

Integrated Climate Action

***Second Annual Meeting of the Global Platform for
Sustainable Cities (GPSC)***

01 November 2017

**Soumya Chaturvedula
Deputy Director
ICLEI South Asia**

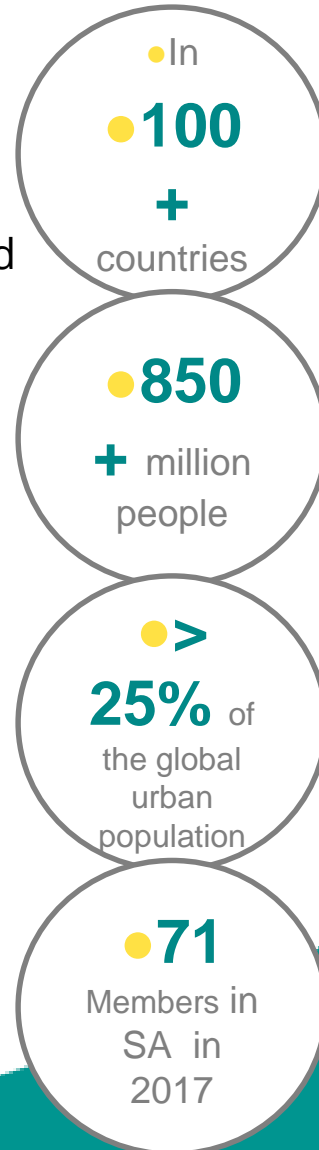
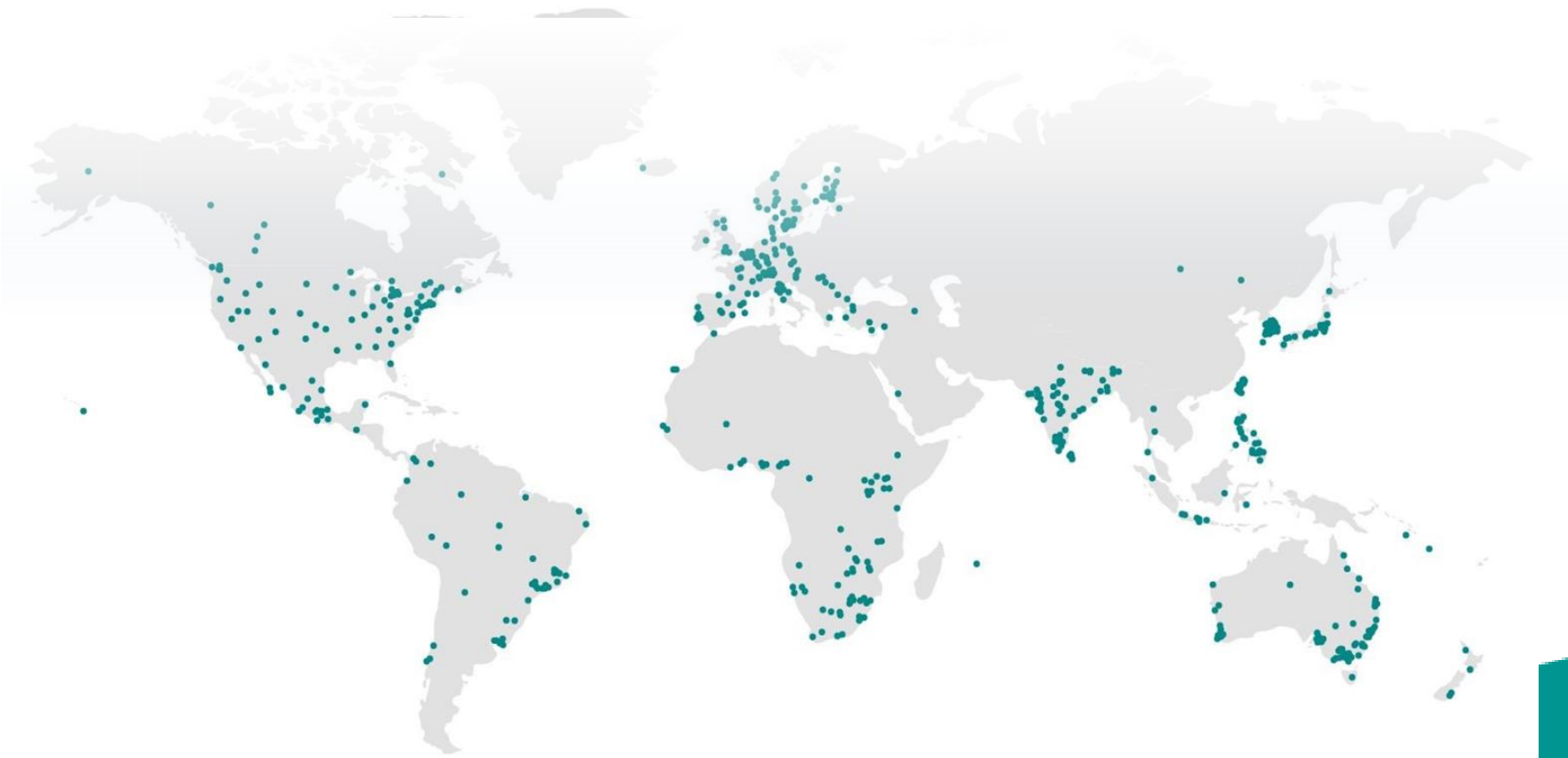


Who we are

Pioneers of urban sustainability

ICLEI was founded in 1990, with the idea that a single municipality has a significant impact and that cumulative local actions can achieve tangible improvements in global sustainability.

