



HEAT

HARMONIZED EMISSIONS ANALYSIS TOOL

Harmonized Emissions Analysis Tool (HEAT) Plus

- *Cities' tool to manage energy and emissions*

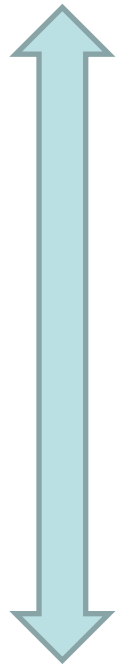
Training Workshop for National and Local Governments in
Southeast Asia and South Asia on Climate Change Adaptation and
Mitigation

Manila, 10th-11th Feb 2012

Ravi Ranjan Guru
ICLEI

ICLEI's- Mitigation Initiative

Global:



Cities for Climate Protection Campaign (CCP)

Harmonized Emissions Analysis Tool (HEAT) Plus

International Local Government GHG Emissions Analysis Protocol (IEAP)

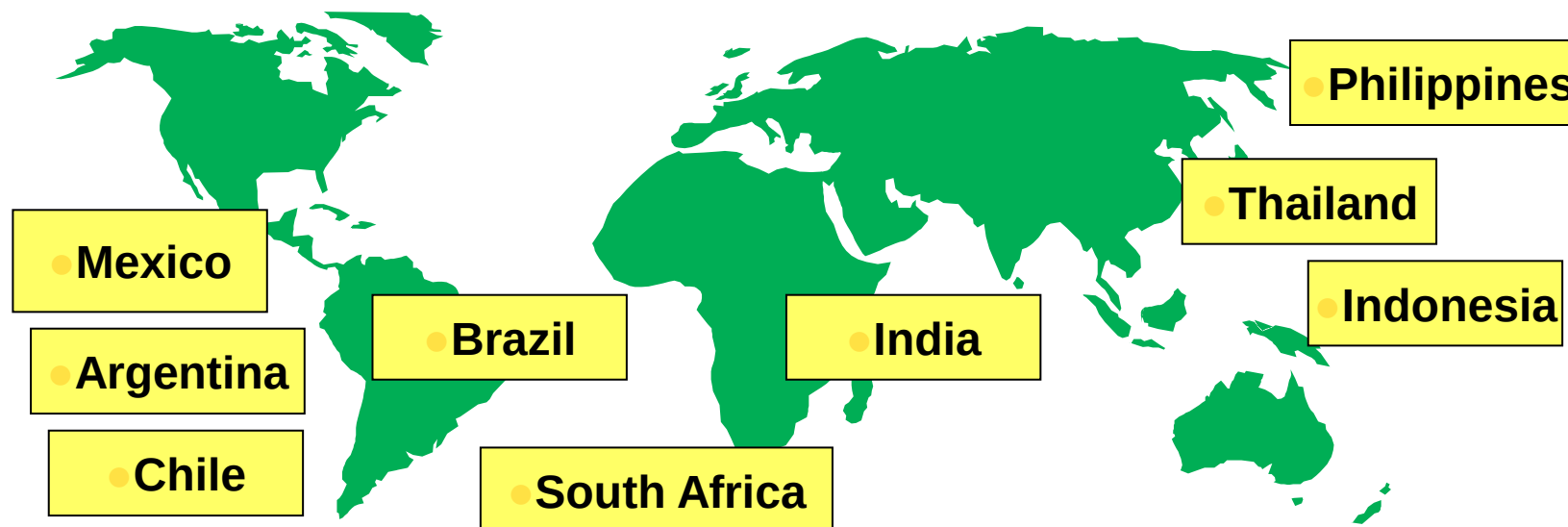
- 1993: global network of LGs (>1000) aims at facilitating GHG reductions at local level
- GHG emission accounting tool tailored to the needs of LGs
- 17 yrs of CCP experience – follows GHG Protocol principles – peer reviewed

CCP Program & Objective

“To build a worldwide movement of local governments to achieve measurable reductions in local GHG emissions, improve air quality, and enhance urban livability”

