Indicators measure the achievement of objectives and thus map the success of a strategy. Different data sets are needed in order to build the indicators, and it is important to understand what data sets are available at the local level.

## Goal

Understand the need for good indicators and what data sets are available at the local level as well as collect ideas for building integrated data platforms

## Tasks

1. You are now invited to start thinking about the data / information that is available at city level. For identified climate priorities / strategic and operational goals, list the indicator you can use to measure progress, the type of data needed to build the indicator, the possible source / database, the stakeholder / institution that has the data. (Other possible criteria to be analysed/collected are the periodicity of collection and disaggregation of data.) – Template 1.
2. In a later step, you can think and discuss about strategies to improve and harmonize data collection, and how to build integrated data platforms (also looking at data integration: National - regional - local data integration and horizontal data integration). What are the challenges and opportunities. What short and long term measures are needed? Brainstorm and visualize your ideas.

## Materials

Markers, cards, boards, brown-paper / Printouts (template) or prepared templates in a virtual whiteboard

## Note

Involve as much stakeholders as possible to get different perspectives from the sectors. It is important to involve officials dealing with data topics. This exercise is also recommended when different cities are participating, so they can get mutual inspiration.

## Timeframe

60 to 90 min

## Output

Table with indicators and data for different strategic goals, as well as further analysis of data sources, institution responsible, etc.

## References

City WORKS

<https://localising-global-agendas.org/city-works-toolkit/keep-track-of-progress/>

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## Template 1.

Goal (from strategy / action plan Mitigation / Adaptation)	Indicator	Data set to build indicator	Possible source of data	Institution / stakeholder responsible	Challenges and gaps regarding data	Innovative solutions

You can also analyse periodicity of collection of data, disaggregation level, etc

- **Discuss about strategies to improve and harmonize data collection, and how to build integrated data platforms (also looking at data integration: National - regional - local data integration and horizontal data integration).**
- **What are the challenges and opportunities?**
- **What short and long term measures are needed?**
- **Brainstorm and visualize your ideas.**

# International tools

Several tools and approaches are available at international level to assist cities in monitoring / reporting / evaluation their climate related action.

## Goal

Gain an overview about available international tools related to monitoring / reporting / evaluation of climate related action.

## Tasks

1. Look at lists of tools/ approaches listed below
  - [GHG Protocol for Cities - An Accounting and Reporting Standard for Cities](#)
  - [Measuring, Reporting, Verification \(MRV\) of Urban Low Emission Development](#)
  - [Carbomm Platform](#)
  - C40 resources (e.g. [Reporting GHG emissions inventories](#) / [Measuring progress in urban climate change adaptation](#))
  - [Urban Adaptation support tool](#)
2. Discuss their main characteristics, applicability in your local context, difficulties related to their use. If wished, and time allows, you can become more concrete in testing some of the excel tools as well

## Materials

Slides / links about tools / excel tools / laptops or materials for online setting

## Note

If time is short, prioritize some tools in advance, according to the needs of the city

## Timeframe

30 to 90 min

## Output

Understanding of different tools and how these could be used in your local context.

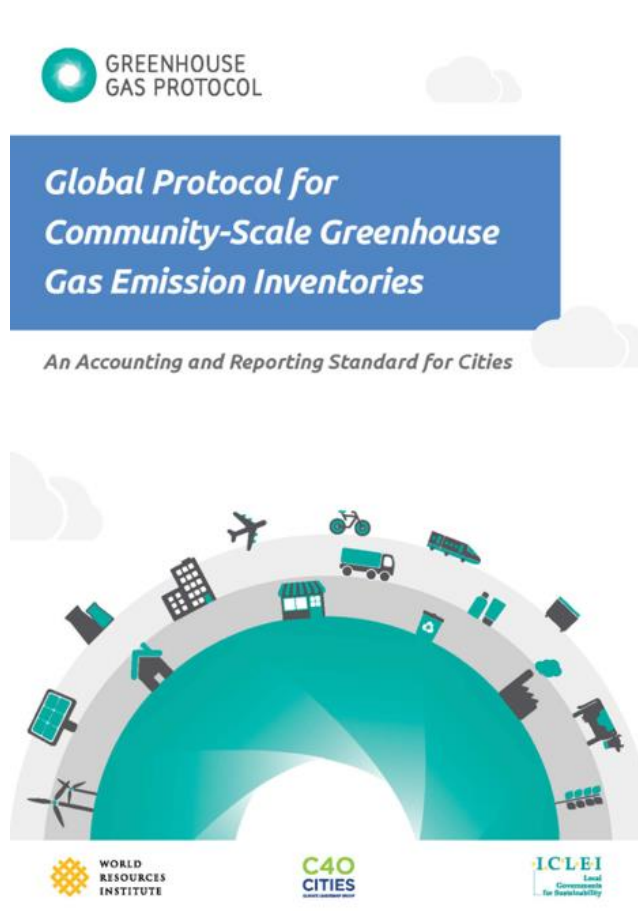
## References

Several as listed below



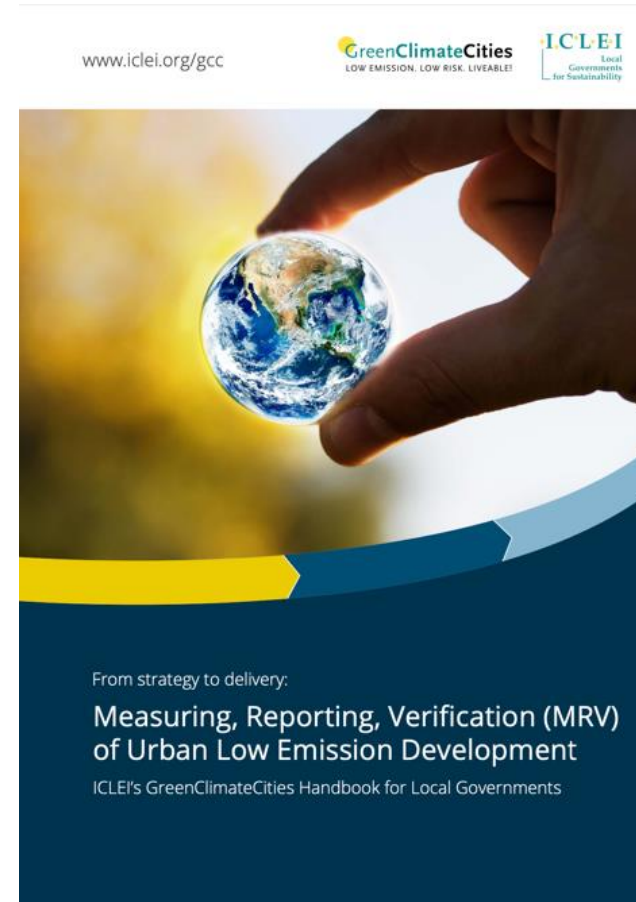
## ➤ For Mitigation

### GHG Protocol for Cities An Accounting and Reporting Standard for Cities



<https://ghgprotocol.org/greenhouse-gas-protocol-accounting-reporting-standard-cities>

