

Public Authorities Next Steps Guide: Taking Action

INTRODUCTION

The 'Next Steps Guide' provides topic-specific recommendations and resources to support your climate and environmental action.

USING THE NEXT STEPS GUIDE

The guide is structured to align with CDP's 2022 Public Authorities Questionnaire; each section will provide a variety of recommendations and resources to improve your data quality and support action. You can navigate between the different sections using the Table of Contents (page 2).

CDP RESOURCES

CDP is here to support you through the disclosure journey. We provide a variety of resources year-round to support your climate action.

Tools and Resources

Resources

- ▼ [CDP Webinars](#)
- ▼ [Public Authorities Questionnaire Guidance](#)
- ▼ [CDP Open Data Portal](#): Search and export data from cities and states and regions that disclose publicly.
- ▼ [CDP Home Page Search](#): Search for a questionnaire response.
- ▼ [Matchmaker](#): Participants receive assistance linking economic development and infrastructure projects with climate and sustainability efforts to improve potential for investment and implementation.
- ▼ [Supply Chain Membership](#): Evaluate your Scope 3 footprint and build a rigorous supplier engagement program to reduce your environmental impact.
- ▼ [Accredited Solutions Providers](#): CDP's network of accredited partners who provide solutions to accelerate your journey towards environmental leadership. Services offered include Risk/Opportunity Assessment, Carbon Offsets, Transition Planning and more.
- ▼ [Sustainable Infrastructure Landing Page](#): a one-stop-shop for CDP's efforts to catalyze climate action, partnerships and investment in sustainable infrastructure across cities, states, regions and public authorities. You can access our recent publications, register for upcoming events and programs and browse our toolkits and resources.

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Risk and Opportunities Module

Climate-related Risk and Opportunities

For many public authorities, climate change poses significant financial challenges and opportunities, now and in the future. CDP asks about a process for identifying, assessing, and responding to climate-related risks and opportunities so that data users may gauge the thoroughness of your public authority's understanding of its exposure to climate-related issues. Understanding how a public authority integrates the consideration of climate-related issues into its overall risk management framework provides insight into the thoroughness of the risk management processes employed by public authorities. Public authorities that fully integrate and frequently assess climate-related risks and opportunities across their value chain and over a range of time-horizons may be better equipped to handle longer-term uncertainties and liabilities.

Climate-related risk, in line with the TCFD, refers to the potential negative impacts of climate change on an organization. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation, temperature and increased variability in weather patterns (e.g., sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations.

Climate-related opportunity, in line with the TCFD, refers to the potential positive impacts on an organization resulting from efforts to mitigate and adapt to climate change, such as through resource efficiency and cost savings, the adoption and utilization of low-emission energy sources, the development of new products and services, and building resilience along the supply chain. Climate-related opportunities will vary depending on the region, market, and industry in which an organization operates.

| Tools and Resources |
|---|
| <p><i>Resources</i></p> <ul style="list-style-type: none">▼ The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities, TCFD (2017) <p><i>Case studies & examples (note: inclusion in this list does not imply an assessment by CDP that these plans are 'credible'.)</i></p> <ul style="list-style-type: none">▼ Climate Readiness: Assessment and Action Plan, Sacramento Municipal Utility District (SMUD) (2016)▼ Climate Readiness: Action Plan Status Report, SMUD (2018) |

Strategy Module

Climate Transition Plan

A climate transition plan is a time-bound action plan that clearly outlines how an organization will achieve its strategy to pivot its existing assets, operations, and entire business model towards a trajectory that aligns with the latest and most ambitious climate science recommendations, i.e., halving greenhouse gas (GHG) emissions by 2030 and reaching net-zero by 2050 at the latest, thereby limiting global warming to 1.5°C.