Today, **ICLEI** is a world-leading association of over 1,500 cities, towns, metropolises in around 100 countries, committed to building a sustainable future.



ICLEI Offices



● 300+ staff in 17 offices

What we do

- Support our members with technical expertise, tools, guidance.
- Facilitate city peer exchange, support networking.
- Operate global processes
- Conduct international advocacy and representation

We connect leaders



We accelerate action



We provide gateways to solutions

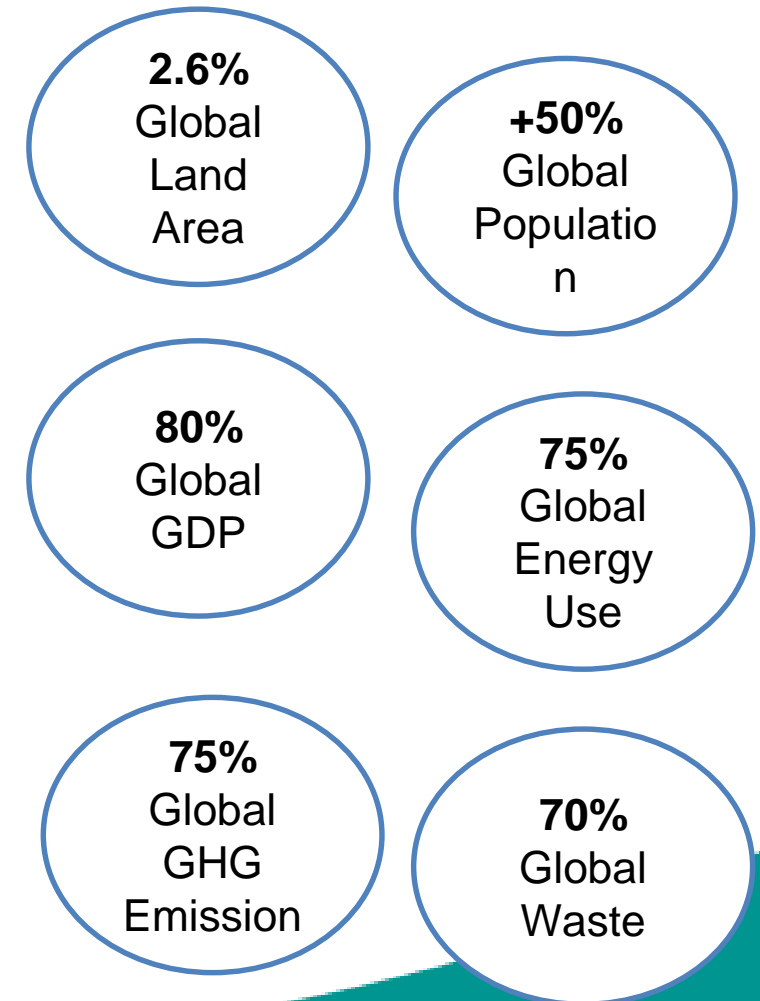


Role of cities, local and subnational authorities

The Paris agreement recognizes the role of **non-Party stakeholders** in addressing climate change, including cities and subnational authorities to

- scale up their efforts and support actions to **reduce emissions**
- **build resilience** and decrease vulnerability to the adverse effects of climate change
- uphold and promote regional and international **cooperation**