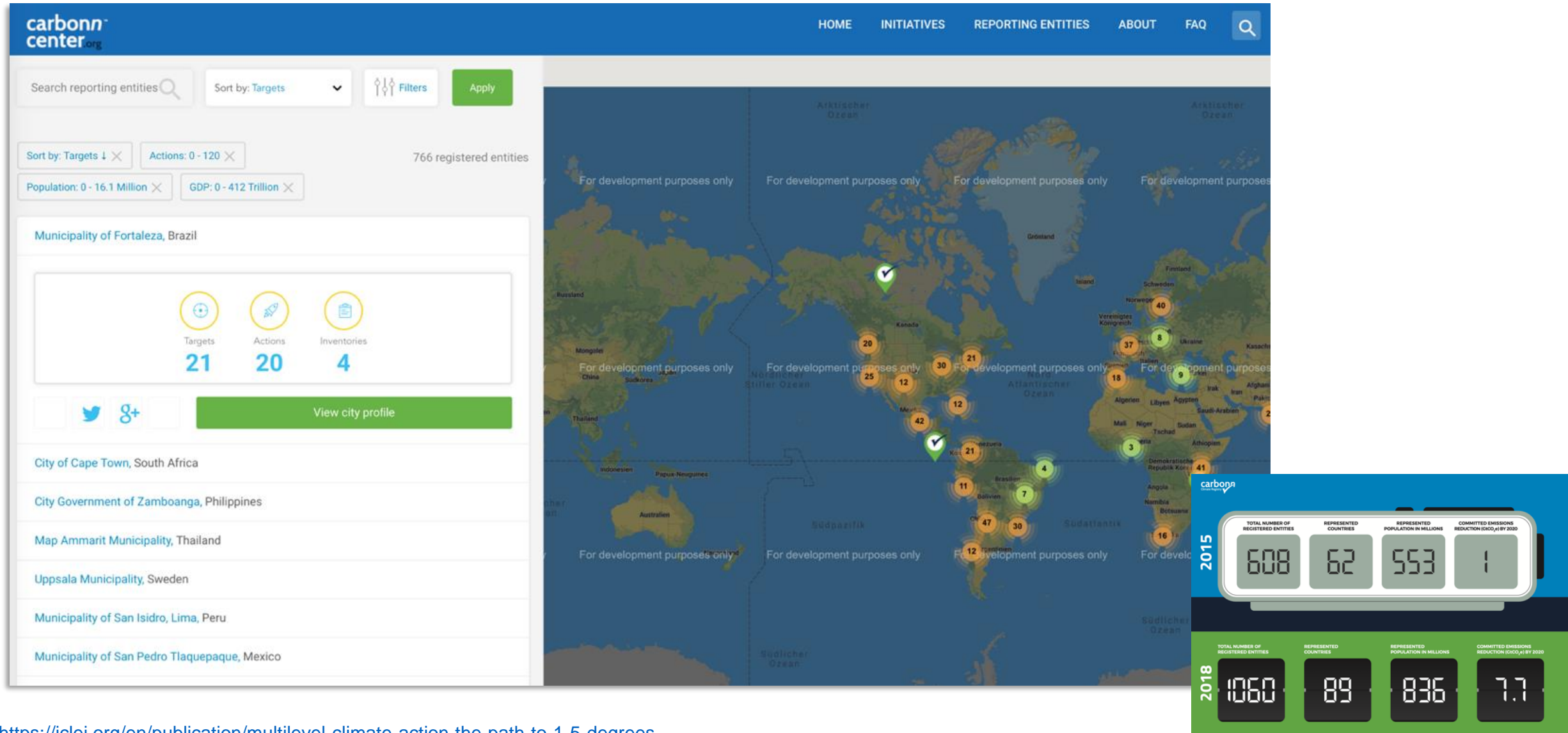
### Measuring, Reporting, Verification (MRV) of Urban Low Emission Development



[https://e-lib.iclei.org/wp-content/uploads/2016/05/GCC\\_Handbook\\_final-web.pdf](https://e-lib.iclei.org/wp-content/uploads/2016/05/GCC_Handbook_final-web.pdf)

<https://carbons.org/entities>

Carbons is coordinated at ICLEI's Bonn World Secretariat and is the leading platform for **collecting local and subnational climate commitments and activities**. The inventory is now becoming the common database for collecting and publishing greenhouse gas values at the local level.



<https://iclei.org/en/publication/multilevel-climate-action-the-path-to-1-5-degrees>

# ➤ For Mitigation

A user guide for the City Inventory Reporting and Information System (CIRIS); an Excel-based tool for managing and reporting city greenhouse gas inventory data.

[Click here to download user guide](#)

**Reporting GHG emissions inventories**

**City Inventory Reporting and Information System (CIRIS)** is an accessible, easy-to-use and flexible Excel-based tool for managing and reporting city GHG inventory data. Based on the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) standard, CIRIS facilitates a transparent calculation and reporting of emissions for all sectors:

- Stationary energy
- Transportation
- Waste
- Industrial processes and product use (IPPU)
- Agriculture, forestry and other land use (AFOLU)

CIRIS also contains additional information required under the [Global Covenant of Mayors' 'Common Reporting Framework' \(CRF\)](#) for GHG emissions inventories. This consists of an automatically populated CRF output table that enables cities to easily report their emissions in this format to the city-wide emissions section of the CDP-ICLEI Unified Reporting System.

Once completed, CIRIS can be directly uploaded to the public reporting platform [CDP Cities](#).

**Managing and reporting emission inventories with the City Inventory Reporting and Information System (CIRIS)**

Seth Schultz, C40 Director of Science and Innovation, and Wee Kean Fong, World Resources Institute Senior Associate, explain how the City Inventory Reporting and Information System (CIRIS) supports cities worldwide with their greenhouse gas inventory data reporting and management

**Toolbox**

**Resources**

CIRIS User Guide  
Step-by-step guidance on how to use CIRIS

Download

[Click here to download excel tool](#)



## USER GUIDE

CIRIS (City Inventory Reporting and Information System) has been designed to support cities in reporting city-wide GHG emissions according to the requirements of the Global Protocol for Community-scale Greenhouse Gas Emission Inventories (GPC). It should be used in conjunction with the GPC, available at <http://ghgprotocol.org>.

CIRIS also aligns with the Common Reporting Framework (CRF) of the Global Covenant of Mayors for Climate and Energy (GCoM), available at <https://www.globalcovenantofmayors.org/our-initiatives/data4cities/common-global-reporting-framework/>

Below and throughout the tool you will find basic instructions on how to use CIRIS. For more detailed guidance please refer to the user guide, available at <https://resourcecentre.c40.org>

### 1. Set-up

To start with, users are asked to define the inventory boundary and provide supporting background information, such as population and land area. This helps to provide context and allows for meaningful benchmarking. This section should also be used to record all data sources and emission factors to be used in the inventory.

### 2. Inventory

The next step is to record activity data. Using the emission factors defined in the Set-up, emissions are calculated according to the GPC reporting framework. Stationary energy, Transportation and Waste must be completed for a BASIC inventory. IPPU and AFOLU are additionally required for a BASIC+ inventory.

### 3. Calculators

CIRIS includes five calculators to help cities estimate emissions for: fugitive losses from gas distribution; solid waste landfill; biological treatment of waste; waste incineration and wastewater. The calculations are based on IPCC Guidance and use IPCC default factors. These should only be used if no other data is available or otherwise to compare results estimated using another methodology.

### 4. Results

This section presents your city's GHG emissions in a number of different ways. It provides a summary of total city-wide emissions broken down by (sub-) sector based on the activity data and emission factors submitted. It enables you to compare your city's current GHG emissions against any historical inventories, and also gives you the option to record emission credits to estimate your city's net emissions.

# ➤ For Adaptation

## Monitoring, evaluating and reporting adaptation

In order to assess the impacts and success of their climate change adaptation plans, cities must monitor and evaluate the results of their adaptation actions. Indeed, one of the crucial components of C40's Climate Action Planning Programme is the monitoring and evaluation of cities' climate change actions. However, the outcomes and impacts of climate change adaptation actions are difficult to track and monitor, and there is a lack of sufficient adaptation monitoring tools. As a result, cities face a significant challenge in determining the success or failure of their adaptation actions. This presents a barrier to making a case for adaptation, securing funding and implementing plans as effectively as possible.

**C40's Climate Change Adaptation Monitoring, Evaluation and Reporting (CCA MER) Framework** paves the way towards this goal. It is intended to help cities "make the case" for climate adaptation and assist and incentivise targeted climate change adaptation initiatives for C40 and non-C40 cities. The Framework consists of three main components - a guide to measuring progress in Climate Change Adaptation, an indicator matrix and a manual on using the matrix.