Organizations typically set emissions reduction targets, commit to monitoring their progress on climate action and reduce their exposure to climate-related risks. A climate transition plan is an encompassing instrument that helps organizations to align their climate ambitions. This alignment is achieved by establishing specific strategies and clear accountability mechanisms to track progress. Transition plans are critical.

| Tools and Resources |
|---|
| <p><i>Resources</i></p> <ul style="list-style-type: none">▼ Climate Transition Plan: Discussion Paper, CDP (2021)▼ Are Companies Being Transparent in Their Transition: 2021 Climate Transition Plan Disclosure, CDP (2022)▼ Technical Note: Reporting on Transition Plans, CDP (2022) <p><i>Case studies & examples (note: inclusion in this list does not imply an assessment by CDP that these plans are 'credible.')</i></p> <ul style="list-style-type: none">▼ Aena Climate Action Plan (2022)▼ Charting the Course to Zero: Port of Seattle's Maritime Climate and Air Action Plan (2021)▼ Orsted Climate Action Plan▼ 2030 Zero Carbon Plan, Sacramento Municipal Utility District (SMUD) (2021) |

Scenario Analysis

Scenario analysis is a strategic planning tool to help an organization understand how it might perform in different future states. It is designed to embrace complexity and uncertainty, allowing decision makers to evaluate the organization's flexibility, resilience, or robustness across a range of potential outcomes. Scenario analysis is not designed to produce rigid predictions nor irrational futures, but is designed to consider possible and plausible alternative futures

Scenarios are not forecasts or predictions. Scenario analysis is a tool to enhance critical strategic thinking by challenging 'business-as-usual' assumptions and instead exploring alternatives based on their relative impact and likelihood of occurrence (i.e. critical uncertainties).

As recommended by TCFD, scenarios should be sufficiently diverse to allow challenging "what-if" analyses and capture a wide range of insights about uncertain futures. In assessing transition risks, a public authority should consider using or developing a 1.5°C scenario. In assessing physical risks, a public authority should use the current GHG pathway based on government policies currently in place, which according to latest estimates from the [Climate Action Tracker](#) would result in warming of about 2.7°C above pre-industrial levels. 2.7°C is the median of the low and high ends of current policy projections.

| Tools and Resources |
|---|
| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ Technical Note on Scenario Analysis, CDP (2022) ▼ The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities, TCFD (2017) ▼ Guidance on Scenario Analysis for Non-Financial Companies, TCFD (2020) |

Targets Module

Emissions Reduction Targets

Reducing emissions is key to combatting climate change. National governments who are signatories to the [UNFCCC](#) have committed to reducing emissions within their Nationally-Determined Contributions to the [Paris Agreement](#). Public authorities can support this – or even encourage further ambition - by setting emissions reduction targets.

CDP and our partners in the [Science Based Targets Network](#) encourage you to set an ambitious long-term target and a mid-term target that will support your progress. Ideally, your targets would be science-based climate targets. Science-based targets (SBTs) are measurable and actionable environmental targets aligned with the goals of the Paris Agreement.

| Tools and Resources |
|---|
| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ Science-based Climate Targets: A Guide for Cities, Science-Based Targets Network (2020) ▼ Foundations of Climate Mitigation Target Setting, UNEP (2022) ▼ Mitigation Goal Standard, Greenhouse Gas Protocol (2014) ▼ Setting Goals and Tracking Emissions Over Time, Chapter 11 of Global Protocol for Community-Scale Greenhouse Gas Emission Inventories - An Accounting and Reporting Standard for Cities, Greenhouse Gas Protocol (2014) |

Other Climate-related Targets

Many parts of the world are already experiencing significant impacts of climate change. It is therefore critical to set goals to reduce threats and support the resilience of your operations and protect critical infrastructure.

| Tools and Resources |
|--|
| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ Guiding Principles for City Climate Action Planning, UN-Habitat (2015) ▼ Integrating Climate Adaptation: A toolkit for urban planners and adaptation practitioners, C40 Cities and Global Platform for Sustainable Cities (GPSC) (2020) ▼ Goals and milestones for climate resilience and adaptation, C40 Cities ▼ Urban Adaptation Support Tool: provides guidance on how to develop, implement and monitor your adaptation plan ▼ Developing Urban Climate Adaptation Indicators, Urban Sustainability Directors Network (USDN) and Institute for Sustainable Communities (ISC) (2017) |