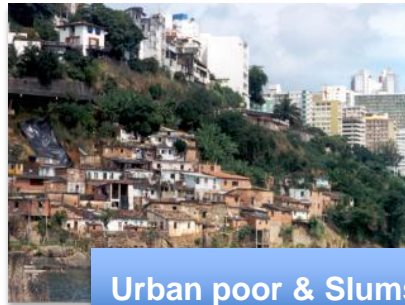
- **Cities can drive global action**



Key Urban Sectors for GHG emission reduction intervention



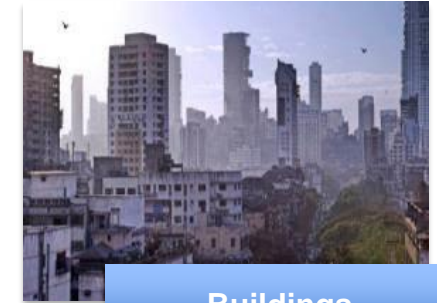
Roads & Transportation



Urban poor & Slums



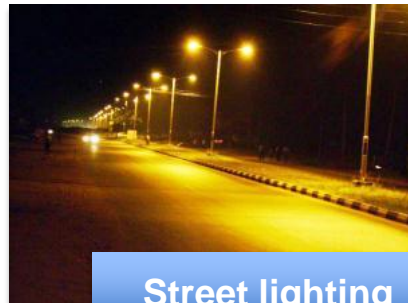
Land use & Development



Buildings



Water Supply



Street lighting



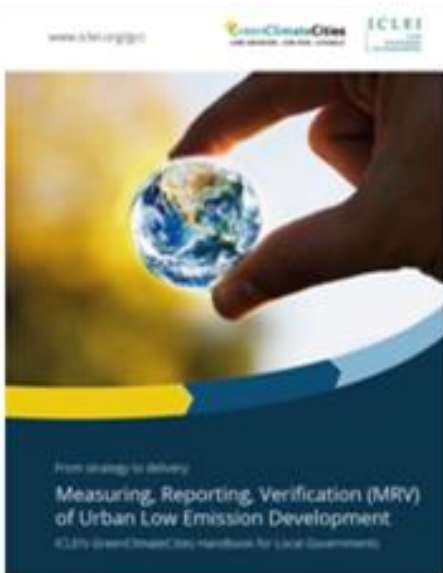
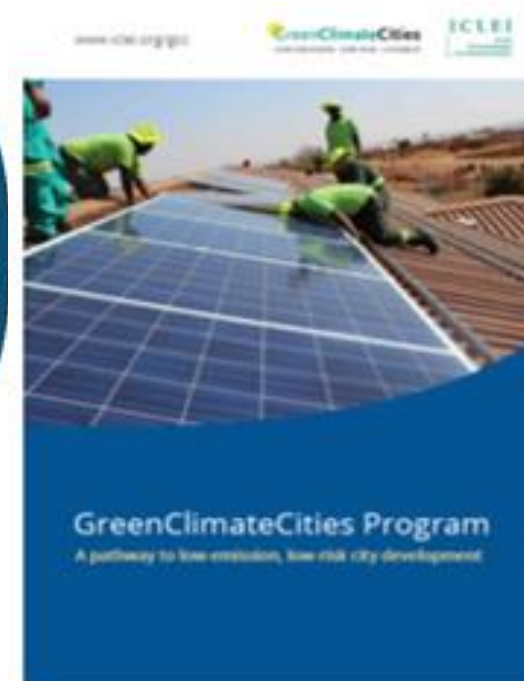
Sewerage & Drainage