### Measuring progress in urban climate change adaptation

A framework developed in collaboration with cities and for cities



Toolbox

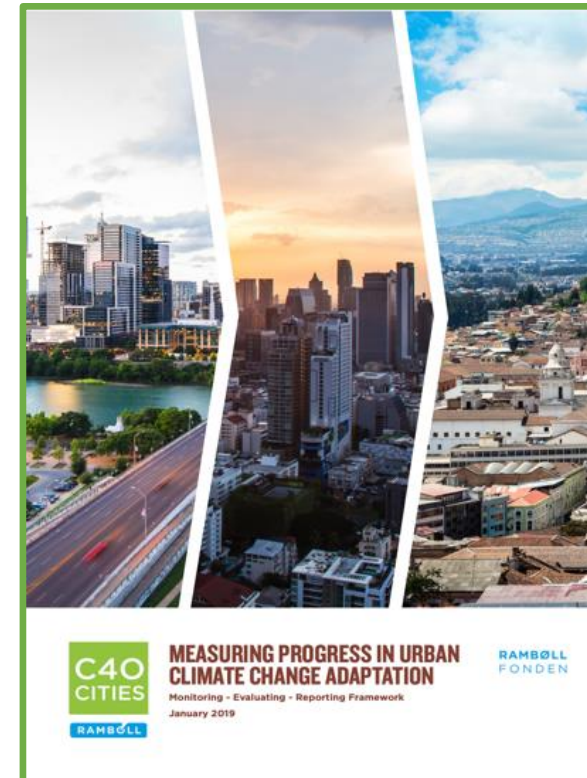
Resources



Measuring progress in urban climate change adaptation

C40's Climate Change Adaptation Monitoring, Evaluation and Reporting (CCA MER) Framework helps cities "make the case" for climate adaptation and assist and incentivise targeted climate change adaptation initiatives for C40 and non-C40 cities

Download



[Click here to download framework](#)



## Getting started

### 1 Preparing the ground for adaptation

### 2 Assessing climate change risks and vulnerabilities

### 3 Identifying adaptation options

### 4 Assessing and selecting adaptation options


### 5 Implementing adaptation

### 6 Monitoring and evaluating adaptation

- 6.1 Developing the monitoring and evaluation approach
- 6.2 Defining monitoring indicators
- 6.3 Finding examples of adaptation monitoring indicators
- 6.4 Using monitoring results to enhance the process of adaptation
- 6.5 Monitoring and evaluating adaptation: Self check

## 6 Monitoring and evaluating adaptation

In order to ensure that a city's adaptation process is effective and sustainable over time, it is important to regularly evaluate the progress of planned actions and check the actual outcomes against the objectives that were set out when developing the strategy. Further, it is important to consider if necessary to adjust, add or drop certain actions in view of the monitoring results. Monitoring can also help practitioners determine if adaptation measures have incurred any unanticipated side effects. Important elements of the monitoring and evaluation process are the approach or framework, selection of suitable indicators, and a process to use the results of the evaluation to improve a local authority's actions for the future. Please see Chapter 6.4 of the EEA report [Urban adaptation in Europe: how cities and towns respond to climate change](#) for additional information.

 This step assists local authorities and Covenant of Mayors signatory cities in developing a monitoring framework, including appropriate monitoring and evaluation (M&E) indicators, and complete the adaptation-related sections of the reporting platform MyCovenant (see also the offline working version of the [reporting template](#)) to report progress on adaptation actions and update, revise and readjust the adaptation strategy and/or action plan according to the findings of the M&E procedure.

<https://climate-adapt.eea.europa.eu/knowledge/tools/urban-ast/step-6-0>

# ➤ For Adaptation

Offline / excel working version of the reporting template) to report progress on adaptation actions and update, revise and readjust the adaptation strategy and/or action plan according to the findings of the M&E procedure.

**Strategy** HOME

---

**Strategy**

1) Long-term vision (e.g. 2050 and beyond)

2) Target(s) and commitment(s)

Mitigation					
CO <sub>2</sub> / GHG target	Unit	Target Year	Base Year	Reduction Type	Population estimates in target year
%		2020	[drop-down]	[drop-down]	
%		2030	[drop-down]	[drop-down]	
		2050	[drop-down]	[drop-down]	

① Only if your local authority has set up a 2020 objective.  
① Only if your local authority has set up a 2030 objective.  
① Add as many rows as necessary.

Adaptation				
Goal	Unit (% or other)	Target year	Base Year	Progress towards target
		[drop-down]	[drop-down]	
		[drop-down]	[drop-down]	

① Only if your local authority is committed to adaptation. If Add as many rows as necessary.

3) Administrative structure

Type of administrative structure
<input type="checkbox"/> Mono-sectoral - (one officer of) one sectoral department assigned within the municipal administration
<input type="checkbox"/> Multi-sectoral - several departments assigned within the municipal administration
<input type="checkbox"/> Multi-level - several departments assigned at different level(s) of governance (e.g. provincial/regional)

Comments [v] ① Click on the [v] button on the left to expand or collapse.

4) Staff capacity allocated

Type	Plan preparation			Plan implementation		
	Mitigation	Adaptation	(Estimated) full-time equivalent jobs	Mitigation	Adaptation	(Estimated) full-time equivalent jobs
Local authority	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Other level(s) of governance (e.g. Co-ordinator or supporter)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
External consultant	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
<b>Total</b>			0			0

Comments [v] ① Click on the [v] button on the left to expand or collapse.

5) Stakeholder engagement

Type of stakeholders	Stakeholders engaged	Engagement level	Engagement method(s)	Engagement purpose
Local authority's staff	<input type="checkbox"/>	[drop-down]	Survey ; Workshop ; Focus group ; Citizen jury ; Other (specify)	Information ; Consultation ; Advice ; Co-production ; Co-decision ; Implementation
External stakeholders at local level	<input type="checkbox"/> Academia ; Business & private sector ; Trade-unions ; citizens ; NGO & civil society ; Education sector ; Other (specify)	[drop-down]	Survey ; Workshop ; Focus group ; Citizen jury ; Other (specify)	Information ; Consultation ; Advice ; Co-production ; Co-decision ; Implementation
Stakeholders at other levels of governance	<input type="checkbox"/> National government and/or agency(ies) ; Sub-national governments(s) and/or agencies ; Other (specify)	[drop-down]	Survey ; Workshop ; Focus group ; Citizen jury ; Other (specify)	Information ; Consultation ; Advice ; Co-production ; Co-decision ; Implementation

① Delete categories that are not applicable. ① Delete categories that are not applicable. ① Delete categories that are not applicable.

Home Strategy **CO2-GHG emissions** Risks & vulnerabilities Action plan Key actions Actions Annex 1-Emission factors Annex 2-Adaptation scoreboard Annex 3-Adaptation indicators +

It also includes GHG Emissions

# ➤ For Adaptation

Below is a non-exhaustive list of indicators which may be used to complement the risks and vulnerability assessment. This is optional; the indicators below are illustrative examples and serve as a source of inspiration only.

Please select any indicators that your local authority is using to measure progress and complete the list with your own indicators - simply add/hide the rows according to your needs.

## ANNEX 3 - Indicators for Adaptation

Below is a non-exhaustive list of indicators which may be used to complement the risks and vulnerability assessment. This is optional; the indicators below are illustrative examples and serve as a source of inspiration only.

Please select any indicators that your local authority is using to measure progress and complete the list with your own indicators - simply add/hide the rows according to your needs.