- ▼ [Measuring Progress in Urban Climate Change Adaptation](#), C40 Cities and Ramboll (2019)
- ▼ [Urban Adaptation Assessment – Indicator List](#), Notre Dame Global Adaptation Initiative
- ▼ [Interaction between adaptation and mitigation actions](#), C40 Cities
- ▼ [Climate Adaptation Toolkit for Local Authorities](#), Local Partnerships (2021)
- ▼ [Evaluating the impact of nature-based solutions: A handbook for practitioners](#), European Commission (2021)
- ▼ [Nature-based Solutions Initiative](#), University of Oxford: resources and insights on the potential of nature-based solutions to address global challenges

Case studies & examples

- ▼ [Urban Adaptation Support Tool](#): examples of adaptation action plans
- ▼ [Helping cities to address climate change – Current projects](#), C40 Cities Finance Facility: examples of green infrastructure projects focused on transportation, energy and adaptation
- ▼ [Guadalajara's Urban Forests Network](#), C40 Cities (2020)
- ▼ [Cities leading the way: Seven climate action plans to deliver on the Paris Agreement](#), C40 Cities (2021)

Energy Targets: Increasing renewable energy uptake can drive emissions reduction while also increasing new business and economic opportunities. CDP encourages you to develop a renewable energy target to guide the decarbonization of your electricity grid.

Tools and Resources

Resources

- ▼ [Data and statistics](#), IEA: database of national energy source mixes
- ▼ [Renewable Energy in Cities](#), IRENA (2016)
- ▼ [Renewables in Cities 2021 Global Status Report](#), REN21 (2021)

Case studies & examples

- ▼ [Dubai's 'Mohammed Bin Rashid Al Maktoum' 5,000MW Solar Park Aims to Save 6.5 Million tCO2e Annually](#), C40 Cities (2019)
- ▼ [Zero Carbon Yokohama – Renewable Energy Partnership](#), C40 Cities (2019)
- ▼ [Sunset Park: Community Solar Energy in NYC](#), C40 Cities (2020)
- ▼ [Cities100: Cape Town is spearheading South Africa's shift towards decentralised, renewable energy supply](#), C40 Cities and Nordic Sustainability (2019)
- ▼ [Waterfalls to Generate Clean Energy: Curitiba's First Hydroelectric Power Plant](#), C40 Cities (2020)

Transportation Targets: Setting transportation goals which work towards a more sustainable transport system is an important step in reducing GHG emissions. These goals may aim to increase low-carbon vehicles, public transport, or the consumption of renewable energy in transport. They may also focus on the uptake of active modes of transport and walkable cities.

Tools and Resources

Resources

- ▼ [Making COP26 Count: How investing in public transport this decade can protect our jobs, our climate, our future](#), C40 Cities and International Transport Workers' Federation (2021)
- ▼ [The Future is Public Transport](#), International Transport Workers' Federation and C40 Cities: Campaign aimed at ensuring all urban residents have access to safe, frequent, and affordable public transport within a 15-minute walk from their home.
- ▼ [15-Minute City Project](#): Resources and guidance on the 15-minute city framework.
- ▼ [Clean Cities: Benchmarking European cities on creating the right conditions for zero-emission mobility](#), Clean Cities Campaign (2022)

Case studies & examples

- ▼ [San Francisco's Transportation Demand Management Programme](#), C40 Cities (2020)
- ▼ [Targets for a sustainable transport future](#), City of Edinburgh Council (2021)

Actions Module

Emissions Reduction Actions

CDP encourages you to start by reporting at least one action. As your mitigation programme becomes more robust, you should report all significant actions that are contributing towards your emissions reduction targets. For each action, you should consider details such as co-benefits, scope, and impact indicators such as GHG reduction.