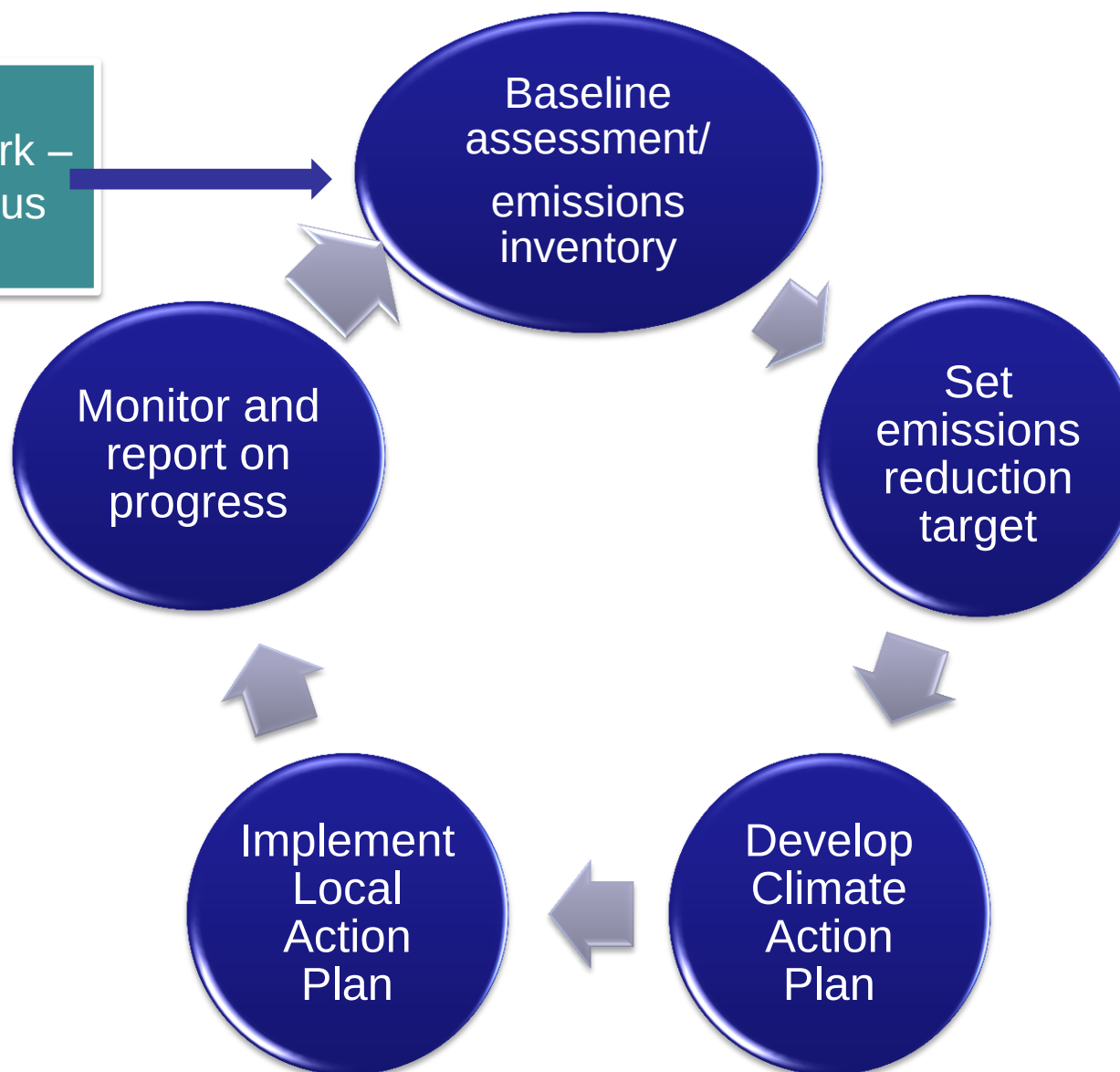


5 Milestone target oriented action plans

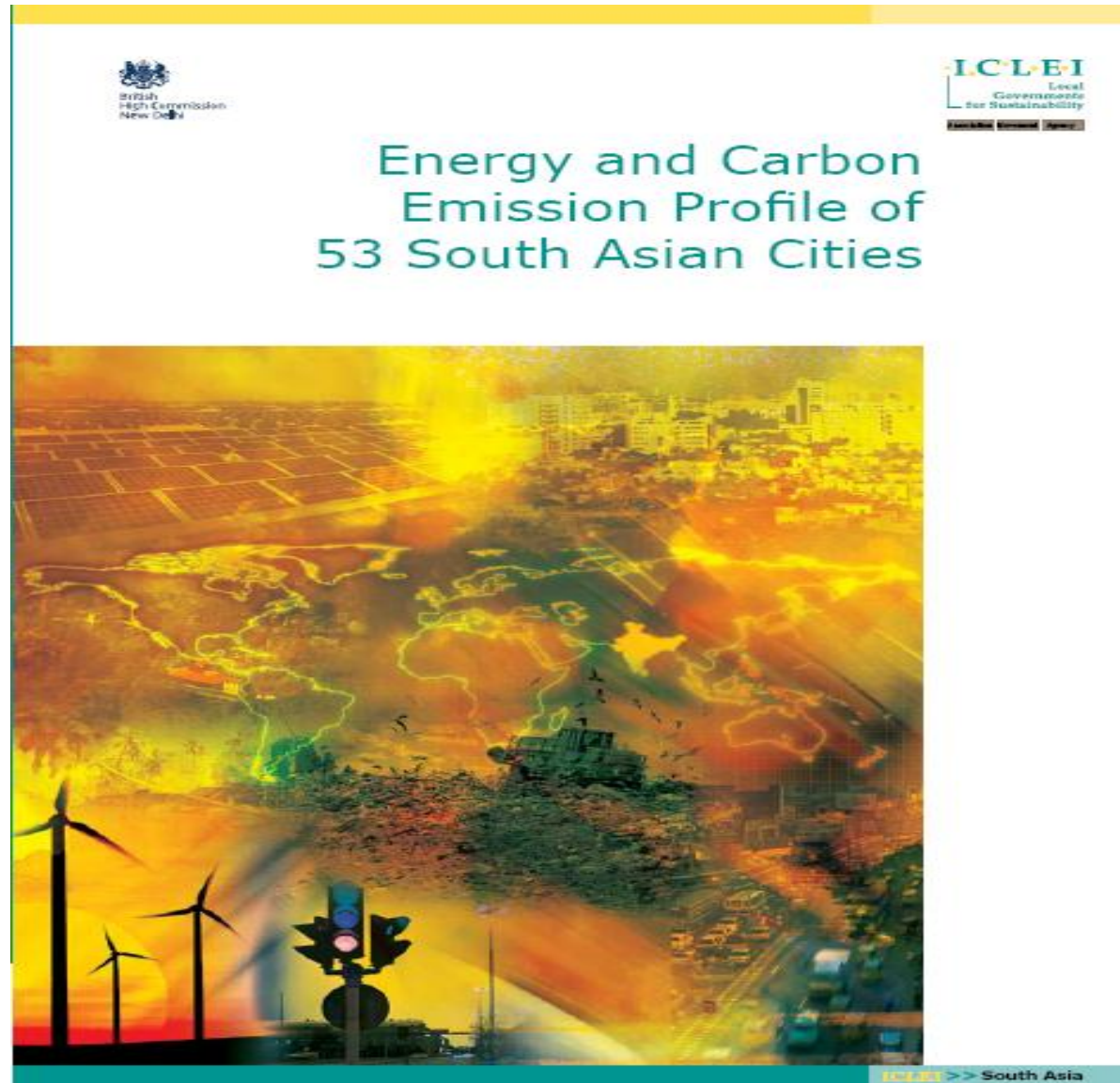


CCP –Five Milestone Process

● To support the Mitigation framework – ICLEI has HEAT Plus tool



Report





Ahmedabad

GUJARAT, INDIA

Mr Inderjeet Prasad Guntam, IAS
Municipal Commissioner
Tel: +91 79 2539 1811-30

Mr Amit Shah
Mayor

City Profile

The largest city in Gujarat, Ahmedabad is commercial hub. Located on the banks of the river Sabarmati, the city is the administrative centre of Ahmedabad district. Though not a tourist spot, the city is known for its welcoming people. The economy of the city is supported by migrant workers from different parts of Gujarat and neighbouring states.

Population	Area
5.5 Million (2001)	466 sq. km.

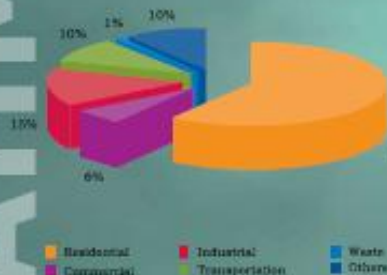
Community Energy Consumption

Sector	Energy/Fuel	Quantity
Residential	Electricity (Million kWh)	1,334.22
	Kerosene (kl)	93,810
Commercial	Electricity (Million kWh)	948.12
Industrial	Electricity (Million kWh)	2,266.62
Transportation	Diesel (kl)	272,160
	Petrol (kl)	200,824
Waste	MSW (tpd)	2,242
Others	Auto Gas (MT)	43,046
	CNG (MT)	55,034

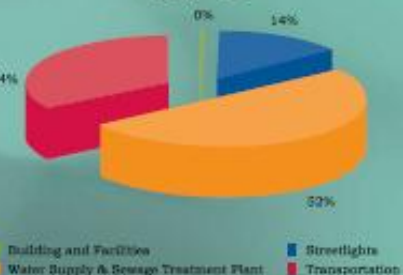
Corporation Energy Consumption

Sector	Energy/Fuel	Quantity
Building and Facilities	Electricity (Million kWh)	0.77
Street Lighting	Electricity (Million kWh)	33.17
Water Supply & STP	Electricity (Million kWh)	122.59
Transportation	Petrol (kl)	27.33
	Diesel (kl)	7,354.73
	CNG (kg)	2,168,119

City Carbon Emissions 2007-08



Corporation Carbon Emissions 2007-08



Asansol

WEST BENGAL, INDIA

Mr Yadav Mondal
CEO
Tel: +91 341 2302 491

Mr Tapas Banerjee
Mayor



Population	Area
0.47 Million (2001)	127.237 sq. km.

City Profile

Located in Bardhaman District on the western periphery of West Bengal, Asansol is the second largest city of the state. The city has rich coal and steel industries, a committed and large workforce and moderately high per capita income. It is one of the most culturally and ethnically diverse places in India.

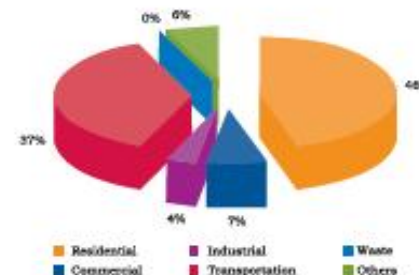
Community Energy Consumption

Sector	Energy/Fuel	Quantity
Residential	Electricity (Million kWh)	67.58
	LPG (MT)	6,686.8
Commercial	Kerosene (kl)	18,840
	Electricity (Million kWh)	19.1
Industrial	Electricity (Million kWh)	9.95
Transportation	Diesel (kl)	23,360
	Petrol (kl)	8,980
Waste	MSW (tpd)	NA
Others	Electricity (Million kWh)	8.9
	Fuel Wood (MT)	750
	CNG (MT)	360

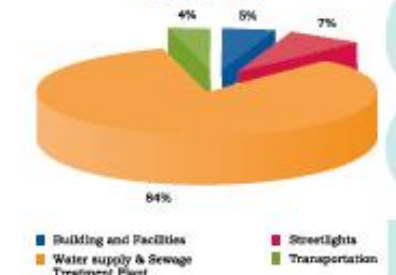
Corporation Energy Consumption

Sector	Energy/Fuel	Quantity
Building and Facilities	Electricity (Million kWh)	0.45
Street Lighting	Electricity (Million kWh)	0.64
Water Supply & STP	Electricity (Million kWh)	7.55
Transportation	Petrol (kl)	23.9
	Diesel (kl)	110

City Carbon Emissions 2007-08



Corporation Carbon Emissions 2007-08



Harmonized Emissions Analysis Tool (HEAT) Plus

**1. Introduction to
HEAT+**

2. Use of HEAT+

**3. HEAT+
Functionality**

**4. Benefits &
Future**

Key Messages

HEAT+ is ICLEI's newest software tool designed to help local governments reduce their greenhouse gas emissions and common air. The benefits include saving money, improving air quality, and protecting public health

The tool is based on the principle of ICLEI's Local Government GHG Protocol. Cities using HEAT+ can compare "apples to apples" and benchmark emissions levels against local, state, national, provincial, and international standards.

. HEAT+ is the only web-based product of its kind, offering secure data storage, a global data bank, comprehensive technical support, and accessibility 24 hours a day, 7 days a week. A variety of software packages are available.

Harmonized Emissions Analysis Tool (HEAT) Plus

**1.
Introduction
to HEAT+**

2. Use of HEAT+

3. HEAT+
Functionality

4. Benefits &
Future

What is HEAT plus? –How it helps City

- Planning tool to calculate the GHG emissions – from various energy consumption at city level such as electricity, LPG, Coal, Petrol, etc
- Cities can track community and government operations GHG and other emissions
- HEAT plus also calculate the other emissions such as VOCs, and PM emissions.
- Contains emissions factors (country specific, IPCC default, research organization, US EIA, etc)
- Internet based, centralized tracking and management.
- multi-lingual- all languages possible.

● HEAT Plus Home Page

HEAT+
HARMONIZED EMISSIONS ANALYSIS TOOL PLUS

HOME FEEDBACK SPONSORS CONTACT View portal in English

Member Access

User Id

Password

[Sign In](#)

[Forgot Password](#)

Guest Access

Select Country

Select Language

[Sign In](#)

Sponsors

Co-Sponsors

HEAT+ is ICLEI's newest software tool designed to help local governments reap the benefits of reducing greenhouse gas emissions and common air pollutants—such as CO₂, NO_x, SO_x, CH₄, CO, and VOC—and the benefits are significant. Save money. Improve air quality. Mitigate global warming. Protect public health.

For the first time ever, cities using HEAT+ can compare "apples to apples" and benchmark emissions levels against local, state, national, provincial, and international standards. Anyone interested in translating energy use, transportation demand, and waste activities into emissions data can use HEAT+ to

- › Inventory and forecast emissions
- › Prepare Action Plans
- › Track commitments
- › Measure progress against targets
- › Inform policy decisions
- › Determine Priorities
- › Quantify progress, and
- › Report results

HEAT+ is the only web-based product of its kind, offering secure data storage, a global data bank, comprehensive technical support, and accessibility 24 hours a day, 7 days a week. A variety of software packages are available.

Downloads

[Download](#)

[HEAT+ Brochure](#)

Updates

International Data | Partners Confirmed

First HEAT+ training conducted in South Africa

HEAT+ training in India

HEAT Plus Emissions (GASES)

- Greenhouse Gases
 - Carbon Dioxide (CO₂)
 - Methane (CH₄)
 - Nitrous Oxide (N₂O)

“Indicators” standardize
results for ease of
comparisons

- Criteria Air Pollutants
 - NOX
 - SOX
 - CO
 - Volatile Organic
- Compounds (VOC)
 - Particulate Matter (PM₁₀)

Harmonized Emissions Analysis Tool (HEAT) Plus

1. Introduction to
HEAT+

2. Use
of
HEAT+

3. HEAT+
Functionality

4. Benefits &
Future

Who will use HEAT Plus?