ID#	Sector	Indicator	Measurement unit	Numerical value
1.1	Buildings	Number or % of (public/residential/tertiary) buildings damaged by extreme weather conditions/events	(per year / over a certain period)	
1.2	Transport, Energy, Water, Waste, ICT	Number or % of transport/energy/water/waste/ICT infrastructure damaged by extreme weather conditions/events	(per year / over a certain period)	
1.3	Land Use Planning	% of grey/blue/green areas affected by extreme weather conditions/events (e.g. Heat Island Effect, Flood, Rockfalls and/or Landslides, Forest/Land Fire)	%	
1.4	Transport, Energy, Water, Waste, Civil Protection & Emergency	Number of days with public service interruptions (e.g. energy/water supply, health/civil protection/emergency services, waste)	No.	
1.5	Transport, Energy, Water, Waste, Civil Protection & Emergency	Average length (in hours) of the public service interruptions (e.g. energy/water supply, public transport traffic, health/civil protection/emergency services)	hours	
1.6	Health	Number of people injured/evacuated/relocated due to extreme weather event(s) (e.g. heat or cold waves)	(per year / over a certain period)	
1.7	Health	Number of deaths related to extreme weather event(s) (e.g. heat or cold waves)	(per year / over a certain period)	
1.8	Civil Protection & Emergency	Average response time (in min.) for police/fire-fighters/emergency services in case of extreme weather events	min.	
1.9	Health	Number of water quality warnings issued	No.	
1.10	Health	Number of air quality warnings issued	No.	
1.11	Environment & Biodiversity	% of areas affected by soil erosion / soil quality degradation	%	
1.12	Environment & Biodiversity	% of habitat losses from extreme weather event(s)	%	
1.13	Environment & Biodiversity	% change in number of native species	%	
1.14	Environment & Biodiversity	% of native (animal/plant) species affected by diseases related to extreme weather conditions/events	%	
1.15	Agriculture & Forestry	% of agriculture losses from extreme weather conditions/events (e.g. drought/water scarcity, soil erosion)	%	
1.16	Agriculture & Forestry	% of livestock losses from extreme weather conditions	%	
1.17	Agriculture & Forestry	% change in crop yield / evolution of the annual grassland productivity	%	
1.18	Agriculture & Forestry	% of livestock losses from pests/pathogens	%	
1.19	Agriculture & Forestry	% of timber losses from pests/pathogens	%	
1.20	Agriculture & Forestry	% change in Forest composition	%	
1.21	Agriculture & Forestry	% change in water abstraction	%	
1.22	Tourism	% change in tourist flows / tourism activities	%	
1.23	Other	€ annual direct economic losses (e.g. in commercial/agricultural/industrial/touristic sectors) due to extreme weather event(s)	€/year	
1.24	Other	€ annual amount of compensation received (e.g. insurance)	€/year	

➤ Add as many rows as necessary.

ID#	Adaptive capacity factor	Indicator	Measurement unit	Numerical value
2.1	Socio-economic	% of public funds available to address a climate hazard and its impacts (e.g. fire, flood, heatwave, etc)	%	
2.2	Socio-economic	% share of vulnerable population groups (e.g. elderly (65+) / young (25-) people, lonely pensioner households, low-income/unemployed households, migrants and displaced people) - compared to national average in year X in country X	%	
2.3	Socio-economic	Number of households educated in house energy/water/waste management	No.	
2.4	Socio-economic	Population density (compared to national/regional average in year X in country/region X)	People per km <sup>2</sup>	
2.5	Socio-economic	% of population living in areas at risk (e.g. flood/drought/heat wave/ forest or land fire)	%	
2.6	Governmental & institutional	% change in green & blue infrastructure/areas (e.g. through new urban planning regulation/policy)	%	
2.7	Physical & environmental	Length of transport network (e.g. road/rail) located in areas at risk (e.g. flood/drought/heat wave/ forest or land fire)	Km	
2.8	Physical & environmental	Average time needed to reach a health facility	Hours	
2.9	Physical & environmental	% of areas non-accessible for emergency responses (e.g. firefighting services)	%	
2.10	Physical & environmental	% of (e.g. residential/commercial/agricultural/industrial/touristic) areas at risk (e.g. flood/drought/heat wave/ forest or land fire)	%	
2.11	Knowledge & technology	Hours needed to inform population of a risk via an early warning system	hours	

➤ Add as many rows as necessary.

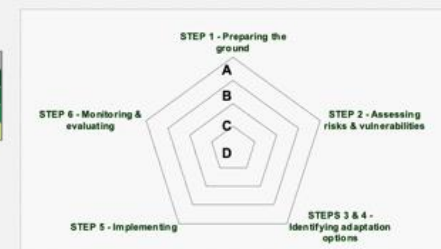
➔ Relevant resources

- EUROSTAT Urban Audit – Database
- EEA's Urban Adaptation Map Viewer – Tool
- EEA's Map book urban vulnerability to climate change – Factsheets (July 2016)
- EEA's Map book urban vulnerability to climate change – Technical Report (ETC-CCA & ETC-SIA, 2012)
- Urban Vulnerability Indicators – Technical Report (ETC-CCA & ETC-SIA, 2012)
- "World Council on City Data" – Open Data Portal
- ISO 37120 Sustainable Development of Communities: Indicators for City Services and Quality of Life (ISO May 2014) - Note: only informative sessions of standards are publicly available.
- Planning for Adaptation to Climate Change – Guidance Document (ACT Life project, 2013)

## ANNEX 2 - Adaptation Scorecard

Please complete the following self-assessment checklist, using the A-B-C-D scaling system (presented below) in column F (compulsory). Identify your next steps/areas of possible improvements through comments entered in column I (optional). The average status for every step is then visualised through the (automatically computed) spider graph below as well as in the "Synthesis Report" tab.

Status Scale	Status	Indicative Completion Level
D	Not started or getting started	0-25 %
C	Moving forward	25-50 %
B	Forging ahead	50-75 %
A	Taking the lead	75-100 %



Adaptation cycle steps	Actions	Self check of the Status	Comments
STEP 1 - Preparing the ground for adaptation ➔ STRATEGY	<p><u>Adaptation commitments defined/integrated into the local climate policy</u></p> <p>Human, technical and financial resources identified</p> <p>Adaptation team (officer) appointed within the municipal administration and clear responsibilities assigned</p> <p>Horizontal (i.e. across sectoral departments) coordination mechanisms in place</p> <p>Vertical (i.e. across governance levels) coordination mechanisms in place</p> <p>Consultative and participatory mechanisms set up, fostering the multi-stakeholder engagement in the adaptation process</p> <p>Continuous communication process in place (for the engagement of the different target audiences)</p> <p>Mapping of the possible methods &amp; data sources for carrying out a <u>Risk &amp; Vulnerability Assessment</u> conducted</p> <p>Assessment(s) of climate risks &amp; vulnerabilities undertaken</p>		500 chars left
STEP 2 - Assessing risks & vulnerabilities to climate change ➔ RISKS & VULNERABILITIES	<p>Possible sectors of action identified and prioritised</p> <p>Available knowledge periodically reviewed and new findings integrated</p> <p>Full portfolio of adaptation options compiled, documented and assessed</p>		500 chars left
STEPS 3 & 4 - Identifying, assessing and selecting adaptation options ➔ ACTIONS	<p>Possibilities of <u>mainstreaming adaptation</u> in existing policies and plans assessed, possible synergies and conflicts (e.g. with mitigation actions) identified</p> <p><u>Adaptation Actions</u> developed and adopted (as part of the SECAP and/or other planning documents)</p> <p>Implementation framework set, with clear milestones</p>		500 chars left
STEP 5 - Implementing ➔ ACTIONS	<p><u>Adaptation actions</u> implemented and mainstreamed (where relevant) as defined in the adopted SECAP and/or other planning documents</p> <p>Coordinated action between mitigation and adaptation set</p> <p>Monitoring framework in place for adaptation actions</p>		500 chars left
STEP 6 - Monitoring and evaluating ➔ INDICATORS	<p>Appropriate M&amp;E indicators identified</p> <p>Progress regularly monitored and reported to the relevant decision-makers</p> <p><u>Adaptation strategy</u> and/or <u>Action Plan</u> updated, revised and readjusted according to the findings of the M&amp;E procedure</p>		500 chars left

Please complete the following self-assessment checklist, using the A-B-C-D scaling system (presented below) in column F (compulsory). Identify your next steps/areas of possible improvements through comments entered in column I (optional). The average status for every step is then visualised through the (automatically computed) spider graph below as well as in the "Synthesis Report" tab.