Tools and Resources

Resources

- ▼ [Policy and Action Standard: An accounting and reporting standard for estimating the greenhouse gas effects of policies and actions](#), Greenhouse Gas Protocol
- ▼ [The CURB Tool: Climate Action for Urban Sustainability](#), The World Bank (2016)
- ▼ [Focused Acceleration](#), C40 Cities
- ▼ [The GHG Protocol for project accounting](#), WBCSD (2005)
- ▼ [Quantifying greenhouse gas reductions at the project level](#), Partners for Climate Protection (2020)
- ▼ [The Carbon-Free City Handbook](#), Rocky Mountain Institute (2017)
- ▼ [Urban Climate Action Impacts Framework: A Framework for Describing and Measuring the Wider Impacts of Urban Climate Action](#), C40 Cities and Ramboll (2018)
- ▼ [Interaction between adaptation and mitigation actions](#), C40 Cities
- ▼ [Net Zero by 2050: A Roadmap for the Global Energy Sector](#), International Energy Agency (2021)

Case studies & examples

- ▼ [Cities100](#), C40 Cities and Nordic Sustainability (2019): Examples of ambitious and innovative climate actions taken by cities worldwide.
- ▼ [Cities leading the way: Seven climate action plans to deliver on the Paris Agreement](#), C40 Cities (2021)

Financing Climate Projects

Moving from climate planning to taking action requires funding. Sustainability projects that address climate change can also bring economic co-benefits to the public authority through increased private investment and/or partnership.

[CDP's Matchmaker initiative](#) can help you find relevant opportunities for projects that you report through question 7.4 in the Cities Questionnaire. Contact climateprojects@cdp.net for more information on Matchmaker.

Tools and Resources

Resources

- ▼ [Sustainable Infrastructure Resources](#): CDP Matchmaker: Equity Toolkits and Financing Menus

- ▼ [The Demand for Financing Climate projects in Cities: An analysis of project from the C40 Cities Finance Facility's application phase and from CDP disclosure](#), C40 Cities Finance Facility, CDP and GCoM (2018)
- ▼ [Climate Finance Opportunities](#), Urban Low Emission Development Strategies, Transformation Actions Program, ICLEI and UN-Habitat
- ▼ [Funding and financing](#), C40 Cities: Resources and case studies on identifying financing and funding sources.
- ▼ [Cities Climate Finance Leadership Alliance Publication Library](#): Collection of resources and guidance on urban climate finance.
- ▼ [CoM SSA climate finance course: An introductory guide to climate finance for African cities](#), Covenant of Mayors in Sub-Saharan Africa (2022)
- ▼ [The Climate Fund Explorer](#), NDC Partnership: Database of climate funds and support for mitigation and adaptation projects.
- ▼ [Municipal Public-Private Partnership Framework](#), The World Bank (2019)
- ▼ [Infrastructure Monitor 2021](#), Global Infrastructure Hub (2021): Analysis of global private investment in infrastructure projects across regions.

Emissions Module

Emissions Inventory

A greenhouse gas (GHG) emissions inventory will allow your public authority to understand its total emissions and main emissions sources. Understanding your emissions is critical to developing mitigation targets and analyzing your progress towards them.

| Tools and Resources |
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| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ Greenhouse Gas Protocol Corporate Standard, Greenhouse Gas Protocol ▼ Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Greenhouse Gas Protocol ▼ Technical Guidance for Calculating Scope 3 Emissions: Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Greenhouse Gas Protocol – Technical guidance on relevant calculation methods including guidance by Scope 3 category ▼ CDP Technical Note: Accounting of Scope 2 emissions (2022) ▼ CDP Technical Note: Relevance of Scope 3 Categories by Sector (2022) ▼ Greenhouse Gas Reporting Program (GHGRP), EPA: This data can be used by businesses and others to track and compare facilities' greenhouse gas emissions, identify opportunities to cut pollution, minimize wasted energy, and save money ▼ Environmental Insights Explorer, Google: a tool to support cities and regions measure GHG emission sources, conduct analyses and identify strategies to reduce emissions ▼ IPCC Emission Factor Database: users can find emission factors and other parameters with background documentation or technical references that can be used for estimating greenhouse gas emissions and removals ▼ International Energy Agency: Database of national and global energy statistics ▼ The Airport Tracker: interactive web-based tool that provides summary data for passenger-related emissions from the 1,300 largest commercial airports. Flights are assigned to the airport they departed from. <p><i>Case studies & examples (note: inclusion in this list does not imply an assessment by CDP that these inventories are 'credible'.)</i></p> <ul style="list-style-type: none"> ▼ CEQA Greenhouse Gas Emissions Final Technical Report: Amendment to Airport Master Plan Mineta San Jose International Airport, San Jose, California (2019) |