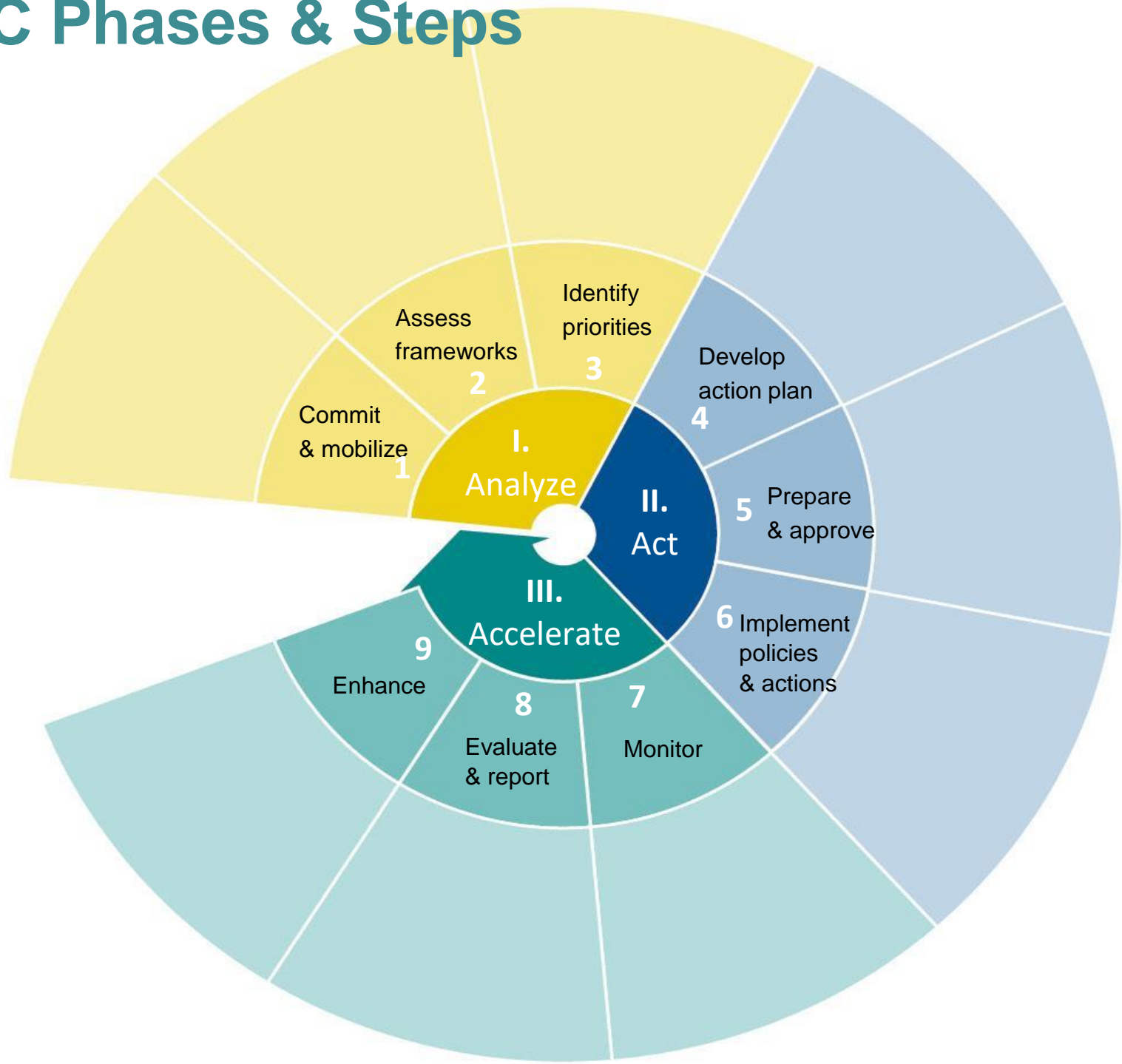
Solid Waste Management

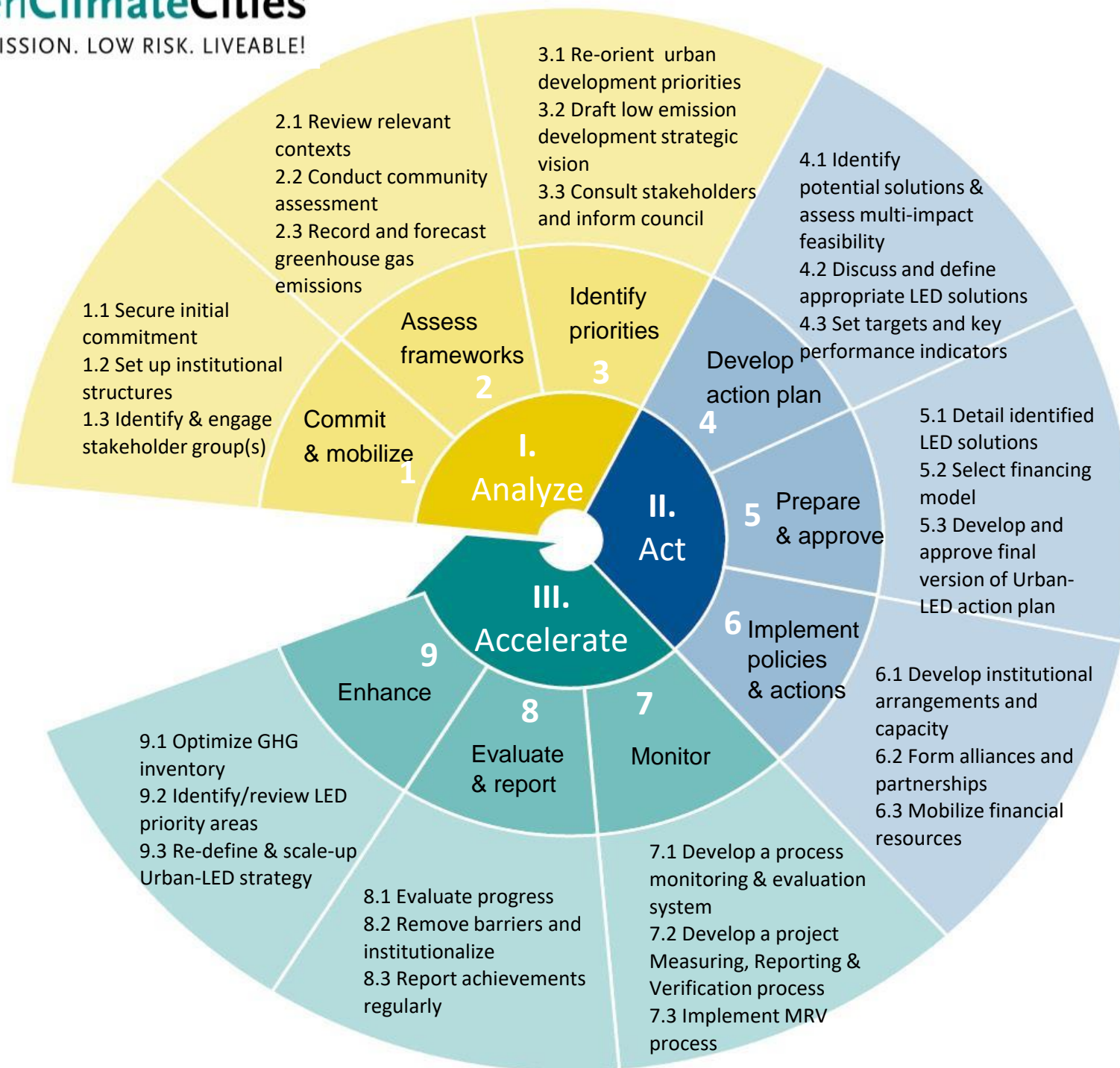
**A pathway to
urban low-
carbon
development**