# ➤ Sustainable cities framework



<http://rfsc.eu>

## Reference Framework Sustainable Cities

YOU ARE AN URBAN PLANNER, A CITY LEADER,  
A PRIVATE ORGANISATION AND YOU NEED TO:



**CHOOSE YOUR FRAMEWORK**  
RFSC OFFERS THE CHOICE  
BETWEEN SEVERAL EUROPEAN  
AND GLOBAL FRAMEWORKS IN  
FAVOUR OF INTEGRATED AND  
SUSTAINABLE URBAN  
DEVELOPMENT

**DEFINE YOUR AMBITIONS**  
IDENTIFY AND PRIORITISE YOUR  
AMBITIONS

**ASSESS YOUR PROJECT**  
VERIFY THAT YOUR ACTIONS  
MATCH YOUR AMBITIONS USING  
OUR TOOL

**MONITOR YOUR PROGRESS**  
USE RELEVANT AND SOUND  
INDICATORS TO MONITOR YOUR  
PROGRESS TOWARDS A GREEN,  
INCLUSIVE AND ATTRACTIVE CITY



### Assess your project

For each objective, describe your actions and estimate their impact.



Objective 10

INCREASE  
CITIZEN PARTICIPATION



Objective 17

IMPROVE INCLUSIVE EDUCATION  
AND TRAINING



Objective 19

STIMULATE GREEN GROWTH  
AND CIRCULAR ECONOMY



THE RFSC OFFERS YOU VISUALS THAT SHOW ESTIMATED GAPS BETWEEN YOUR AMBITIONS AND YOUR ACTIONS

**European Framework:  
5 dimensions and 30  
objectives were defined**

for a european vision of  
tomorrow's cities

<http://app.rfsc.eu> – login required

## One UN Training Module: Cities and Climate Change

Provider: UN CC-Learn

Format: web-based, short course, 2 hours, login (no fee)

Target group: multiple – government, professionals, citizens

Access to course

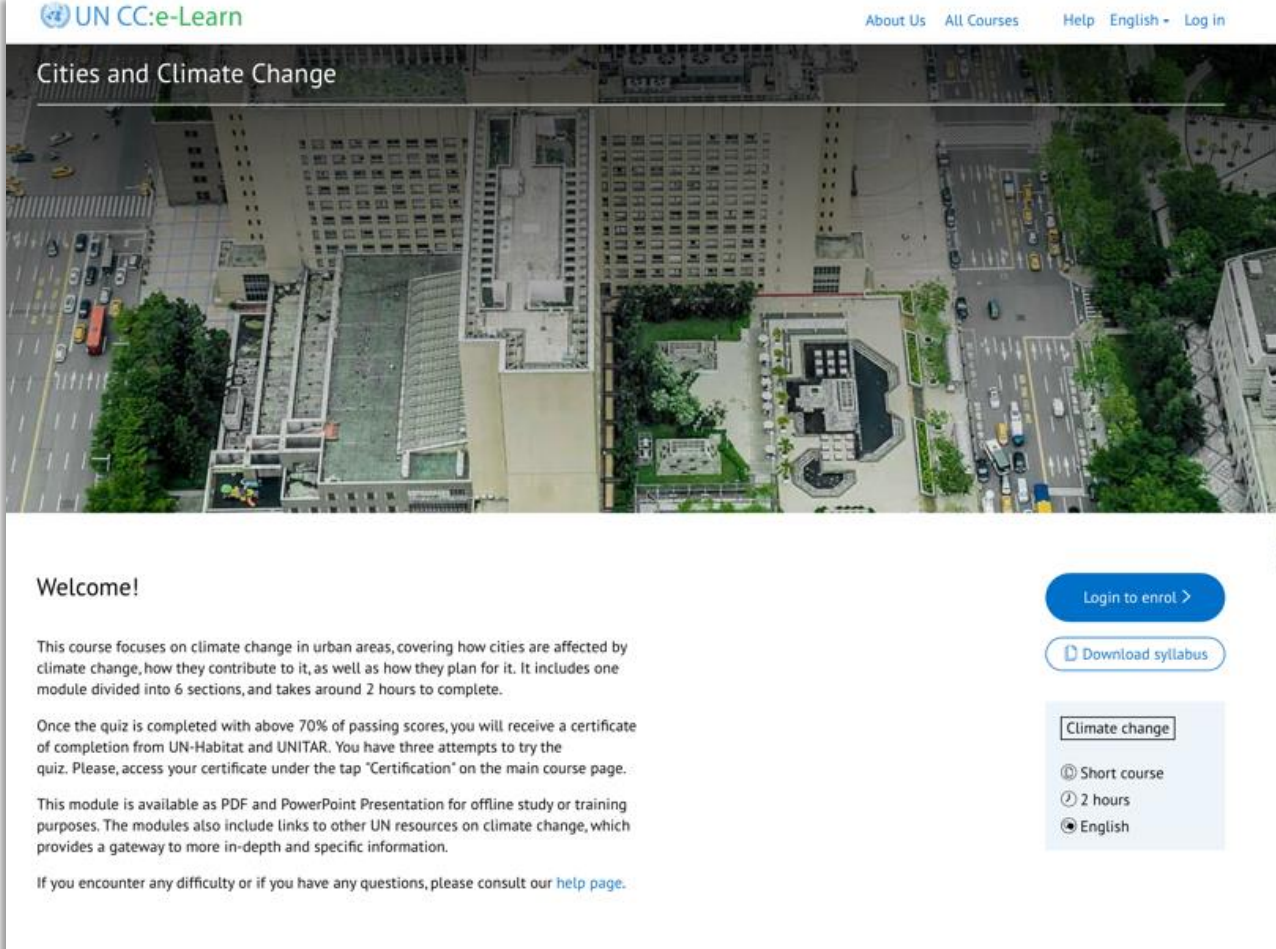
<https://unccelearn.org/course/view.php?id=21&page=overview>

Description:

The course focuses on climate change in urban areas, covering how cities are affected by climate change, how they contribute to it, as well as how they plan for it. It includes one module divided into 6 sections, and takes around 2 hours to complete.

Once the quiz is completed with above 70% of passing scores, you will receive a certificate of completion from UN-Habitat and UNITAR. You have three attempts to try the quiz.

This module is available as PDF and PowerPoint Presentation for offline study or training purposes. The modules also include links to other UN resources on climate change, which provides a gateway to more in-depth and specific information.



The screenshot shows the course page for 'Cities and Climate Change' on the UN CC:e-Learn platform. The page features a header with the UN CC:e-Learn logo and navigation links for 'About Us', 'All Courses', 'Help', 'English', and 'Log in'. Below the header is a large aerial photograph of a city street scene. The main content area includes a 'Welcome!' message, a brief course description, and a 'Login to enrol' button. A 'Download syllabus' button is also present. A 'Climate change' tag is visible, along with course details: 'Short course', '2 hours', and 'English'. A 'help page' link is provided at the bottom.

## City Climate Planner Certificate Program

Provider: World Bank, with inputs from WRI, ICLEI, C40

Funder: Korean Green Growth Partnership

Format: in-person training + online support + exam/ certificate

Target group: local planning professionals

Description:

The City Climate Planner (CCP) Certificate Program aims to increase the global talent base of local climate planning specialists. Through training and offering professional certificates, the CCP will help city practitioners develop the skills needed to design, plan and implement green growth initiatives in their cities. The World Bank and global partners developed the City Climate Planner (CCP) Certificate Program, a training and professional certificate program that aims to increase the global talent base of climate planning professionals. The first certificate to be developed is focused on GHG emission inventories, as they are seen as a key building block in development of quality climate action plans. The result is a training on the latest internationally accepted standard for GHG inventories, a rigorous certificate exam that allows candidates to demonstrate mastery of the content and access to professional networks that support this work. In the future, additional content areas and certificates that address other components of climate action planning will be created.

In-person Training: interactive curriculum based on the GPC standard that follows the process of inventory creation, starting from selling the benefits of an inventory to city executives, to data collection, management, quality assurance and verification, and ending with a module connecting GHG inventories to broader climate action planning.