Additional Metrics Module

Passenger Transport Data

Transportation is one of the most significant contributors to climate change. Knowing the modal split of transport in your operational area will help you understand the sources of transport related emissions and develop reduction strategies.

| Tools and Resources |
|---|
| <p><i>Resources</i></p> <ul style="list-style-type: none">▼ Six impactful actions cities can take to reduce transport emissions, C40 Cities (2021)▼ Good Practice Guide: Low Emission Vehicles, C40 Cities (2016)▼ Broadening the E-Mobility Debate, Sustainable, Low Carbon Transport Partnership: resources and insights on electromobility▼ Decarbonizing Cities by Improving Public Transport and Managing Land Use and Traffic, The World Bank (2021) <p><i>Case studies & examples</i></p> <ul style="list-style-type: none">▼ California Transit Agencies Chart a Course to Zero Emissions: A review of proposed zero-emission bus pathways under the innovative clean transit regulation, CALSTART (2021)▼ Cities100, C40 Cities and Nordic Sustainability (2019): examples of ambitious and innovative actions taken by cities worldwide▼ Bus Rapid Transit to Tackle Air Pollution, CO2 Emissions, and Improve Mass Public Transportation, C40 Cities (2019)▼ San Francisco's Transportation Demand Management Programme, C40 Cities (2020) |

Waste Data

Once you have measured your waste generation try to implement the circular economy concept within your city which will help increase energy and material efficiency, lower emissions and stimulate job creation.

Wastewater data is also crucial to promote strategies for sustainable and safe wastewater use or reuse and to respond to growing water demands, increasing water pollution loads, and climate change impacts on water resources (UN, 2020).

| Tools and Resources |
|---|
| <p><i>Circular Economy and Zero Waste</i></p> <ul style="list-style-type: none">▼ The Circular Economy in Cities and Regions, Organisation for Economic Co-operation and Development (OECD): guidance, insights and events to support cities and regions in their transition to a circular economy▼ Circular Economy in Cities, Ellen Macarthur Foundation: resources and guidance on building a circular economy in cities▼ Cities Cooperating for Circular Economy (FORCE): the FORCE project brings together a consortium of four cities and partners to work towards a circular economy▼ Creating City Portraits: A methodological guide from the Thriving Cities Initiative, C40 Cities, Doughnut Economics Action Lab (DEAL) and Circle Economy (2020)▼ The State of Zero Waste Municipalities Report, Zero Waste Europe (2021)▼ Waste Reduction Model, United States Environmental Protection Agency (EPA): tool providing estimates of GHG emissions reduction, energy savings and economic impacts of different waste management practices <p><i>Wastewater</i></p> |

- ▼ [UN SDG6 Indicator Metadata](#), United Nations (2020): definitions, data sources and data collection methods for wastewater

Food waste

- ▼ [Cities100: Buenos Aires – Changing Food Waste Attitudes and Behavior](#), C40 Cities (2017)
- ▼ [How cities can reduce food waste by households and businesses](#), C40 Cities (2021)

Recycling and Energy Recovery

- ▼ [C40 advancing towards zero waste declaration: How cities are creating cleaner, healthier communities and circular economies](#), C40 Cities (2022)
- ▼ [Circular city actions framework: Bringing the circular economy to every city](#), ICLEI (2021)
- ▼ [Waste management](#), Local Government Association: resources and guidance on how to bring about efficiencies and savings to local governments' waste and recycling budget
- ▼ [How cities can boost recycling rates](#), C40 Cities (2019)
- ▼ [Waste Wise Cities – Resources](#), UN-Habitat
- ▼ [Energy Recovery from the Combustion of Municipal Solid Waste](#), EPA

Case studies & examples

- ▼ [The Amsterdam City Doughnut: A tool for transformative action](#), DEAL, Circle Economy, C40 Cities and Biomimicry 3.8 (2020)
- ▼ [Policy: Circular economy](#), City of Amsterdam
- ▼ [Municipality-led circular economy case studies](#), C40 Cities and Climate-KIC (2018)

Public Health Data

Climate change is increasingly impacting people's health (e.g. food security, infectious diseases, heat stress). Furthermore, events like Covid-19 have impacted priorities in many cities, reducing capacity for climate action.