**Builds on more
than 20 years
cumulative
expertise**



GCC Phases & Steps





GCC – Process

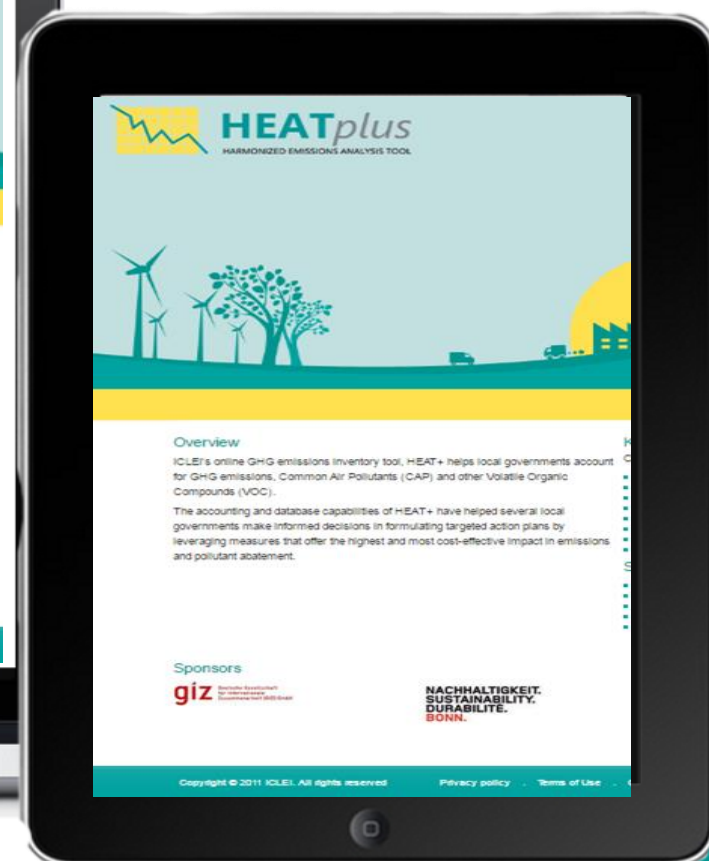
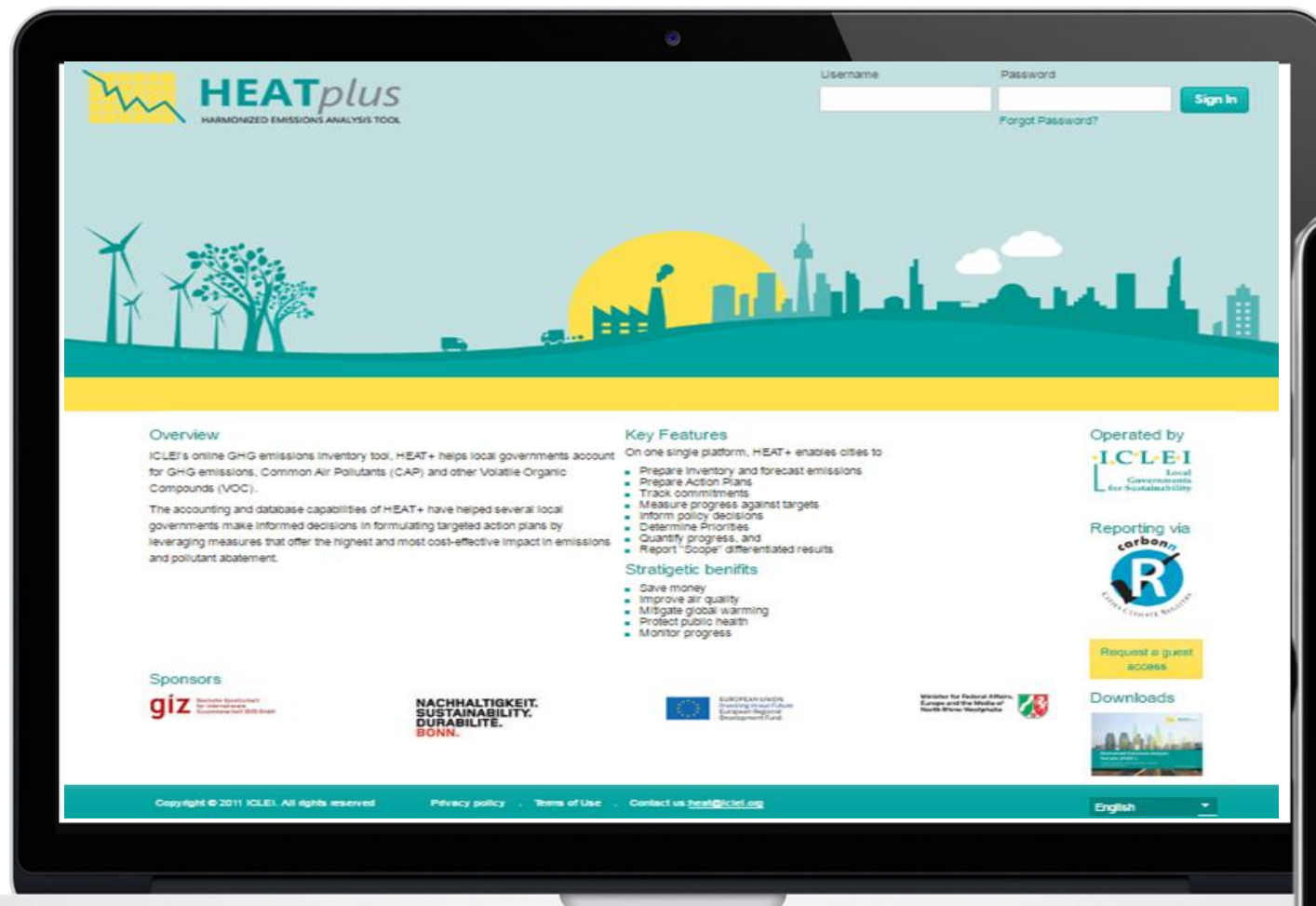
- **Create political processes:** Set up (or fine-tune) structures, tasks and responsibilities, and institutionalizing processes.
- **Identify LEDS priorities:** Exploring 1-2 actions that can be “fast-tracked” for implementation
- **Compile greenhouse gas (GHG) inventory:** Inventory-building process, with reporting of results in the cCR
- **Review contexts:** Understand national, regional and international contexts, as well as local situation
- **Build capacity:** Explore and respond to capacity development needs of political leaders and staff
- **Initiate stakeholder involvement:** Identify and engage with key internal and external stakeholders to ensure success.