Online Learning and Support: The CCP hosts a Collaboration for Development (C4D) where city practitioners can engage with global experts and find resources that help them manage GHG inventory challenges.

City Climate Planner Certificate Exam: The certificate exam is the core component of the City Climate Planner Certificate Program. Successful completion of the exam demonstrates mastery of the GHG inventory building process and its connection to city climate planning, and also supports professional development in the field.

<https://cityclimateplanner.org>

<https://cityclimateplanner.org/resources> community

## E-learning

### Cities and Climate Change Leadership

The e-Learning course on Cities and Climate Change Leadership will serve as an introductory course providing an overview of basic concepts, policies, institutions and financial instruments for use by cities. Its overall objective is to encourage city leaders and decision makers to undertake climate actions suitable to local needs.

[Learn more](#)

### Fundamentals of Climate Change

This course addresses the basics of Climate Change including: the greenhouse effect, and how it impacts the earth's climate; current and projected impacts of climate change on ecological, biological and socioeconomic systems; international negotiations and agreements addressing the climate change problem; international negotiations and agreements addressing the climate change problem; mitigation and adaptation approaches and financing climate change related development actions.

[Learn more](#)

### Greenhouse Gas Inventory Training

This online training, available on Education @USGBC, is for professionals working on emissions inventory, and will help you address the data challenges you will face, from collecting and analyzing large amounts of data from different sources to performing complex calculations.

[Take the course](#)

### The Compact of Mayors Online Training

The Compact of Mayors Online Training Course is designed for mayors, city sustainability officers, environmental policy advisors and city climate planning professionals. This self-paced e-learning course provides an overview of the tools, resources and compliance requirements of the Compact of Mayors, a global coalition of mayors and city leaders committed to sustainable local climate action.

[Learn more](#)



## Global Covenant of Mayors Online Training Course

Provider: GCoM

Format: online, approx. 5 hours, certificate (must complete 7 modules)

Target group: mayors, city sustainability officers, environmental policy advisors and city climate planning professionals

Access

<https://ghgprotocol.org/global-covenant-mayors-online-training-course>

### Description

This self-paced e-learning provides an overview of the tools and resources for the Global Covenant of Mayors, a global coalition of mayors and city leaders committed to sustainable local climate action. The Covenant establishes a common platform to capture the impact of cities' collective actions through standardized measurement of emissions and climate risk, and consistent, public reporting of their efforts. To develop greenhouse gas inventories, cities use the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC).

The ten-module course includes interactive exercises, infographics, maps, graphs and resources for learning about the Global Covenant of Mayors. Lessons provide foundational knowledge for getting started with GHG inventories, setting mitigation targets and developing climate action plans. The course also provides ample opportunities for users to apply material through practice exercises with real-time feedback that motivates and reinforces learning.

Course enrollees and expect to learn about:

- How to get started developing a GPC compliant greenhouse gas inventory
- Reporting greenhouse gas targets
- Good practices for developing community-scale climate action plan
- How to improve urban resilience and create a climate adaptation plan

## Cities and Climate Change Academy

Provider: UN-Habitat,

Format: open access, downloadable online course

Target Audience: University lecturers and other trainers in post-secondary learning institutions.

### Description:

Educational modules for the Curricula of Universities, Higher Education and Training Institutions on Climate Change in Urban Areas. These modules provide an overview of theory and concepts of climate change including mitigation, adaptation, risk and vulnerability, and demonstrate how climate change is a key issue in urban areas. Climate change education is needed to address the challenges of climate change and universities play an important role in transferring knowledge. The modules show how cities are both affected by and contribute to climate change and how planning for climate change is essential. The project was supported by funding from the Government of Norway. The modules were developed under the Habitat UNI, the UN-Habitat partnership with universities globally. The Cities and Climate Change Academy is one of the components of the Cities and Climate Change Initiative. The developers of the modules were organized in consortia of universities that collaborated intensively in the development of the modules.

### Modules:

Module 1: Theory and Concepts of Climate Change and Cities

Module 2: The Practice of Urban Climate Change Adaptation and Mitigation

Module 3: Planning for Climate Change

Module 4: Climate Change and Urban Water Cycle Management

Module 5: Climate Change and Urban Energy

Module 6: Climate Change and Urban Mobility

Module 7: Climate Change and Shelter & Housing

The main objective of these modules is to **provide a comprehensive body of knowledge on climate change in the context of cities** and to provide universities, higher education institutions and training organizations with **ready-to-use materials and case studies** to be utilized in their regular educational and training programs.

From 2011

<https://mirror.unhabitat.org/content.asp?typeid=19&catid=657&cid=9317>

[https://mirror.unhabitat.org/downloads/docs/CCCA\\_Africa\\_Report\\_final.pdf](https://mirror.unhabitat.org/downloads/docs/CCCA_Africa_Report_final.pdf)

## Climate Adaptation and Local Resilience – Online training

Provider: The Hague Academy for Local Governance

Format: online

### Description

The course discusses how local authorities can adapt to climate change and increase their climate resilience. We start by discussing climate change projections and scenarios and further explore the policy implications of climate change projections in a case study. We will identify tools to measure climate change vulnerabilities and practice by assessing their own local context.

After that, we zoom in on the design and planning of sustainable development policies. Attention is paid to the integration of smart solutions for food, water, energy and transport as well as to city-region relations. In a special module, we explore instruments for financing climate adaptation. Further, we will address change management and how to deal with obstacles during the implementation of climate policies.

In interactive sessions, best practices from different parts of the world are discussed and linked to the context of the participants. In addition, we visit inspiring examples from the Netherlands, such as a climate-proof neighbourhood of Culemborg, combining green buildings with smart energy and waste management, urban farming in Rotterdam, and projects to adapt to floods and rising sea levels.

<https://thehagueacademy.com/blog/2020/03/climate-adaptation-and-local-resilience-2/>

### Open courses

[2021 Open Courses](#)

[2022 Open Courses](#)

[Participants and Study Visits](#)

[Scholarship opportunities](#)

## Climate Adaptation and Local Resilience – Online training

**Part 1 - Online:** 12/04 - 21/05 **Part 2 - Online:** 28/06 - 16/07

### Content

- ▶ [Course Introduction:](#)
- ▶ [Course format:](#)
- ▶ [Key Information](#)
- ▶ [Learning Objectives](#)
- ▶ [Intended Audience](#)
- ▶ [Experts](#)
- ▶ [Practical Information](#)
- ▶ [Funding Opportunities](#)
- ▶ [Nuffic Scholarships](#)
- ▶ [Application Procedure](#)
- ▶ [Payment](#)
- ▶ [Visa Applications](#)
- ▶ [Cancellation](#)
- ▶ [Contact Information](#)

### Course Introduction:

The course discusses how local authorities can adapt to climate change and increase their climate resilience. We start by discussing climate change projections and scenarios and further explore the policy implications of climate change projections in a case study. We will identify tools to measure climate change vulnerabilities and practice by assessing their own local context.

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### Course format:



Due to the travel restrictions associated with the Coronavirus outbreak, the format of the course has been adjusted. We are now offering a practice-oriented **online course**, consisting of two parts:

**First module:** This module will consist of several assignments spread throughout the timeframe provided. This is an opportunity to learn about the topic (while enhancing your online skills in an [innovative e-learning environment](#)) and prepare you for the next part of the course.

**Dates:** 12 April – 21 May 2021.

## World Bank – Open learning campus – Self-paced courses

### [Safe and Resilient Cities \(Self-paced\)](#)

The course will expose city officials and practitioners to cutting edge tools on vulnerability assessments, policies and programs, stock-taking and gaps analysis, and financial access. The discussion will also focus on decision making under uncertainty to identify options and establish priorities, making the city more resilient to climate change impacts and natural disasters.

### [Cities and Climate Change Leadership \(Self-paced\)](#)

The e-Learning course on Cities and Climate Change Leadership will serve as an introductory course providing an overview of basic concepts, policies, institutions and financial instruments. Its overall objective is to encourage city leaders and decision makers to undertake climate actions suitable to local needs.