CDP encourages public authorities to explore the linkages between climate change and public health. Start by assessing the current situation and identify any health areas that are affected by climate hazards, and subsequently which health issues are driven by this climate hazard.

| Tools and Resources |
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| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ Estimating environmental health impacts, WHO ▼ COP26 Special Report on Climate Change and Health: The Health Argument for Climate Action, WHO (2021) ▼ Compendium of WHO and other UN guidance on health and environment, WHO (2022) ▼ Health Economic Assessment Tool for walking and cycling, WHO (2021): tool enabling users to conduct economic assessments of the health impacts of walking or cycling ▼ A tool for assessing the climate change mitigation and health impacts of environmental policies: the Cities Rapid Assessment Framework for Transformation (CRAFT), Symonds P <i>et al.</i>, Wellcome Open Research (2021) ▼ Carbon Reduction Benefits on Health CaRBonH, WHO (2018): tool allowing the quantification of the consequences for human health achieved through improvements in air quality from carbon reductions <p><i>Covid-19 Resources</i></p> <ul style="list-style-type: none"> ▼ Focus on green recovery, OECD: resources and insights focused on ensuring a green recovery from COVID-19 ▼ A New Deal for Planetary Health, Security and Sustainability Forum and Island Press (2020): webinar on climate change, COVID-19 and sustainability <p><i>Case studies & examples</i></p> <ul style="list-style-type: none"> ▼ Health and Climate Change Urban Profiles, WHO |

▼ [Cool Neighborhoods NYC: A comprehensive approach to keep communities safe in extreme heat](#), City of New York (2017)

Air Quality Data

Outdoor air pollution is a major environmental health problem, especially fine particulate matter (PM_{2.5}) and Nitrogen Dioxide (NO₂). The main source for PM_{2.5} is vehicle emissions, NO₂ is largely produced by the burning of fuel.

Tools and Resources

Resources

- ▼ [What are the WHO air quality guidelines?](#) WHO (2021)
- ▼ [Ambient \(outdoor\) air pollution](#), WHO (2021)
- ▼ [How to set standards and monitor outdoor air quality](#), C40 Cities (2021)
- ▼ [Monitoring and Assessment of Air Quality](#), C40 Cities
- ▼ [Communicating the health impacts of air pollution](#), Clean Air Fund (2019)
- ▼ [Tools for health impact assessment of air quality: the AirQ+ software](#), WHO
- ▼ [Toward a Healthier World: Connecting the dots between climate, air quality and health](#), C40 Cities and Buro Happold (2019)

Case studies & examples

- ▼ [Ambient air pollution and health in Accra, Ghana](#), WHO (2021)

Water Data

Last year, over 60% of CDP cities reported substantive risks facing their city's water supply. Among the most common water related risks reported were increased water stress, declining water quality and inadequate or ageing infrastructure. The [2020 UN World Water Development Report](#) highlights that between 2001-2018 around 74% of all natural disasters were water related. Furthermore, Safe Water, Sanitation, and Hygiene (WASH) is crucial to human health and well-being; climate change has a tremendous negative impact on WASH services.

Water sector actions present a huge opportunity to contribute to climate adaptation and mitigation. Ensure water risk is regularly assessed and incorporated into considerations when identifying emissions reduction and adaptation goals.

Tools and Resources

Resources

- ▼ [Guidance of WASH and health](#), WHO
- ▼ [JMP Estimation Methods](#), WHO and United Nations Children's Fund (UNICEF): definitions and methods used for global monitoring of basic and safely managed WASH services
- ▼ [Who's tackling urban water challenges?](#) CDP, AECOM and Bloomberg Philanthropies (2017)
- ▼ [The Journey to Water-Wise Cities](#), International Water Association (IWA) (2016)
- ▼ [Flood and Drought Management Tools](#), DHI, IWA, UNEP, Global Environment Facility (GEF)
- ▼ [Water Resources Management](#), The World Bank (2017)
- ▼ [The W12 Framework: Supporting Collaboration Among Cities for Water Security](#), Knapp J et al. (2020)
- ▼ [Evaluating the impact of nature-based solutions: A handbook for practitioners](#), European Commission (2021)