- Local and State Governments
- Energy, transportation, land use, and waste planners
- Research community
- NGOs
- Anyone wishing to translate energy data into an emissions estimate

Local Governments Can Use HEAT plus To...

- Conduct an emissions inventory
- Set a emissions reduction targets
- Forecast predicted emissions in future years under a “business-as-usual” scenario (i.e. the target year)
- Quantify the impact of reduction measures on emissions, energy use and cost
- Track changes over time and progress towards meeting targets

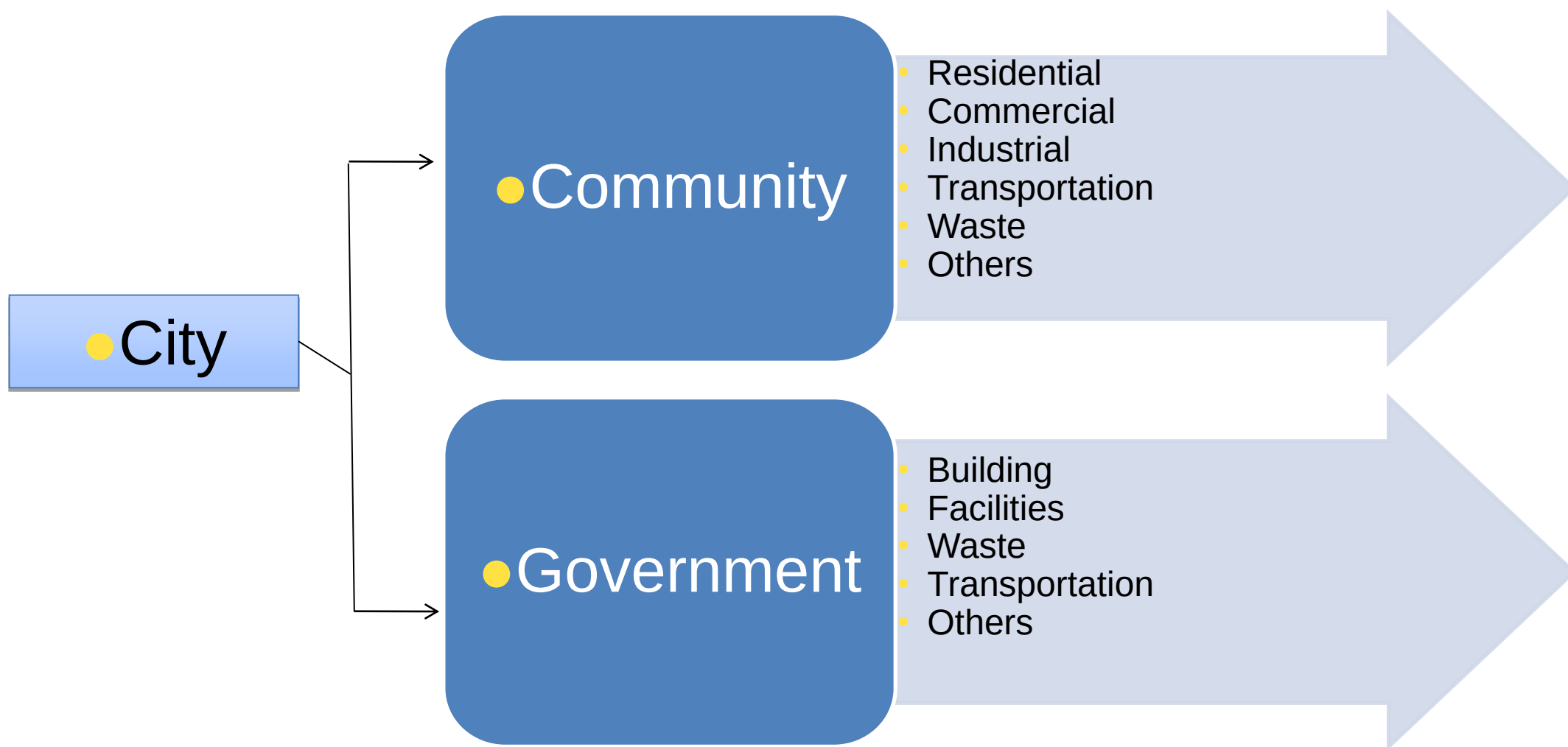
HEAT Plus can be used for

- Policy planning and implementation
- Advocacy and outreach
- Supporting voluntary programs
- Supporting anyone wishing to report emission impacts of energy, transportation, and waste activities

Functionalities

- compile an inventory and forecast greenhouse emissions and air pollutants.
- prepare action plans
- track commitments
- measure progress against targets
- inform policy decisions
- determine priorities
- quantify progress report results

Software Module – City Emissions Inventory



How Software Works-A Basic Approach

- Step #1- Input Energy Consumption data.
- Step #2- Review Emission reports sector wise.
- Step #3- Forecast Future Emissions.
- Step #4- Set Emission reduction targets.
- Step #5 -Use tools to compare the options for future development.
- Step #6 -Check with the emission reduction targets.
- Step #7 - Annual Monitoring of actions Implemented.

Harmonized Emissions Analysis Tool (HEAT) Plus

1. Introduction to
HEAT+

2. Use of
HEAT+

**3. HEAT+
Functionality**

Benefits &
Future

- HEAT Website: URL: <http://182.72.148.156:81/HeatplusV2>

HEAT+
HARMONIZED EMISSIONS ANALYSIS TOOL PLUS

HOME FEEDBACK SPONSORS CONTACT View portal in **English**

Member Access

User Id

Password

[Forgot Password](#)

Guest Access

[Request Guest Access](#)

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- > Inventory and forecast emissions
- > Prepare Action Plans
- > Track commitments
- > Measure progress against targets
- > Inform policy decisions
- > Determine Priorities
- > Quantify progress, and
- > Report results

HEAT+ is the only web-based product of its kind, offering secure data storage, a global data bank, comprehensive technical support, and accessibility 24 hours a day, 7 days a week. A variety of software packages are available.

ICL E I
Local
Governments
for Sustainability

Updates

International Data | Partners Confirmed

First HEAT+ training conducted in South Africa

HEAT+ training in India

Downloads

[Download](#)

[HEAT+ Brochure](#)

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Investing in our Future
European Regional Development Fund

Minister for Federal Affairs,
Europe and the Media of
North Rhine-Westphalia

NACHHALTIGKEIT.
SUSTAINABILITY.
DURABILITÉ.
BONN.

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● Login as a
Registered user

● Login as a Guest

● HEAT – Home Page (after login)



Welcome to HEAT+: IndiaDemo City:Ahmedabad Local Authority: AMC Current Inventory Year:2007

HOME Process Data View Data Data sets Preferences Help Logout

HOME

HEAT+ is ICLEI's newest software tool designed to help local governments reap the benefits of reducing greenhouse gas emissions and common air pollutants—such as CO₂, NO_x, SO_x, CH₄, CO, and VOC—and the benefits are significant. Save money. Improve air quality. Mitigate global warming. Protect public health.



Key Features of HEAT+

Key Functionalities of HEAT+

Getting Started

- › Multi-country versions with national languages and emission factors
- › Tailormade analysis for government and community emissions
- › Modular, database-driven system for analysis of current sources and future measures
- › Internationally accepted algorithms and formulaes
- › Comparative analysis of progress and results
- › Scientifically-based, standardized benchmarks
- › Professional presentation styles
- › On-line user access and support
- › Strengthened by:
 - › new measures, scopes and sectors
 - › consistency with 2006 Guidelines of Intergovernmental Panel on Climate Change (IPCC) and International Local Government GHG Emissions Analysis Protocol (IEAP)

Updates

International Data | Partners Confirmed

Sponsors



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● HEAT – Process Data – Build Inventory



HEAT+

HARMONIZED EMISSIONS ANALYSIS TOOL PLUS

Welcome to HEAT+: IndiaDemo City:Ahmedabad Local Authority: AMC Current Inventory Year:2008

HOME Process Data View Data Data sets Preferences Help Logout

Process Data / Build Inventory

Welcome to Harmonized Emission Analysis Tool - Build Inventory

Step 1

☒ Choose Existing City Ahmedabad ☐ Create New City

Step 2

☒ Choose Existing Local Authority AMC ☐ Create New Local Authority

Step 3

Select Module Community - Inventory

Step 4

☒ Open Existing Inventory Year 2008 ☐ Create New Inventory Year 1990

Step 5

Choose Sector Residential
Choose Subsector Single family

Step 6

Choose Emission Source Category Stationary

Step 7

Enter Name Of The Record

STEP 8

Choose Calculator Fuel Consumption

Step1 How to

Select "Choose Existing City" if you have previously created a city, else select "Create New City" if you want to create a new city. Click on the "Create" button.

Step2 How to

Select "Choose Existing Local Authority" if you have previously created a local authority, else select "Create New Local Authority" if you want to create a new local authority. Click on the "Create" button.

Step3 How to

Select the module for which you want to create an inventory. Choose Community for emissions from community activities. Choose Government for emissions from government controlled facilities and services.

Step4 How to

Select "Open Existing Inventory Year" if you have previously created an year for which you want to create an inventory or "Create New Inventory Year". This will be set as the default year for the inventory.

Step5 How to

Choose the "Sector" in which you want to create an inventory. Choose a relevant "Sub-sector" from the drop down menu.

Step6 How to

Choose relevant emission source category from the drop down menu. The emission source category will be used to select the calculator.

Step7 How to

Key in the name of the inventory record. For each activity/emission source a new inventory record will be created.

Step8 How to

Choose a relevant calculator from the drop down menu. In the subsequent calculator pages – the user will be asked to key in specific details of the record and will provide the requisite energy consumption data which will be used as an input for the calculation.