### [Introduction to Disaster Risk Management \(Self-paced\)](#)

This introductory course familiarizes development practitioners with contemporary concepts and practices in disaster management and discusses the paradigm shift from re-active to pro-active approaches in this cross cutting field of development.

### [Low Carbon Development: Planning & Modelling \(Self-paced\)](#)

This course has four modules - (i) Overview for Policymakers; (ii) Power; (iii) Household; (iv) Transport - which introduce you to climate change mitigation, explore the concepts surrounding low carbon development planning on an economy-wide basis and take a detailed look at what this means in the power and transport sectors and for household electricity use

## GLOBAL URBAN LECTURES

UN-Habitat's Global Urban Lectures are a free resource of video lectures open to use for academic, professional or personal purposes.

Global Urban Lectures - Accessing the knowledge of UN-Habitat associated experts.

In April 2014 UN-Habitat launched the Global Urban Lectures – lecture packages focused on subjects related to cities and urbanization.

Each package consists of a 15 min video, a synopsis of the topic, a biography of the speaker and links to in depth study. The speakers are associated with UN-Habitat's work, recruited from universities, think-tanks, governments, NGO's, and private sector institutions. The series wishes to demonstrate a sound evidence-based analysis of a given problem and issues at stake, identify propositions to address them and provide examples that demonstrate how such propositions actually work, are being tested or have been implemented.

The views expressed are the ones of the lecturers themselves and do not necessarily represent the views of UN-Habitat.

<https://unhabitat.org/knowledge/global-urban-lectures>



## Planning for Climate Change in African Cities

Organization: United Cities and Local Governments of Africa (UCLGA), African Local Government Academy, Institute for Housing and Urban Development at the Erasmus University Rotterdam (IHS)

Short description: The Course on Planning for Climate Change in African Cities provides the foundation for understanding cities' exposure and sensitivity to climate change, and how cities can manage these impacts in the face of growing uncertainty. It does so by introducing the basic concepts of urban resilience and adaptation, by using illustrative case studies in different African cities. Furthermore, this module provides lectures on the different approaches for climate change planning, whether ad hoc, strategic or mainstreaming; introduces the different steps in the planning cycle – from initial assessment to monitoring and evaluation; and presents the different decision support and assessment tools for prioritizing climate change actions. This course broadens the discussion on planning for climate change by engaging learners to apply their knowledge and practice their decision-making skills in a simulated exercise.

Course Objectives: At the end of this course, learners should be able to:

- Recognize the effects, impacts, and drivers of climate change in cities
- Understand the drivers of urban risk and vulnerability in the context of climate change
- Distinguish the typologies, approaches, and tensions of climate change adaptation
- Explain the different approaches and steps in climate change planning
- Examine the decision support and assessment tools for climate change
- Develop a climate change plan based on participants' city contexts

Comments

- Veronica Olivotto, Expert, Climate Change Risk and Adaptation, IHS
- Dr. Shuaib Lwasa, Associate Professor, Geography, Makerere University
- Prof. Andy Gouldson, School of Earth and Environment, University of Leeds
- Marcus Mayr, Climate Change Planning Unit, UN-Habitat
- Dr. Stelios Grafakos, Head of Urban Environment and Climate Change Group, Institute for Housing and Urban Studies (IHS), Erasmus University Rotterdam
- Dr. David Dodman, Director of the Human Settlements Group, International Institute for Environment and Development
- Dr. Diana Reckien, Associate Professor, Department of Urban and Regional Planning and Geo-Information Management, University of Twente
- Dr. Nathalie Jean Baptiste, Team Leader Climate Change and Environmental Studies, Institute of Human Settlements Studies, Ardhi University

Contact Person:

<https://www.coursera.org/learn/climate-change-africa>

# SDG Academy - Selfpaced course: Cities and the Challenge of Sustainable Development

**Organization:** SDSN

**Short description:** This mini-series is a companion piece to the SDG Academy's full-length "Sustainable Cities" course and also serves as a brief introduction to the topic of urban sustainable development and the SDGs. Join Professor Sachs as he delves into the challenges and opportunities that cities face in the 21st century. From the inclusion of SDG 11 to the emphasis on subnational actors, cities are increasingly recognized as key players in achieving the SDGs. In these five lectures, Professor Jeffrey Sachs asks the questions: What does it mean to be a 'sustainable city' in the 21st century? And what types of challenges do local governments face in adapting to new technologies, energy systems, modes of transportation and more?

On-demand mini-series; Login necessary –

**Comments** Part 1: Introduction to the SDGs Part 2: Why Cities? The Importance of SDG 11 Part 3: The 10-Point Agenda for 21st Century Cities Part 4: Urban Environment and Energy Systems Part 5: Cities as Hubs of Knowledge

**Target group** Local stakeholders

**Contact Person:** Prof. Jeffrey D. Sachs;

## About this course

According to the United Nations, urbanization and population growth could result in an increase of 2.5 billion people into urban populations by 2050, with associated impacts ranging from increased transportation needs to more building. How do we make cities sustainable to support this growth?

In this mini-series, learn the challenges of local governments to adapt to new technologies, energy systems, modes of transportation and more in order to build the sustainable cities of the 21st century.

This mini-series is a companion piece to the SDG Academy's full-length [Sustainable Cities](#) course.

This course is for:

- Anyone new to the concept of sustainable cities or smart cities who wants to understand the foundations of modern urban development
- Graduate students and advanced undergraduate students in architecture, real estate development, sustainable development, sustainable business and other related fields who want a concise overview of the concept of sustainable cities
- Sustainable development practitioners interested in the basics of sustainable development for cities around the world
- Private-sector actors, such as those who work in technology, telecommunications, transportation or the energy industry – whose work can contribute to and redefine this space

[Show less](#)

## At a glance

- **Institution:** [SDGAcademyX](#)
- **Subject:** [Environmental Studies](#)
- **Level:** Introductory
- **Prerequisites:** None.
- **Language:** English
- **Video Transcript:** English

## What you'll learn

- The basics of sustainability
- The Sustainable Development Goals and how they apply to cities
- What constitutes a sustainable city
- How various sectors contribute to modern, sustainable urban development

# Klimaschutz in Kommunen -



## [Practical Guide \(in German\)](#)

Updated and expanded practical guide "Climate Protection in Municipalities" supports municipalities in a structured approach to climate protection and serves as a working aid for the initiation and implementation of climate protection activities.



# Werkzeuge der Anpassung + Klimalotse

Themen > Klima | Energie > Klimafolgen und Anpassung > Anpassung an den Klimawandel > Werkzeuge der Anpassung > Klimalotse

1. Klimawandel    2. Verwundbarkeit    3. Maßnahmen

4. Strategie & Integration    5. Beobachtung & Bewertung



**Klimalotse**

**KomPass**  
Kompetenzzentrum  
Klimafolgen und Anpassung

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**Klimalotse**

Willkommen beim Klimalotse, dem Leitfaden zur Anpassung an die Folgen des Klimawandels für Kommunen!

The [Klimalotse](#) is a web-based guide (developed by the Federal Environment Agency) that helps to avoid the risks of climate change and to pursue concrete opportunities from it. Addressed are mainly representatives of small and medium companies and municipalities.

