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SMART CITIES
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KRISHNAJI PAWAR, LEED AP BD+C,GSAS CGP,ISO 14001:2015,GCP
GHG AND CLIMATE CHANGE SPECIALIST CURRICULUM

CITIES AND CLIMATE CHANGE
FOR GHG & CLIMATE CHANGE PROFESSIONALS
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INTRODUCTION

Cities are the global centers of communication, commerce and culture. They are also a significant, and growing, source of energy consumption and account for a large percentage of global greenhouse gas (GHG) emissions.

With a majority of the world's urban areas situated on coastlines, cities are particularly vulnerable to global environmental change, such as rising sea levels and coastal storms. Therefore, cities play a key role in tackling climate change and responding to climate impacts.

CITIES AND CLIMATE CHANGE

A city's ability to take effective action on mitigating climate change, and monitor progress, depends on having access to good quality data on GHG emissions.

Planning for climate action begins with developing a GHG inventory. An inventory enables cities to understand the emissions and removals of greenhouse gases from different activities in the community within a specific time frame. It allows cities to determine where to best direct mitigation efforts, create a strategy to reduce GHG emissions, and track their progress. Many cities have already developed GHG inventories, and use them to set emission reduction targets, inform their climate action plans, and track their performance.

To allow for more credible reporting, meaningful benchmarking and aggregation of climate data, greater consistency in GHG accounting is required. This updated version of Global Protocol for Community-Scale Greenhouse Gas Inventories (GPC) responds to this challenge, offering a robust and clear framework that builds on existing methodologies for calculating and reporting city-wide GHG emissions.

PURPOSE OF THE GPC

The GPC sets out requirements and provides guidance for calculating and reporting city-wide GHG emissions, consistent with the 2006 IPCC (Intergovernmental Panel on Climate Change) Guidelines for National Greenhouse Gas Inventories

- ☑ Help cities develop a comprehensive and robust GHG inventory in order to support climate action planning.
- ☑ Help cities establish a base year inventory, set reduction targets, and track their performance.
- ☑ Ensure consistent and transparent measurement and reporting of GHG emissions between cities,
- ☑ Ensure consistent and transparent measurement and reporting of GHG emissions between cities, benchmarking performance, following internationally recognized GHG accounting and reporting principles.
- ☑ Enable city inventories to be aggregated at subnational and national levels.1
- ☑ Demonstrate the important role that cities play in tackling climate change, and facilitate insight through benchmarking—and aggregation—of comparable data.

WHO SHOULD USE THE GPC

The GPC can be used by anyone assessing the GHG emissions of a geographically defined, subnational area. Although the GPC is primarily designed for cities, the accounting framework can also be used for boroughs or wards within a city, towns, districts, counties, prefectures, provinces, and states.

- The GPC provides a robust framework for accounting and reporting city-wide GHG emissions.

Relationship to other city protocols, standards and with reporting platforms

- The GPC builds upon the knowledge, experiences, and practices of existing standards used by cities to measure city- wide GHG emissions.

HOW THIS STANDARD WAS DEVELOPED

The GPC is the result of a collaborative effort between the GHG Protocol at World Resources Institute (WRI), C40 Cities Climate Leadership Group (C40), and ICLEI—Local Governments for Sustainability (ICLEI). See Table 1.3 for a short description of each organization.

- The GPC (Version 1.1) was developed in 2020-21 by World Resources Institute (WRI), C40 Cities Climate Leadership Group (C40), and ICLEI—Local Governments for Sustainability (ICLEI) to incorporate feedback provided by cities and other stakeholders as well as to update the document as per the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

GPC DEVELOPMENT PROCESS

Date		Milestone
2011	June	Memorandum of Understanding between C40 and ICLEI
2012	March	GPC Draft Pilot (Version 0.9) released for public comment
	May	GPC Draft Pilot (Version 1.0) released
2013		Pilot testing with 35 cities worldwide
2014	July	GPC Draft (Version 2.0) released for public comment
	December	Final GPC published
2021		GPC v1.1 published

- Development of the GPC began in São Paulo in June 2011 as a result of a Memorandum of Understanding between C40 and ICLEI (Table 1.4). In 2012, the partnership expanded to include WRI and the Joint Work Programme of the Cities Alliance between the World Bank, UNEP, and UN-HABITAT. An early draft was released in March 2012 for public comment. The GPC was then updated and tested with 35 cities worldwide. Based on the pilot testing feedback, the GPC was revised and issued for a second public comment in July-August 2014.

GPC AUTHORS

WRI and the GHG Protocol

- WRI is a global research organization that works closely with leaders to turn bigideas into action to sustain a healthy environment—the foundation of economic opportunity and human well-being. The GHG Protocol is a partnership of businesses, non-governmental organizations, governments, and others convened by WRI and the World Business Council for Sustainable Development to develop internationally-accepted GHG accounting and reporting standards and tools.

C40

- C40 is a network of the world's megacities committed to addressing climate change both locally and globally. Established in 2005, C40 is comprised of 70 cities from around the world and offers an effective forum where cities can collaborate, share knowledge and drive meaningful, measurable and sustainable action on climate change.

GPC AUTHORS +

ICLEI

- ICLEI is a leading association of cities and local governments dedicated to sustainable development. ICLEI represents a movement of over 1,000 cities and towns in 88 countries. ICLEI promotes local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, biodiverse, and low-carbon.

LOCAL GOVERNMENT OPERATIONS

In addition to compiling a city-wide GHG inventory, local governments may also want to measure GHG emissions from their own municipal operations via a local government operations (LGO) inventory.

An LGO inventory allows local governments to identify GHG reduction opportunities across their jurisdiction and demonstrate leadership in taking action.

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