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URBAN GREENHOUSE GAS INVENTORY

UGHG OVERVIEW

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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MODULE 1

Introduction and Course Outline

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URBAN GREENHOUSE GAS INVENTORY - UGHG OVERVIEW

Cities, global hubs of communication, commerce, and culture, are growing sources of energy consumption and greenhouse gas emissions. Effective climate action planning requires access to quality data and a GHG inventory.

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BRIEF ABOUT ME

Krishnaji PAWAR

CEO & FOUNDER



Krishnaji Pawar is founder and CEO of Beyond Smart Cities. Before being named CEO in January 2020, Krishnaji held leadership roles at Beyond Smart Cities in both Sustainability ,Energy & Environmental Consultancy.

Specialized in developing sustainable design strategies for Green Building Certification Systems (LEED, GSAS, etc.), Energy & Water Conservation, Commissioning, Environmental Impact Assessment & Environmental Management Systems.

Currently responsible for 3,787 million square feet Green Building /Energy modeling Consulting since January 2008 in UAE, India and Qatar.

Learning Objectives

- Introduction
- Accounting and Reporting Principles
- Setting the Inventory Boundary
- City Actions on Climate Change
- City Climate Planner Program
- Becoming an UGHG Inventory Specialist
- Summary and Resources

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INTRODUCTION

- Diverse approaches to inventory complicate city comparisons.
- Data quality concerns arise, limiting GHG emissions data compiling.
- Greater consistency is needed for credible reporting.
- The updated Global Protocol for Community-Scale Greenhouse Gas Inventories (GPC) provides a clear framework for city-level GHG emissions.
- "City" refers to any geographically discernible subnational entity, covering all levels of subnational jurisdiction and local government.

DEFINING AN INVENTORY BOUNDARY AND EMISSION SOURCES

- Municipalities must establish an inventory boundary before implementing the GPC.
- The boundary specifies the time period, geographic region, gases, and emission sources in a GHG inventory.
- The GPC includes seven gases specified in the Kyoto Protocol for a single reporting year.
- GHG emissions from city activities are classified into six sectors: Stationary energy, Transportation, Waste, Industrial processes and product use (IPPU), and Agriculture, forestry, and other land use (AFOLU).
- Emissions outside the geographic boundary are not covered in this version of the GPC but can be reported separately.





CATEGORIZING EMISSIONS IN CITIES



- GHG emissions can occur within or outside a city.
- The GPC categorizes emissions into three groups: scope 1, scope 2, and scope 3 emissions.
- Scope 1 emissions, also known as "territorial emissions," occur within the defined geographic boundary.
- Emission sources are categorized based on their location within, outside, and across the boundary.

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GPC'S CITY INVENTORY AGGREGATION



- Enhances national inventory data quality, especially for major cities.
- Measures city mitigation actions' contribution to GHG emission reduction targets.
- Identifies innovative transboundary and cross-sectoral strategies for GHG mitigation.

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GPC AUTHORS: ORGANIZATION



WRI and GHG Protocol

- WRI is a global research organization focusing on transforming big ideas into action for a healthy environment.
- GHG Protocol is a partnership between WRI and the World Business Council for Sustainable Development.

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GPC AUTHORS +



C40

- A network of 70 global megacities committed to addressing climate change.
- Offers a platform for cities to collaborate and drive sustainable action on climate change.

ICLEI

- A leading association of over 1,000 cities and local governments dedicated to sustainable development.
- Promotes local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, biodiverse, and low-carbon.

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LOCAL GOVERNMENT OPERATIONS AND GHG INVENTORY



- Local governments can measure GHG emissions from their municipal operations.
- LGO inventory helps identify GHG reduction opportunities and demonstrate leadership.
- LGO data can be useful in compiling city-wide inventory.
- Activity data from city-owned or operated buildings, facilities, landfills, or land is more precise.

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CLIMATE ACTION IN URBAN AREAS



- Local governments offer nimbleness and understanding of local needs, enabling more effective actions.
- They can track city service performance, guide community change, and set regulations for land use, building efficiency, and transportation.
- Cities are taking action to reduce emissions and improve climate resilience, including during the COVID-19 pandemic.
- The revised GPC provides a global standard for tracking greenhouse gas reductions and promoting a sustainable future.

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WELCOME TO BEYOND SMART CITIES

Beyond Smart Cities is the world's 1st Green Technology Marketplace, connecting millions of Sustainability Specialists, Green Building Specialists, Energy Specialists, Commissioning Specialists, Environment Specialists, Health & Safety Specialists, Fire Safety Specialists, Climate Change Specialists & Green Products/Technology Manufacturers with independent talent around the globe.

Our mission is to build and support a global community of experts with the highest professional standards in sustainability, green building, energy, commissioning, environment, health & safety, fire safety, climate change, GHG accounting, carbon auditing, and GHG emissions management.

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THANK YOU