● Step 1: Choose or Create City

● Step 2: Choose or Create Local Authority

● Step 3: Select Module

● Step 4: Open or Create Inventory Year

● Step 5: Choose Sector/Sub-sector

● Step 6: Choose Emissions Source Category

● Step 7: Enter Record name

● Step 8: Choose Calculator

●HEAT – Process Data – Inventory Calculators – Record Information



HEAT

HARMONIZED EMISSIONS ANALYSIS TOOL

E.I
Local
ments
ability

Welcome to HEAT Plus: IndiaDemo

City: Visakhapatnam

Local Authority: sampleLocalauthorities

Current Inventory
Year: 2009

[Home](#)[Process Data](#)[View Data](#)[Data sets](#)[Preferences](#)[Help](#)[Logout](#)

Energy Input Calculator

[Record Information](#)[Calculator Input](#)

Year

Sub Sector

Emission Source Category

● Record
Information

Record Information

Name

Location of Measure

Building or Group Location

Notes

Data Source Contact Information

Name

Title

Organization

Phone

Email

●HEAT – Process Data – Inventory Calculators – Input Data



HEAT
HARMONIZED EMISSIONS ANALYSIS TOOL

Welcome to HEAT Plus: IndiaDemo

City: Visakhapatnam

Local Authority: sampleLocalauthorities

Current Inventory
Year: 2009

[Home](#)[Process Data](#)[View Data](#)[Data sets](#)[Preferences](#)[Help](#)[Logout](#)

Energy Input Calculator

●Calculator Input

[Record Information](#)[Calculator Input](#)

Select Fuels

Use

Default

- ☒ Stationary-AlternativeFuels-India
- ☒ StationaryFossilFuels_India
- ☒ StationaryFossilFuels_IPCC_India

●Select Fuel from
available EF Tables

☒ Yearly

☐ Monthly

Cost

Energy Input

●Enter Energy Inputs
& Select Units

Calculate

Energy Inputs

Name	Usage	Units	Cost In Rs			
No records to display.						

Outputs

GHG Emission

GHG Emission	Unit	Output
Carbon Dioxide (CO2)	grams	0
Nitrous Oxide (N2O)	grams	0
Methane (CH4)	grams	0

CAP Emissions

Output Summary

Save



HEAT

HARMONIZED EMISSIONS ANALYSIS TOOL



Welcome to HEAT Plus: IndiaDemo City: Visakhapatnam Local Authority: sampleLocalauthries Current Inventory Year: 2009

Home

Process Data

View Data

Data sets

Preferences

Help

Logout

Process Data / Forecast Future / Community

Welcome to Harmonized Emission Analysis Tool - Community ForeCast builder

Select Sector

Residential ▼



Reference Year

2009 ▼



Forecast Year

2010 ▼



Sector Growth Rate



Generate

● Select Sector

● Set Reference Year

● Select Year for which Forecast is required

● Define Sectoral Growth Rate in %

●HEAT – Set Targets



HEAT

HARMONIZED EMISSIONS ANALYSIS TOOL

Welcome to HEAT Plus: IndiaDemo

City: Visakhapatnam

Local Authority: sampleLocalauthries

Current Inventory
Year: 2009

[Home](#)[Process Data](#)[View Data](#)[Data sets](#)[Preferences](#)[Help](#)

Process Data / Mitigation / Targets

Welcome to Harmonized Emission Analysis Tool - Targets

Set Community / Government Measure Targets

Community Targets

Base Year



● Select Base Year

Target Year



● Set Target Year

Reduction



● Select Desired Emission Reduction Percentage

Update



Government Targets

Base Year



Target Year



Reduction



Update

● HEAT – Mitigation – Define Measures

Welcome to HEAT Plus: IndiaDemo City: Visakhapatnam Local Authority: sampleLocalauthries Current Inventory Year: 2009

Home Process Data View Data Data sets Preferences Help Logout

Build Inventory Forecast Future Mitigation Reports Measures Targets

Harmonized Emission Analysis Tool - Choose Measures

Step 1: Choose Existing City (Visakhapatnam) or Create New City (Create)

Step 2: Choose Existing Local Authority (sampleLocalauthries) or Create New Local Authority (Create)

Step 3: Select Module (Community - Measures)

Step 4: Implementation Year (1990)

Step 5: Choose Sector (Residential)

Step 6: Choose Measure Type (Absolute Emissions Reduct)

Step 7: Choose Emission Source Category (District Cooling)

STEP8: Enter Name Of The Record

STEP9: Choose Calculator (Absolute Emission Reducti)

Create

● Step 1: Choose or Create City

● Step 2: Choose or Create LA

● Step 3: Select Module: Community/Govt.

● Step 4: Select Implementation Year

● Step 5: choose Sector/Sub-sector

● Step 6: choose Measures Type

● Step 7: Choose Emissions Source Category

● Step 8: Enter Record Name

● Step 9: Choose Calculator

●HEAT – Mitigation – Measures– Estimating Emissions



HEAT
HARMONIZED EMISSIONS ANALYSIS TOOL

Welcome to HEAT Plus: IndiaDemo

City: Visakhapatnam

Local Authority: sampleLocalauthorities

Current Inventory
Year: 2009

[Home](#)[Process Data](#)[View Data](#)[Data sets](#)[Preferences](#)[Help](#)[Logout](#)

Change In Energy Source Calculator

[Record Information](#)[Energy Inputs](#)

●Record Information & Calculator Input

Emission Source Category

Record Information

Name

●Project Name and Notes

Notes

Project Information

Implementation Year

Implementation Month

Total Cost

Internal Cost

External Cost

Annual Maintenance Savings

Crediting Period

●Proposed Duration/Phasing of Project

Data Source Contact Information

Name

Title

Organization

Phone

Email

●Data Source Contact Details

● HEAT – Mitigation – Measures – Data for Estimating Emissions



HEAT
HARMONIZED EMISSIONS ANALYSIS TOOL

Welcome to HEAT Plus: IndiaDemo
City: Visakhapatnam
Local Authority: sampleLocalauthorities
Current Inventory Year: 2009

Home
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View Data
Data sets
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Help
Logout

Change In Energy Source Calculator

Record Information
Energy Inputs

Initial Energy Source
Replacement Energy Source

Select Fuels

Use
Default

+ Stationary-AlternativeFuels-India
+ StationaryFossilFuels_India
+ StationaryFossilFuels_IPCC_India

Initial Energy Source

Scenario1
Add
Delete

Name	Usage	Units	Cost In Rs
No records to display.			

Replacement Energy Source

Name	Usage	Units	Cost In Rs
No records to display.			

Select Initial Energy Source

Select Replacement Energy Source

Yearly
Monthly

Cost

Calculator Input

Calculate

GHG Emissions

GHG Emissions	Unit	Output
Nitrous Oxide (N2O)	grams	0
Methane (CH4)	grams	0
Carbon Dioxide (CO2)	grams	0

Air Pollution Reduction

Other

Output – GHG & CAP Emissions

Compare Scenario Output
Save

Record Information Saved Successfully
Close

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Low Carbon Development. Unit 1. Session 1.9

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● HEAT – Reports

WELCOME TO HEAT PLUS: INDIADEMO City: Visakhapatnam Local Authority: sampleLocalauthries Current Inventory Year: 2009

Home Process Data View Data Data sets Preferences Help Logout

Process Data / Community

Welcome to Harmonized Emission Analysis Tool - Community Inventory

Summary Report

Enter Year

Select Sector

Select City

Select Local Authority

Show chart

Emission

Consumption

Enter Opening Text of the Report

Enter Conclusion Text of the Report

☐ Include Indicators in the End of the Report

Generate

Build Inventory
Forecast Future
Mitigation
Reports

View Inventory Data
View Measures Data
Action Plan

Community
Government

Commercial

Hyderabad

TestAuthrites

Show me in Pie Chart

GHG
CAP
EC02

grams
grams
grams

Electricity
Fule Usage
Waste
Mobile Stationary

ekWh
grams
grams
grams

barrels
barrels
barrels

cu m
cu m
cu m

Design HTML Preview Words: 0 Characters: 0

Design HTML Preview Words: 0 Characters: 0

● Reports:

- View Inventory Report – Community/Government
- View Measure Data – Community/Government data
- Action Plan

● HEAT – Mitigation – Report Creation



HEAT
HARMONIZED EMISSIONS ANALYSIS TOOL

Welcome to HEAT Plus: IndiaDemo City:Visakhapatnam Local Authority: sampleLocalauthorities Current Inventory Year:2009

Home Process Data View Data Data sets Preferences Help Logout

Process Data / Reports / View Inventory Data / Government

Welcome to Harmonized Emission Analysis Tool - Government Inventory

Select Inventory Report

Summary Report



Summary Report

Enter Year

1990

Select Sector

All Sectors

Select City

All Citys

Select Local Authority

All Local Authorities

Show chart

Show me in Pie Chart

Emission

☐ GHG

grams

☐ CAP

grams

☐ ECO2

grams

Consumption

☐ Electricity

ekWh

☐ Fule Usage

grams

barrels

cu m

☐ Waste

grams

☐ Mobile Stationary

grams

barrels

cu m

☐ Mobile VKT/VMT

kilometers

Enter Opening Text of the Report



 Design  HTML  Preview Words: 0 Characters: 0

Enter Conclusion Text of the Report



 Design  HTML  Preview Words: 0 Characters: 0

☐ Include Indicators in the End of the Report

Generate

● Select Year, Sectors City & LA

● Select Output Chart Type: Pie chart /Bar chart

● Select Emissions Categories & Units to be Reported

● Select Sectors & Units to be Reported

● Type in Custom Text for Report

●HEAT – Mitigation –Report Output

●Summary Report

Welcome to HEAT+: IndiaDemo City:Ahmedabad Local Authority: AMC Current Inventory Year:2008