HEAT_{plus}

HARMONIZED EMISSIONS ANALYSIS TOOL

I.C.L.E.I.
Local
Governments
for Sustainability



<http://heat.iclei.org>

What is HEAT_{plus}



- Planning **tool to calculate the GHG emissions** – from energy consumption at city level - electricity, LPG, Coal, Petrol, etc...
- Cities can track GHG and other emissions from **community** and **government operations**
- HEAT plus also calculates other emissions such as VOCs, and PM emissions.
- Helps cities **monitor targets and actions** – Target vs. emission reductions
- Internet based, centralized tracking and management

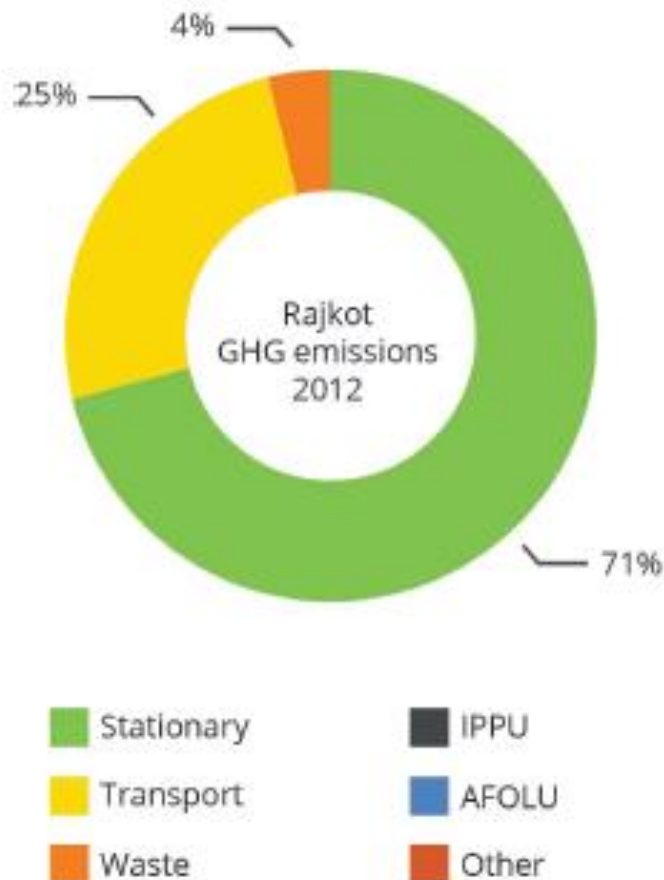
UrbanLEDS - I in Rajkot

Model City **Rajkot**

Community GHG inventory Commitments

GHG emissions from the community:

- 1704'380 tCO₂e (2012-2013)



Rajkot's Low Emission Development Strategy sets the following cumulative community target:

- By 2019-2020: GHG emission reduction of 25.78% (baseline year 2012-2013)

Priority actions in the Strategy include:

- Waste-to-energy
- Renewable energy
- Energy efficiency
- Transport, including strategies to reduce emissions from the municipal fleet.

Approved pilot actions include:

- Street lighting retrofits
- Installation of photovoltaic panels on public schools
- Decentralized waste water treatment plant
- Prefeasibility study and business plan for a Public Bicycle Sharing System.



RAJKOT MUNICIPAL CORPORATION

Vijay Nehra I.A.S.
COMMISSIONER

RMC/C No. - 301

On 23/03/2016

To
The Executive Director
ICLEI - Local Governments for Sustainability, South Asia
Ground Floor, NSIC STP Complex,
NSIC Bhawan
Okhla Industrial Area
Phase - III
New Delhi 110020

Subject: Regarding the implementation of Urban LEDS project and associated activities in Rajkot city
Dear Sir,

We want to extend our greatest thanks and gratitude for considering Rajkot city as one of the pilot cities under European Union supported "Promoting Low Emission Urban Development Strategies in Emerging Economy Countries" project. We want to inform you that the city has greatly been benefitted out of the whole process of participating in the Urban LEDS program. I specially want to mention the GreenClimateCities (GCC) methodology developed by ICLEI to guide local governments to undertake integrated local climate actions. This integrated process has facilitated institutionalization of low carbon development planning process within Rajkot Municipal Corporation (RMC) and has been instrumental in enhancing the effectiveness of local energy and climate actions.

I also want to take thank you for taking RMC through various steps of capacity building, providing resources & tools, technical & financial resources and help city advancing the local climate change agenda through participation in various platforms. The process has helped RMC in prioritizing the key sectors to introduce the low carbon sustainable actions and identifying the potential in various sectors. The city level energy and GHG inventory was crucial to identify the major areas of intervention. The low emissions action plan prepared under this project for the city is an ambitious target for Rajkot Municipal Corporation and we hope to achieve as per the guidelines given in the action plan within the stipulated time period.