Case studies & examples

- ▼ [Water, waste, and adaptation](#), CDP (2020): case studies on managing solid waste, flooding and water stress in African cities

- ▼ [Resilient Storm Water Management Leading to Climate Adaptation for Hong Kong](#), China, C40 Cities (2020)
- ▼ [2020 Source Water Protection Plan – Edmonton’s Drinking Water System](#), EPCOR (2020)
- ▼ [Our Shared Water Future – Cape Town’s Water Strategy](#), City of Cape Town
- ▼ [City Water Resilience Assessment: Cape Town Water Resilience Profile](#), City of Cape Town, Arup and 100 Resilient Cities (2020)

Adaptation Actions

Unlike mitigation actions which can be collectively tracked in terms of GHG emissions reduction, there is no single metric to track adaptation actions. Therefore, ensure you have formulated appropriate indicators to monitor your adaptation goals and actions.

CDP encourages you to pay special attention to vulnerable populations within your jurisdiction who will experience more severe and immediate impacts. Your goals should connect to the climate hazards that you experience and should address both short/medium term and long-term impacts.

As your adaptation programme becomes more robust, you should report all significant actions. For each action, you should consider details such as timeframes for improved resilience, cost, co-benefits, scope, natural areas protected or restored, and improved resilience of your operations.

Tools and Resources

Resources

- ▼ [Urban Adaptation Support Tool](#): provides guidance on identifying, assessing, and selecting adaptation actions
- ▼ [Integrating Climate Adaptation: A toolkit for urban planners and adaptation practitioners](#), C40 Cities (2020)
- ▼ [Developing Urban Climate Adaptation Indicators](#), USDN and ISC (2017)
- ▼ [Climate Adaptation Toolkit for Local Authorities](#), Local Partnerships (2021)
- ▼ [Interaction between adaptation and mitigation actions](#), C40 Cities
- ▼ [Adaptation options](#), CLARITY: List of adaptation actions, their effects, co-benefits, costs and case studies.
- ▼ [Nature-based solutions: How cities can use nature to manage climate risks](#), C40 Cities (2021)
- ▼ [Measuring Progress in Urban Climate Change Adaptation](#), C40 Cities and Ramboll (2019)

Case studies & examples

- ▼ [Cities leading the way: Seven climate action plans to deliver on the Paris Agreement](#), C40 Cities (2021)
- ▼ [Urban Adaptation Support Tool](#): Examples of adaptation action plans
- ▼ [Helping cities to address climate change – Current projects](#), C40 Cities Finance Facility: Examples of green infrastructure projects focused on transportation, energy and adaptation.

Engagement Module

Supply and/or Value Chain Engagement

Global supply chains can drive climate change, deforestation, and water insecurity – all of which pose huge business risks. They also have the power to drive environmental action at scale. To take effective action, you need to understand and work with your supply chain.

| Tools and Resources |
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| <i>Resources</i> <ul style="list-style-type: none">▼ Supply Chain Membership – Can help you evaluate your Scope 3 footprint and build a rigorous supplier engagement program to reduce your environmental impact, CDP▼ Engaging the Chain: Driving Speed and Scale, CDP Global Supply Chain Report 2021 |

Collaboration & Engagement

All levels of governance - international, national, state/regional - are involved in climate action, alongside public authorities civil society and businesses. For example, local governments rely on wider climate policies outside their control to achieve their targets.