HOME Process Data View Data Data sets Preferences Help Logout

1 of 7 Export to the selected format Export 

 **HEAT+**
HARMONIZED EMISSIONS ANALYSIS TOOL PLUS

CITY LEVEL EMISSIONS INVENTORY

Summary Report

Community Inventory

City: Ahmedabad

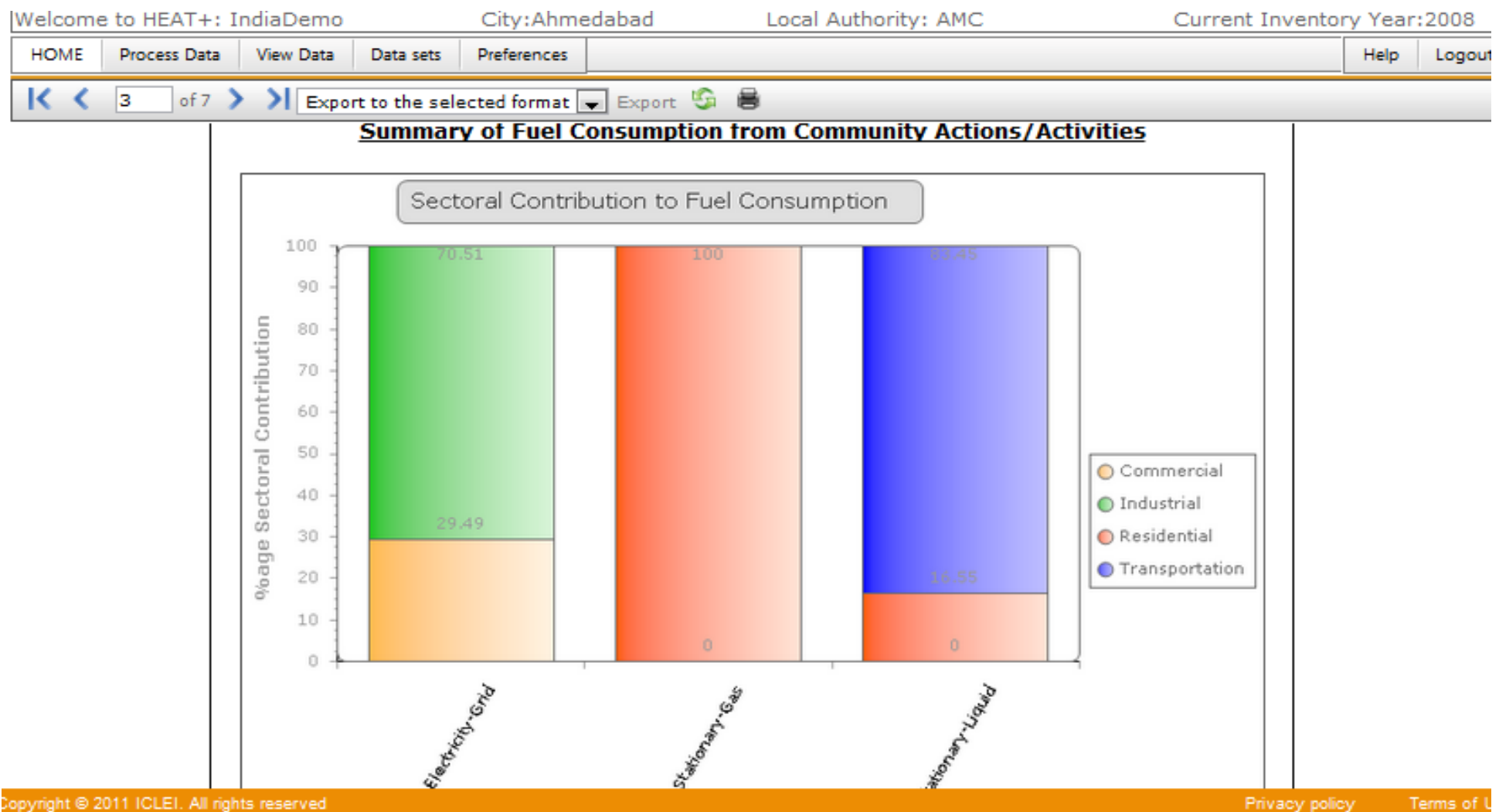
CREATED BY:

Local Authority: AMC

Report generated by: ICLEI HEAT PLUS SOFTWARE (c) 2011 All rights reserved 11/14/2011 9:16:05 AM

● HEAT – Mitigation – Report Output

● Summary of fuel consumption in various sectors



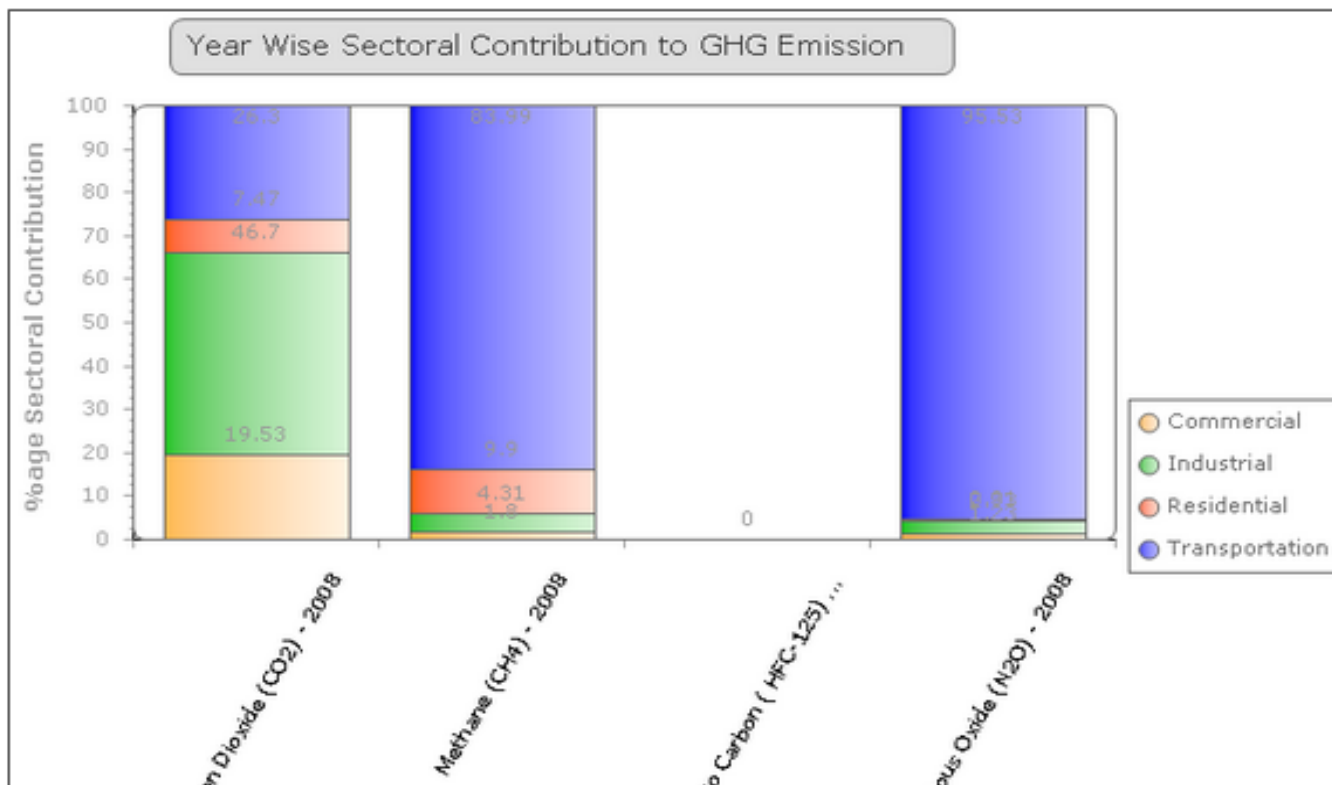
●Time Series Report on Sector wise Emissions

Welcome to HEAT+: IndiaDemo City:Ahmedabad Local Authority: AMC Current Inventory Year:2008

HOME Process Data View Data Data sets Preferences Help Logout

5 of 7 Export to the selected format Export

Time Series Report of GHG Emissions from Community Actions/Activities



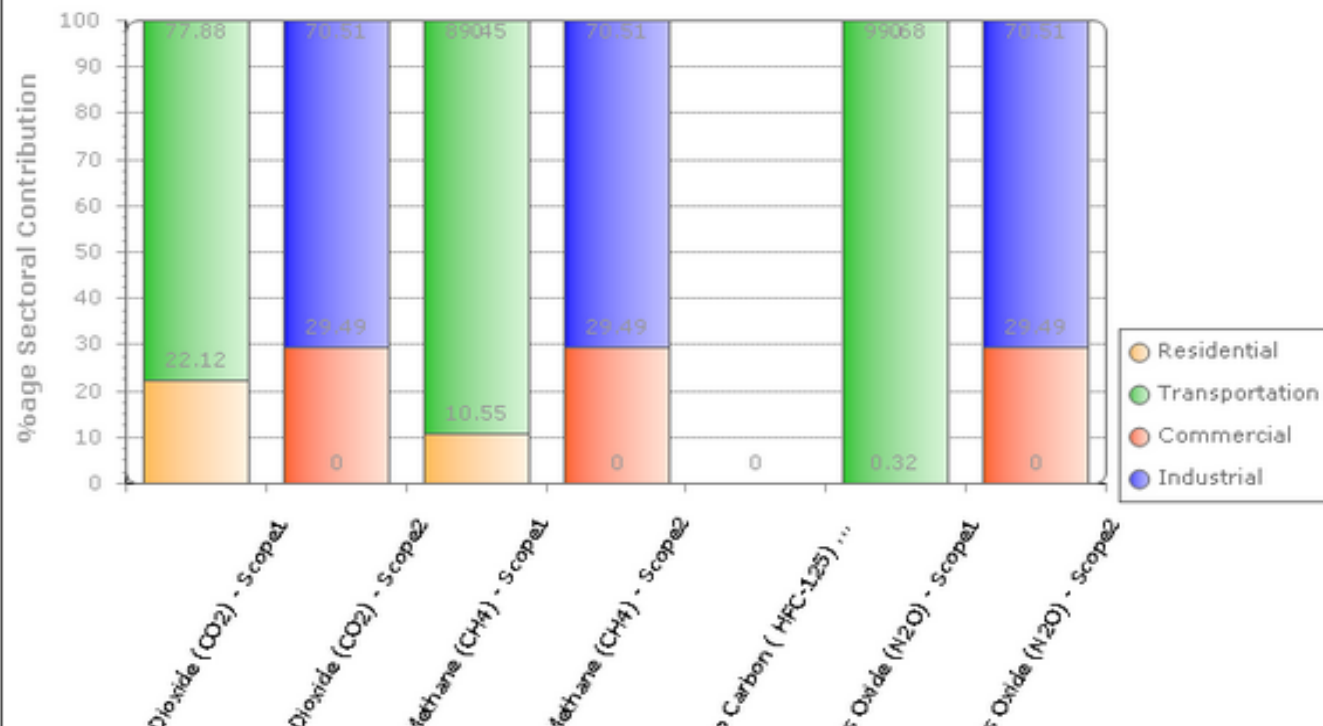
Welcome to HEAT+: IndiaDemo City:Ahmedabad Local Authority: AMC Current Inventory Year:2008