We have also been greatly benefitted with the grants received from EU through ICLEI to identify and implement the following pilot projects in Rajkot City:

- Replacement of 251 existing HPSV lights with LED lights on three preselected roads, Rajkot
- 20 kWp roof top SPV on a Municipal school - Sangam Naidu School
- 1000 Litre decentralized treatment plant at city garden

Commissioner Office, Dr. Ambedkar Bhawan, Okhla Industrial Road, Rajkot - 360 001
Off. : 0281 - 2229975, 2224153, Res. : 0281 - 2463878, Fax : 0281 - 2224330
E-mail : info_rmc@rajkot.gov.in, rajkot@rajkot.gov.in, Website : <http://www.rmc.gov.in>

It is a pleasure to inform you that all the pilot projects have successfully been implemented and a total of 100 tCO₂e per year will be reduced through introduction of these pilot projects in the city. RMC is committed to further replicate them on a larger scale from learnings and understanding out of these pilot projects. A robust low emissions development strategy (LEDS) with MRV component has been prepared out of series of consultations with the core team and concerned stakeholders. We request a council approval on the action plan by April, 2016. The LEDS sets a cumulative target to reduce the GHG emissions by 4,51,724 tonnes of CO₂e, which is 25.78% of Rajkot City's baseline annual GHG emissions in the year 2012-13.

At last, I want to thank the whole team of ICLEI, European Union and UN Habitat for their unstinting and continuous support to RMC and help us deliver the better services to the citizens of Rajkot city. We look forward for more such engagements with you in future as well on our path to make Rajkot a really sustainable city.

Thanking you,

Municipal Commissioner
Rajkot Municipal Corporation
Dr. Ambedkar Bhawan, Okhla Industrial Road,
Rajkot

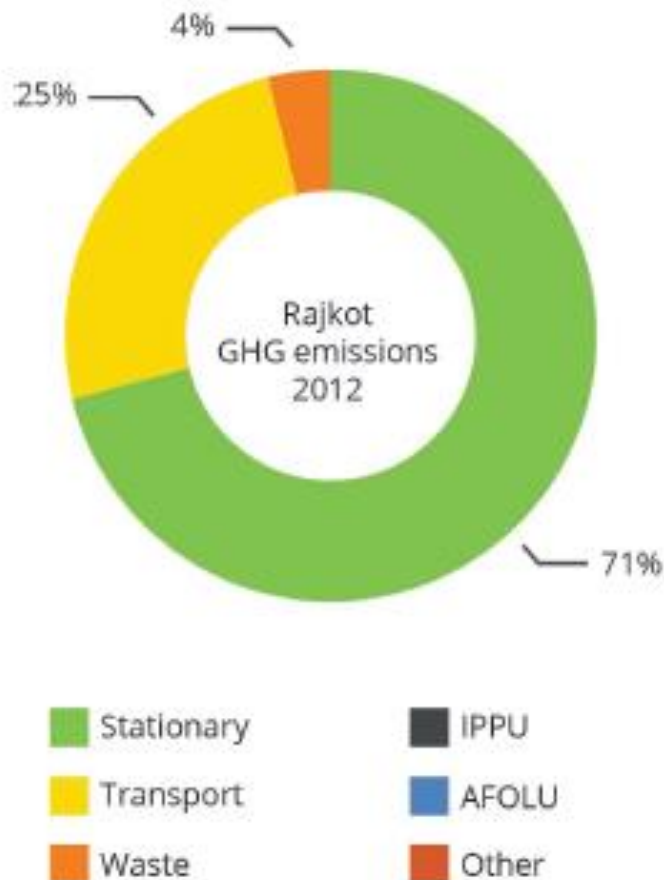
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Dr. Ambedkar Bhawan, Okhla Industrial Road,
Rajkot

✓ 100 KLD Decentralized Wastewater Treatment Plant, Rajkot



✓ **20kWp SPV system on Sarojini Naidu School, Rajkot**



✓ **School Children Training on Climate Change, Thane**



✓ **Retrofitting 522 sodium vapor streetlights with LED streetlights, Thane**



| | Pilot Projects | Annual Energy Generation/ Savings (Million kWh) | Annual GHG Emission Reduction (t CO ₂ e) |
|-------------------|--|---|---|
| Renewable Energy | 100 KLD Decentralized Water Treatment Plant, Rajkot | 0.004 | 15 |
| | 20 kW Solar PV System at Municipal School, Rajkot | 0.02 | 24.68 |
| | 15 kW Solar PV System with smart energy saving appliances at School, Thane | 0.054 | 66.63 |
| Energy Efficiency | ESCO Project Retrofitting 12000 sodium vapor streetlights with LED streetlights, Thane | 4.5 | 3700 |
| | Retrofitting 291 sodium vapor streetlights with LED streetlights, Rajkot | 0.07 | 59.83 |
| | Retrofitting 522 sodium vapor streetlights with LED streetlights, Thane | 0.11 | 86 |
| | Tender for replacing 5600 streetlights and infrastructure with smart LED and control infrastructure, Panaji | 2.3 | 2,221 |
| | Redesigning electrical infrastructure with smart and energy efficient appliances at municipal market, Panaji | 0.2 | 165 |