It offers 3 modes of use: in the first one the focus is on general climate impacts and requires some 30min to be completed; the second mode aims at providing basic knowledge and guidance on dealing with climate change and adaptation (2-3 hour without the exercises) and the third mode focus on concrete blocks for developing an adaptation strategy (a strategy for a municipality or for business is developed by working through the modules and tasks, and it can take from 6 hours to several days);

**KlimaExWoSt**  
Stadtklimalotse

STADT  
KLIMA  
ExWoSt

Start Stadtklimalotse Klimaanpassung Glossar Feedback English

### Login Stadtklimalotse

Benutzername

Kennwort

Submit

[Neuer Benutzer](#)

## Willkommen bei KlimaExWoSt

Der Klimawandel stellt Städte und Siedlungsstrukturen in Deutschland vor neue Herausforderungen. Es gilt, den Ursachen und Folgen des Klimawandels durch urbane Konzepte zu begegnen. Eine klimawandelgerechte Stadtentwicklung fordert stärker als bisher die Integration der vielfältigen sozialen, ökologischen und ökonomischen Aspekte. Zusätzlich stellen Komplexität und Unsicherheit die Entscheidungsträger vor besondere Schwierigkeiten. Bisher haben nur wenige, meist große Städte Konzepte zur Anpassung an den Klimawandel vorgelegt. Gerade mittleren und kleineren Kommunen fehlen oft Personal, Know-how und Ressourcen, um entsprechende Anpassungsstrategien an den Klimawandel anzugehen. Hier will der Stadtklimalotse ansetzen und einen planungsbezogenen Werkzeugkasten an die Hand geben.

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### Entscheidungsunterstützung für die Stadtentwicklung

Aufbauend auf den wissenschaftlichen Grundlagen wurde ein in den Kommunen einsetzbares, akteursspezifisches Entscheidungsunterstützungswerkzeug entwickelt. Dieser Stadtklimalotse soll die Auswahl und Umsetzung von Maßnahmen zum Klimaschutz und zur Klimaanpassung für die kommunale Stadtentwicklung unterstützen. Weitere Informationen finden Sie auch in unserem [Flyer](#).

Derzeit ist die Version 5.0 beta online und bietet unter anderem folgende Features:

- Ansätze zur flexiblen Planung unter Unsicherheit inkl. Umsetzungsbeispiele aus der Planungspraxis
- Ansätze zur ökonomischen Bewertung von Anpassungsmaßnahmen inkl. Umsetzungsbeispiele aus der Planungspraxis
- Good Practice Datenbank
- Überarbeitetes Betroffenheitsmodul zur Selbsteinschätzung der Betroffenheit durch den Klimawandel
- Berücksichtigung der Aspekte 'Demografischer Wandel' und 'Klimaschutz'
- Verbesserte Übersicht zu Synergien und Konflikten einzelner Maßnahmen

[Hier geht's direkt zum Stadtklimalotse](#)

Based on scientific evidence a decision support system (DSS) was developed focusing on German municipalities as central actors. This DSS called “[Stadtklimalotse](#)” supports the identification and implementation of appropriate measures for mitigation and adaptation in urban development.

# Introduction: Role of cities in climate change

- Ca. 70% of global energy consumption, ca. 75% of global natural resource consumption, and ca. 70% of energy-related GHG emissions in cities → Cities as drivers of climate change
  - High vulnerability of cities due to accumulation of people and assets → Cities as victims of climate change
  - Cities → Culprits and victims
  - Cities offer:
    - **proximity to people and understanding of needs**
    - **knowledge and innovation hubs**
    - **economies of scale / efficiency gains**
    - **mayors as 'champions' for initiating change**
- Cities as solutions and actors against climate change

# COP21 and the Paris Agreement – key outcomes

- Long-term **mitigation** goal
  - Keep temperature rise well below 2°C & pursue efforts for 1.5°C goal
  - Reach global peaking of GHG emissions as soon as possible, GHG neutrality in the second half of this century
- **Adaptation** goal: increase ability to adapt and foster resilience
- **Support and Financing:**
  - Annually USD 100 billion (from 2020 until 2025) by developed countries
  - Private finance mobilization: a collective effort
  - Developed countries taking the lead, others invited to voluntarily support
- **Capacity Building**
  - Increasing synergies and cooperation at all levels
  - Country-specific & to strengthen ownership of countries

# Role of cities at COP21

1. **Advocacy for cities' role in fighting climate change**
  2. **Show activities and commitments of cities as role models for national governments**
- **Lima-Paris Action Agenda – Thematic Day „Cities and Regions“**
    - **Global initiatives fostering local and regional climate engagement:** Compact of Mayors, Covenant of Mayors, Compact of States and Regions, Carbon Neutral Cities Alliance, Cities Finance Leadership Alliance, ...
    - **Commitments by 2,254 cities and 150 regions at NAZCA platform**
    - **Paris Action Statement:** increase scale & number of cities & regions' climate action, build resilience, scale up financing, reinforce dialogue, partnerships and policies among all levels

# Role of cities at COP21

- **Climate Summit for Local Leaders**
  - **Mayor of Paris, Anne Hidalgo & UN GS Special Envoy “Cities and Climate Change”, Michael Bloomberg**
  - **Ca. 1,000 cities and regions representatives**
  - **Paris City Hall Declaration:**
    - participatory resilience strategies and adaptation plans
    - annual GHG emission reduction of 3.7 gigatons by 2030
    - transitions to 100% renewable energy and 80% GHG emission reduction by 2050
- **Prominent actors in numerous side events organized by city networks and member states**



# Consideration of cities in the Paris outcomes

## 1. Agreement

- **Preamble:** “*Recognizing* the importance of the engagements of all levels of government and various actors ... in addressing CC.”
- Article 7:  
*recognition of adaptation as challenge for all levels and key component of long-term global response to CC*
- Article 11:  
*Capacity-building to foster country ownership of Parties, including at national, subnational and local levels*

## 2. Decisions

- Uphold and promote regional and international cooperation to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including cities [among others]
- **Capacity building:** foster global, regional, national and subnational cooperation and identify opportunities to strengthen capacity at the national, regional, and subnational level;
- **Non-party stakeholders:** efforts welcomed, invitation to scale-up, needs to strengthen knowledge, technologies and practices as well as for incentives recognized

# Paris Climate Agreement



- The Paris Agreement **recognizes the importance of cities** and other subnational administrations in the fight against climate change
- **Seven hundred representatives** of local and regional authorities pledged to achieve ambitious targets
- The local authorities also pledged to work towards the **full transition to renewable forms of energy** at the local level
- Compact of Mayors, the Covenant of Mayors, the Compact of States and Regions, the NAZCA platform and the Local Government Climate Roadmap
- Commitments made must be reflected in sustainable development plans and in actions defined in their frameworks whilst necessary measures are established to assess the results and provide accountability to the people



# Climate Change – Role of Cities



- The threats to humanity and the planet posed by climate change cannot be addressed **without the engagement of local governments**.
- ICLEI: the **Local Government Climate Roadmap**: recognition of the contribution of local and subnational governments in official COP outcome documents and the launch of the carbon $n$ ® Climate Registry (cCR).
- **What next?** Through their **voluntary commitments**, enormous potential, committed networks and innovative partnerships, local and subnational governments are ready to accelerate action and keep raising ambitions globally; but they need to be empowered even further.
- Vertical integration between levels of government to effectively address climate and energy issues improves policy coherence and implementation.

# Role of Cities



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- Through their voluntary commitments, enormous potential, committed networks and innovative partnerships, local and subnational governments are ready to **accelerate action and raise ambitions globally**

# What needs to be done

## ENGAGE

- Engage local governments in the **design of national plans** (NDCs and NAPs)
- Strengthen **dialogue** between national and local governments
- **Align** climate plans with existing national and local processes and priorities

## ENCOURAGE

- Link mitigation actions with **(co-)benefits** valued by local governments
- Provide **mandates and powers** to motivate local governments to act
- Use **targets** and **regulation** to prompt local government implementation
- Create **financial incentives** to stimulate local government engagement

## ENABLE

- Create the conditions to ensure local governments have sufficient funding
- Support local governments in accessing **data and information**
- Help local governments in developing or accessing **skills and knowledge**
- Enable **knowledge sharing** and **learning** among local governments

- [TUrbOCLiC](#) training – How do I implement global agendas in my city

## Session 5: The Climate Agreement and Urban Mitigation and Adaptation

Measure Strategy	Co-benefits of action	Ease of implementation	Cost	Stakeholder acceptability	Link to other SDGs
Increase share of public transportation and raise efficiency and emission performance standards of vehicles					
Construction of landfill with gas capture					
Promotion of energy efficiency in public buildings					
Expand energy supply through renewable energy					