HOME Process Data View Data Data sets Preferences Help Logout

5 of 7 Export to the selected format Export

GHG Emissions - Scope Report - Community Actions/Activities

Scope Wise Sectoral Contribution to GHG Emission



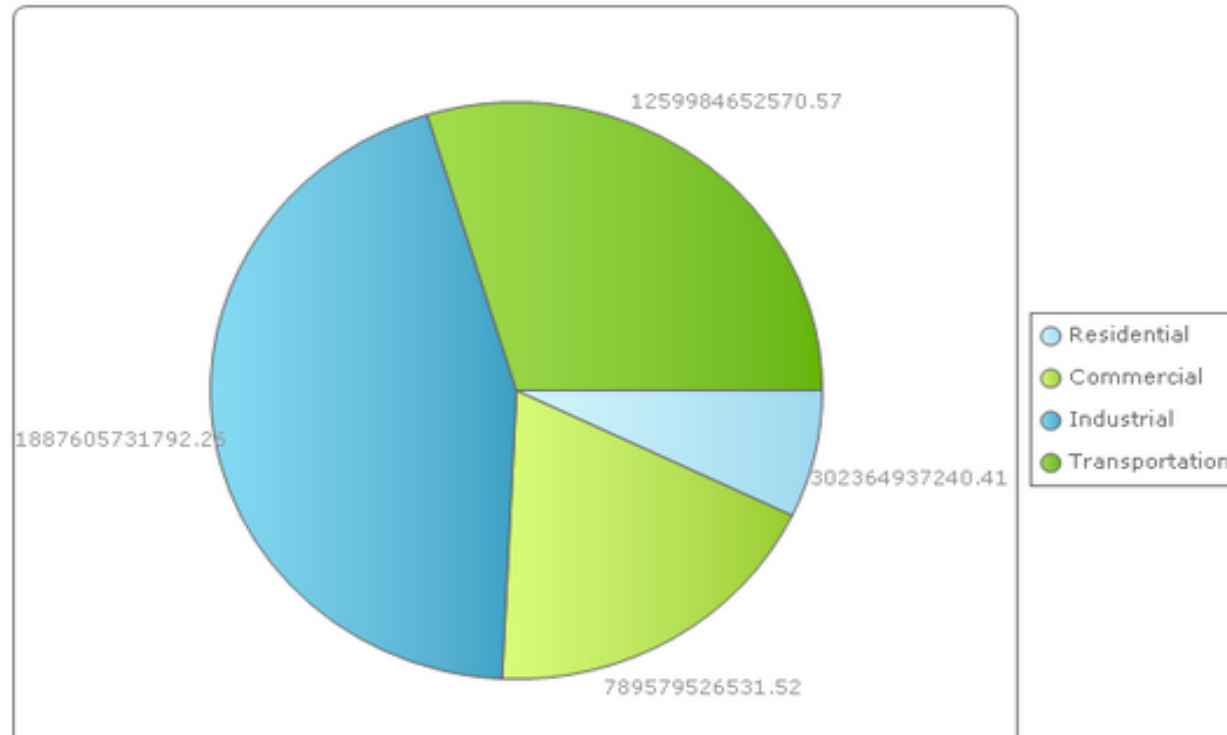
Welcome to HEAT+: IndiaDemo City:Ahmedabad Local Authority: AMC Current Inventory Year:2008

HOME Process Data View Data Data sets Preferences Help Logout

<< 7 of 8 >> Export to the selected format Export

Summary of Carbon Emissions from Community Actions/Activities (TeCO2)*

TCO2E Contribution



●HEAT – Setting User Preferences



HEAT

HARMONIZED EMISSIONS ANALYSIS TOOL



Welcome to HEAT Plus: IndiaDemo

City: Visakhapatnam

Local Authority: sampleLocalauthries

Current Inventory
Year: 2009

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Preferences

Change Password

Old Password



New Password

●Change Password

Confirm Password

Apply

●Set Language

Language

Select Language

English



Personal Information

First Name

Middle Name

Last Name

Street

●Enter Personal
Information of User

Email

Update Personal Information

Session 1.9: Harmonized Emissions Analysis Tool (HEAT) Plus

1. Introduction
to HEAT+

2. Use of
HEAT+

3. HEAT+
Functionality

**Benefits
& Future**

Benefits

- Supports global efforts to mitigate GHG emissions
- Set Emission Reduction target
- Develop action plans
- Monitoring and Reporting
- Access project based mechanisms of global climate finance architecture
- Saves money and resources
- Enhances urban services

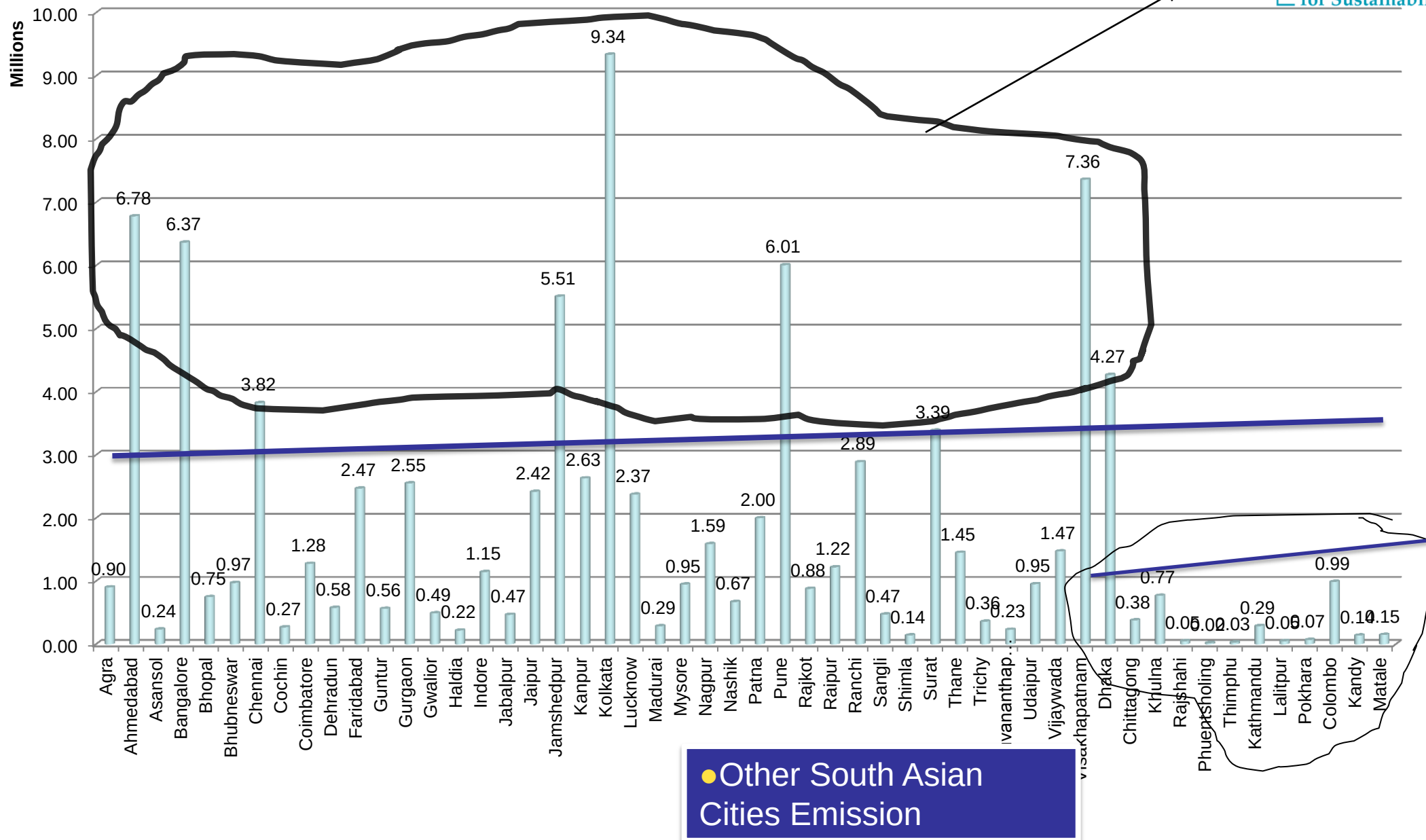
Future for HEAT Plus?