Collaboration between public authorities, cities, states and regions, national governments and businesses are pivotal to delivering effective climate action. Identify current collaborations to determine how city diplomacy can be expanded and strengthened.

| Tools and Resources |
|--|
| <i>Resources</i> <ul style="list-style-type: none">▼ Working together to beat the climate crisis, CDP (2021)▼ Inclusive community engagement toolbox, C40 Cities▼ City Business Climate Alliance, a World Business Council for Sustainable Development (WBCSD), CDP and C40 Cities partnership▼ City-Business Climate Alliances – A step-by-step guide for developing successful collaborations, CDP (2019)▼ Vertically Integrated Action Tool, C40 Cities: A tool to evaluate the alignment of climate action across different levels of government▼ Youth Engagement Playbook for Cities, C40 Cities (2021)▼ Transforming Cities Together: A public engagement guide for cities, World Wide Fund for Nature (WWF) (2021) |

Equity & Co-benefits

Equity: Climate change disproportionately affects underserved communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts. When developing new and revising old climate policies, public authorities should prioritize efforts to engage and support the most vulnerable and excluded groups and bring equity and inclusion to the core of climate action. To do this, public authorities will need to engage with a wide range of stakeholders, understand local needs, and design equitable climate actions.

Co-benefits: benefits of tackling climate change which also deliver on other policy priorities e.g. cleaner air, the creation of green jobs, improved public health, and enhanced biodiversity due to the expansion of green space.

Being aware and reporting co-benefits of climate action can support stakeholder engagement and decision-making processes, as well as create mutually supportive policy across environment, health, inequality, and economic growth etc.

| Tools and Resources |
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| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ Making Climate Infrastructure Equitable: A Toolkit and Workbook, CDP ▼ Inclusive climate action, C40 Cities: Tools and guidance on inclusive community engagement and inclusive planning ▼ Adaptation options, CLARITY: List of adaptation actions, their effects, co-benefits, costs and case studies ▼ The Co-benefits of Climate Action: Accelerating City-level Ambition, CDP, Tyndall Centre and Centre for Climate Change and Social Transformations (2020) ▼ Co-benefits of urban climate action: A framework for cities, C40 Cities and LSE Cities (2016) ▼ 31 Climate Actions for Councils, Ashden, Friends of the Earth and CDP (2020) ▼ Benefits of Urban Climate Action, C40 Cities (2021) ▼ How to embed equity and inclusivity in climate action planning, C40 Cities <p><i>Case studies & examples</i></p> <ul style="list-style-type: none"> ▼ UrbanA: Resources and guidance on incorporating solutions to sustainability and social justice issues ▼ Green New Deals in action: Nine cities commit to simultaneously tackle inequality, social justice and climate change, C40 Cities (2021) ▼ Inclusive climate action in practice 2.0, C40 Cities (2021) |

TCFD Resources

Task Force on Climate-related Financial Disclosures

The Task Force on Climate-related Financial Disclosures (TCFD) is a voluntary framework, published in 2017 and revised in 2021, which was developed at the request of the G20 Finance Ministers and Central Bank Governors. The TCFD framework provides recommendations and guidance about how to disclose climate-related risks.

Demand for climate-related disclosure has increased significantly since the release of the TCFD recommendations. Public sector leaders have noted the importance of transparency on climate-related issues with several national governments and public sector organizations formally supporting the TCFD. Beginning in 2022, public authorities can disclose in alignment with the TCFD’s recommendations through the Public Authorities Questionnaire.

| Tools and Resources |
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| <p><i>Resources</i></p> <ul style="list-style-type: none"> ▼ CDP Technical Note on the TCFD ▼ Guidance Note on the TCFD Recommendations for City, State, and Regional Governments, CDP (2022) ▼ Recommendations of the Task Force on Climate-related Financial Disclosures, TCFD (2017) ▼ Task Force on Climate-related Financial Disclosures: Overview Booklet, TCFD (2022) ▼ TCFD Guidance on Scenario Analysis for Non-Financial Companies, TCFD (2020) <p><i>Case studies & examples</i></p> <ul style="list-style-type: none"> ▼ Examples of TCFD-aligned reporting <ul style="list-style-type: none"> ○ City of Edmonton: 2020 report – Begins on page 105 Section 4 |

- City of Toronto: [2019 report](#) - pages 117-121, 2018 report - pages 126-135
- City of Vancouver: [2022 financial statement](#) – page 43
- City of Montreal: [2020 report](#) (English version) – begins on page 78
- ▼ [City of Phoenix Green and Sustainability Bond Framework](#)
 - (See page 3 for use of CDP disclosure)