- **Thousands of inventories and action plans**
- **HEAT+ becomes premiere international repository for local energy and emissions data.**
- **Developing additional modules:**
 - ✓ Carbon Asset Accounting
 - ✓ Land use/carbon stock
 - ✓ Sustainability indicators
 - ✓ Vulnerability/Adaptation tools

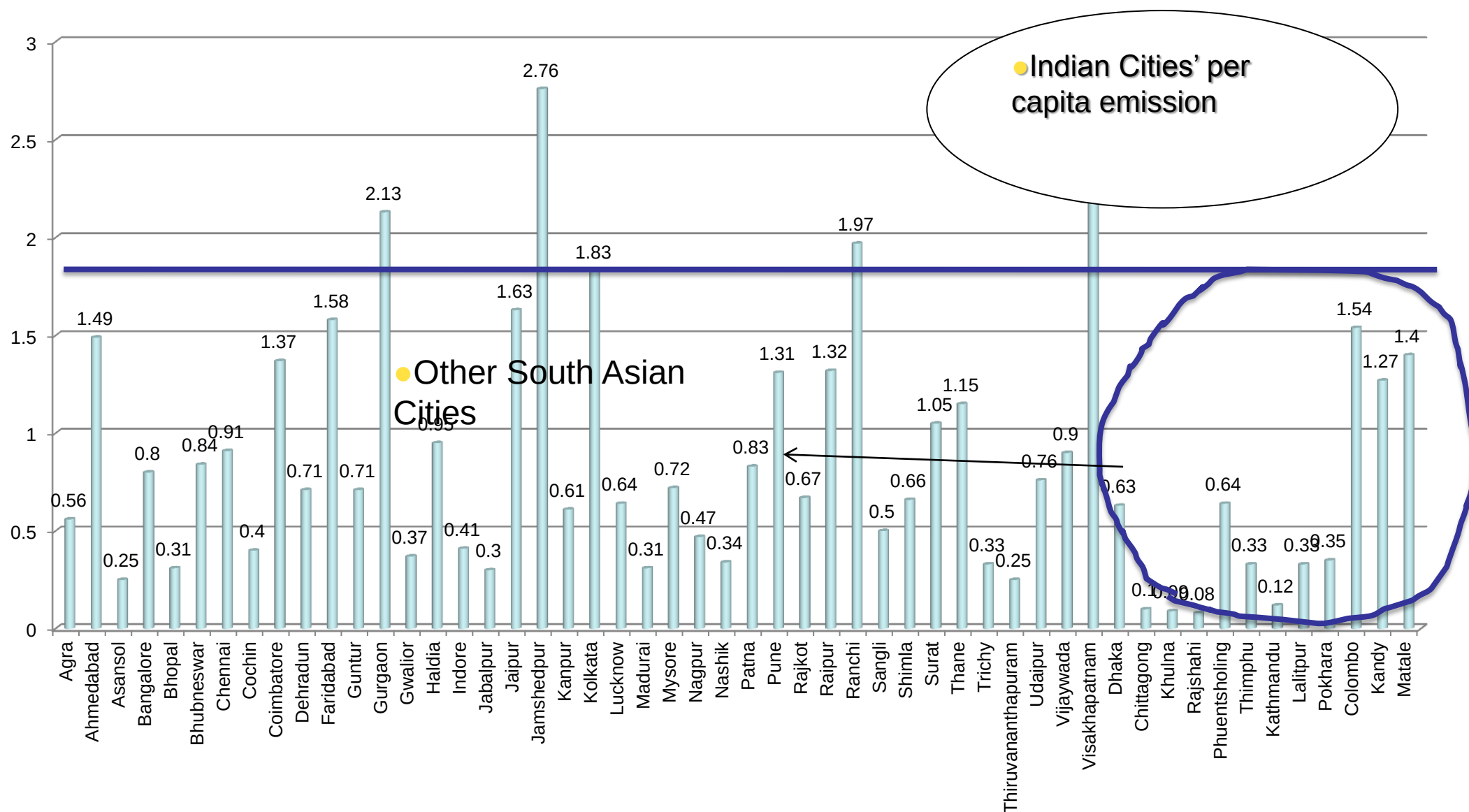
Total Emission

Indian Cities

Local Governments for Sustainability

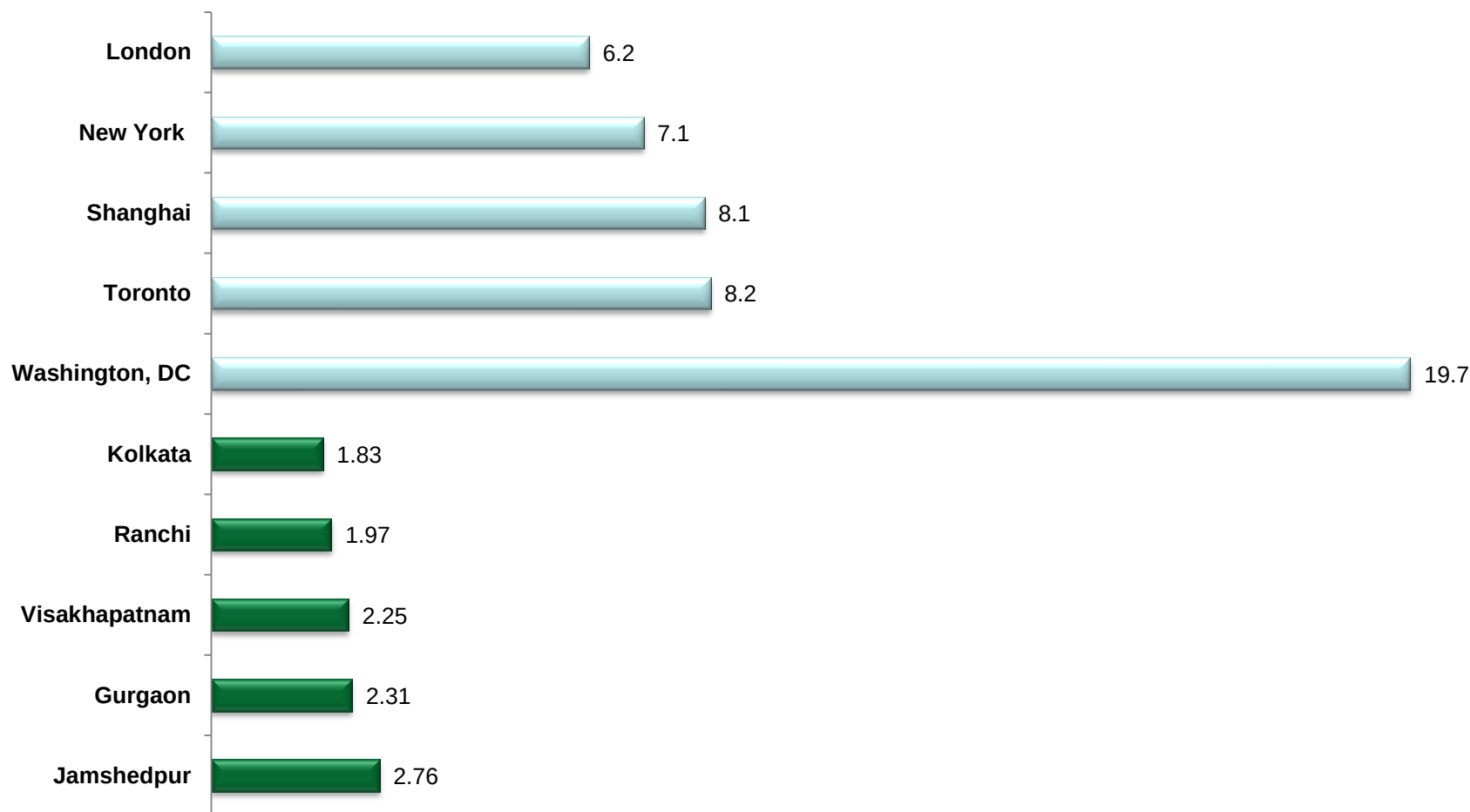


Per Capita Emission



World Cities & Indian Cities

Per Capita Emissions (In Tonnes)



Top Five Cities

11 Cities have more than National Avg

National Avg
1.2T

City Carbon Emissions 2007-08

3
2.5
2
1.5
1
0.5
0

2.76

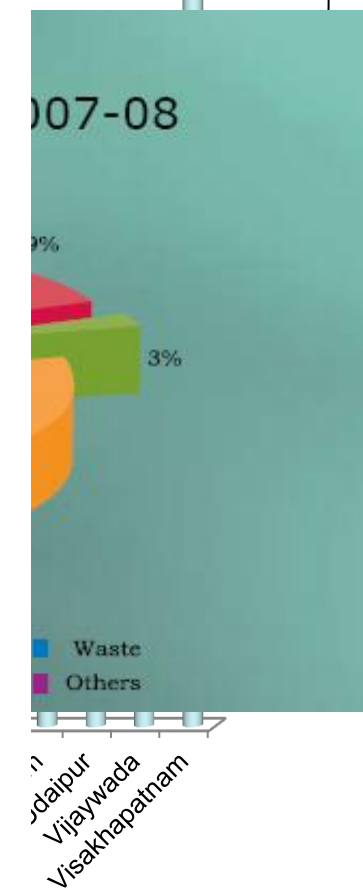
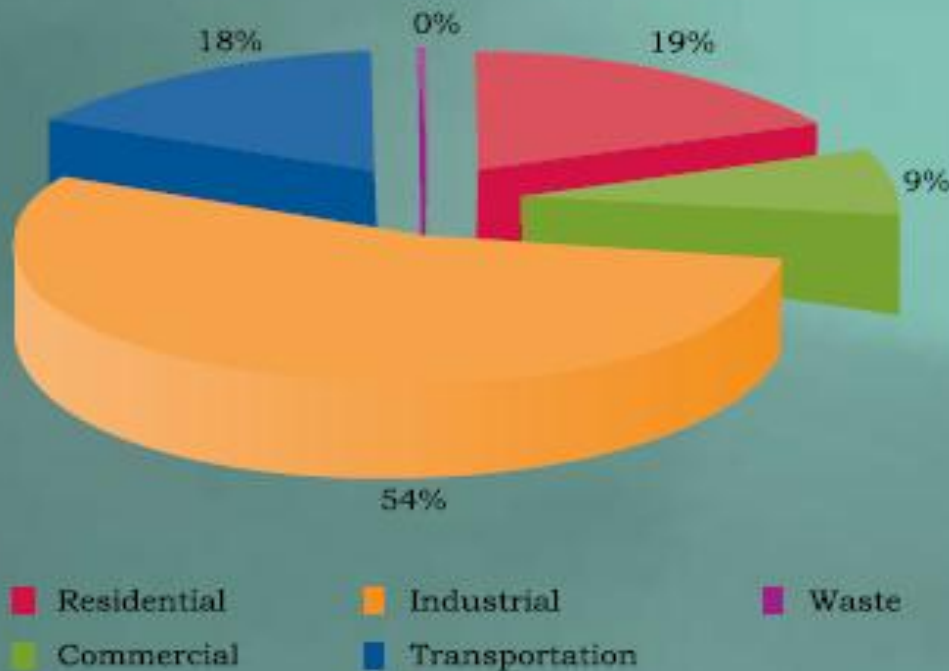
2.25

City Carbon Emissions 2007-08

Agra
Ahmedabad

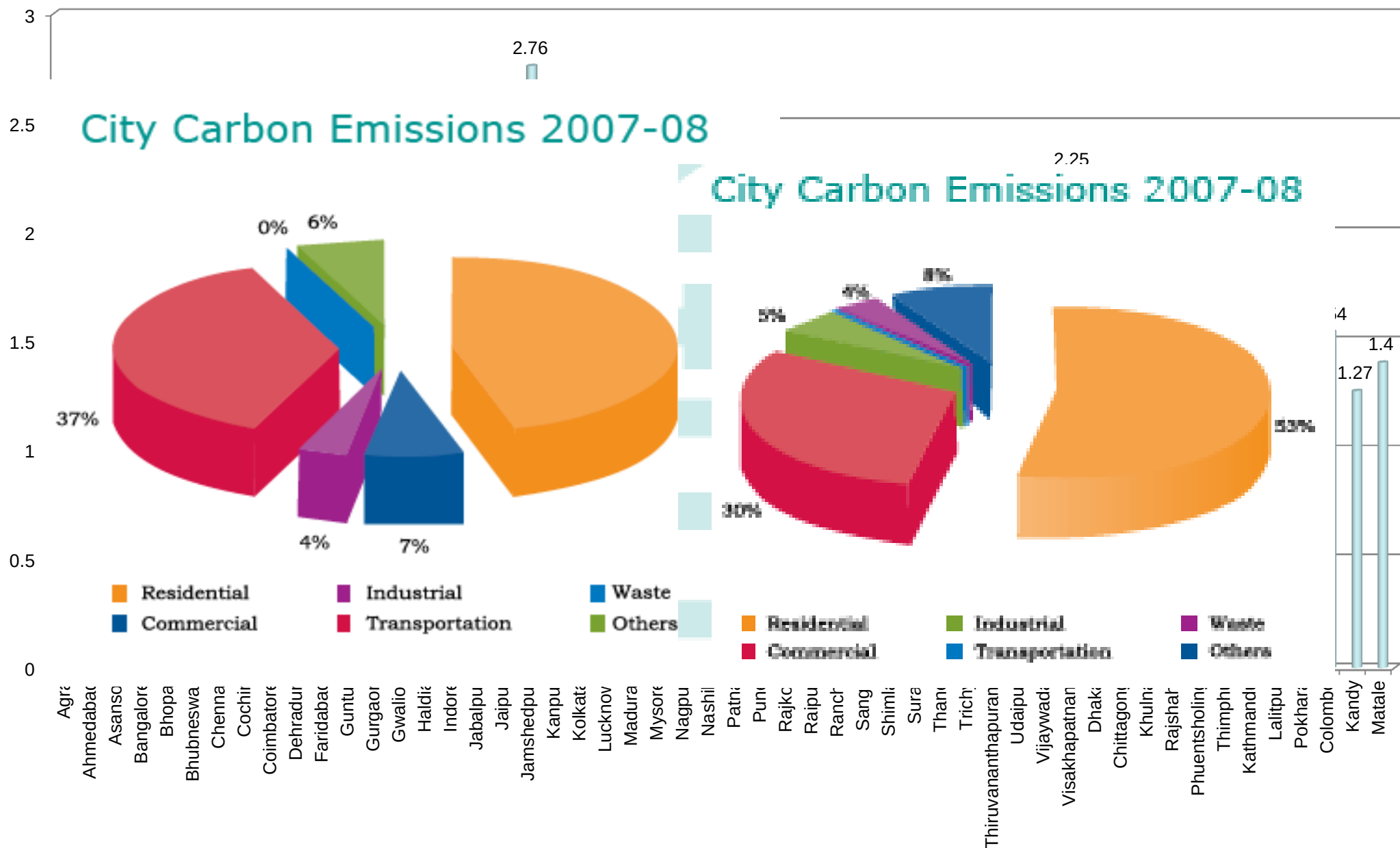
Residential
Commercial
Industrial
Transportation

City Carbon Emissions 2007-08

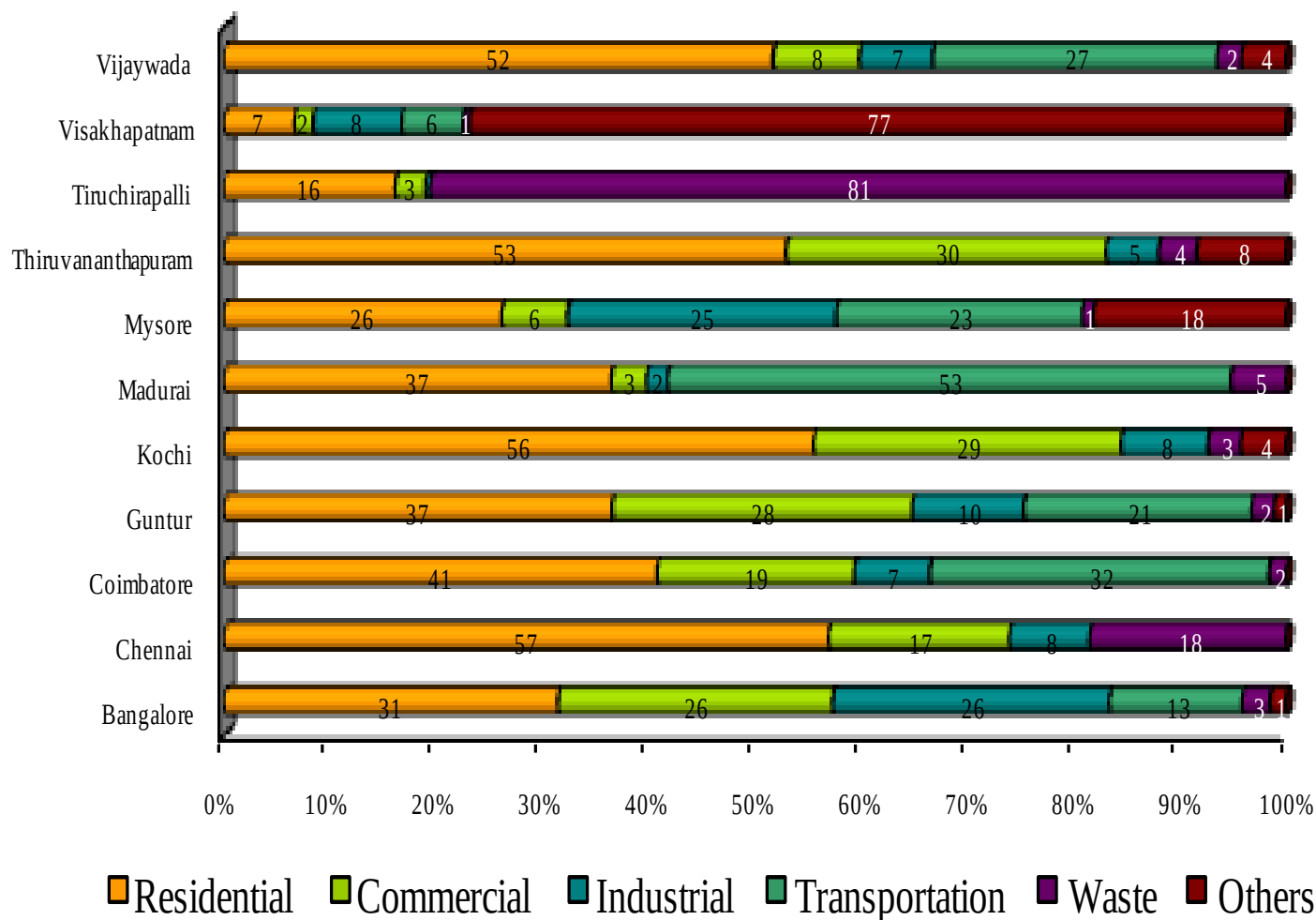


Jaipur
Vijaywada
Visakhapatnam

Per Capita Emission



Emission pattern-Indian City



● Range of CO2 Emissions

● Community Activities

● Residential - 20-55 %

● Commercial - 05-20%

● Industrial - 10-60%

● Transport - 10-40 %

● Solid Waste - 03-15 %

You can find out more about us:

● **THANK
YOU**

- **ICLEI** – Local Governments for Sustainability at:
www.iclei.org
- Ravi.ranjan@iclei.org