UrbanLEDs - I in Bogor

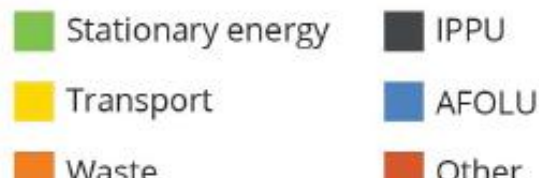
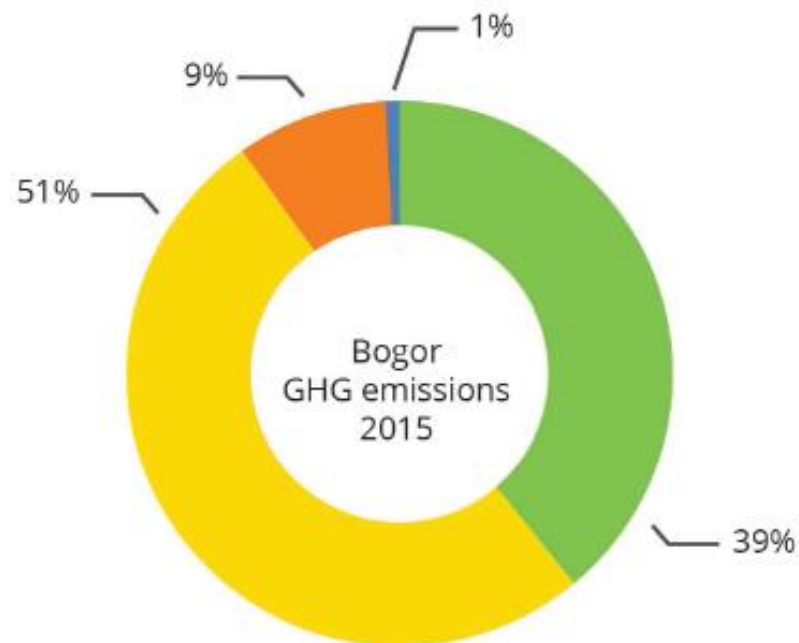
Model City Bogor

Indonesia

Community GHG inventory

GHG emissions from the community:

- 4'970'635 tCO₂ (2013) *Scope 1 emissions



Commitments

Bogor is committed to the following emission reduction target:

- 29% GHG emission reduction by 2020 (baseline year 2010) (community target)

Bogor's **5-Year Development Plan (RPJMD)** adopted in November 2014 recognizes climate change mitigation, adaptation and disaster risk reduction as strategic priorities for the period 2014-2019.

The RPJMD maps emission reduction efforts in the following priority sectors:

- Spatial planning
- Air pollution control
- Public transportation
- Pedestrianization
- Green building standardization
- Integrated waste management
- Energy efficient streetlights retrofits



UrbanLEDs - I in Recife

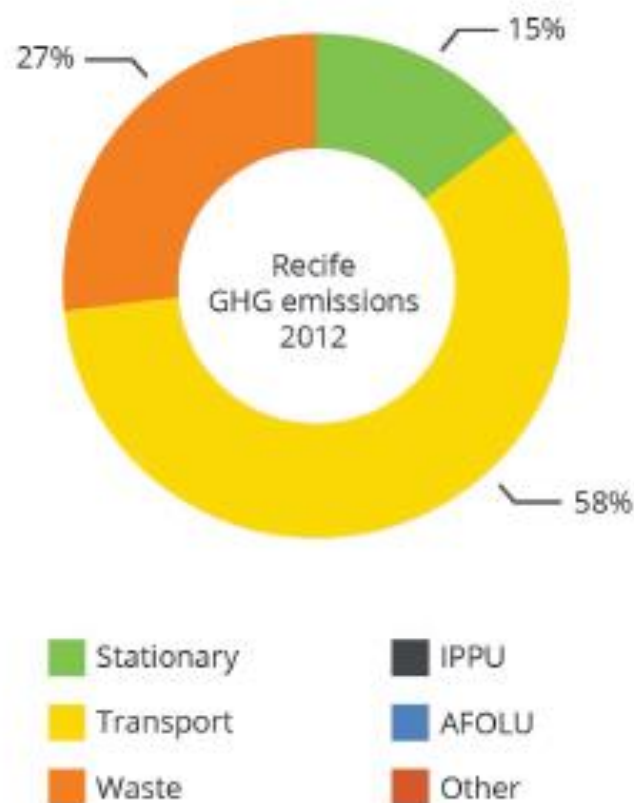
Model City Recife

Brazil

Community GHG inventory

GHG emissions from the community:

- 3'115'341 tCO₂e (2012)



Commitments

The City established the following community targets (in the Decree 29.219):

- By 2017: GHG emission reduction of 14,9% against Business-As-Usual levels (baseline year 2012)
- By 2020: GHG emission reduction of 20.8% against Business-As-Usual levels (baseline year 2012)

Strategy

Building on the **Municipal Climate Change and Sustainability Bill**, by 2015 the LED Action Plan and targets were also approved by the City Council.

Priority actions in the Action Plan include:

- Developing bicycle lanes
- A Bus Rapid Transit system
- An electric car sharing system
- Bus fleet fueled by renewable energy
- Green building certification scheme
- Accelerating light emitting diode lighting
- Renewable energy for public installations
- Recycling
- Waste-to-energy schemes



UrbanLEDs - I in Recife

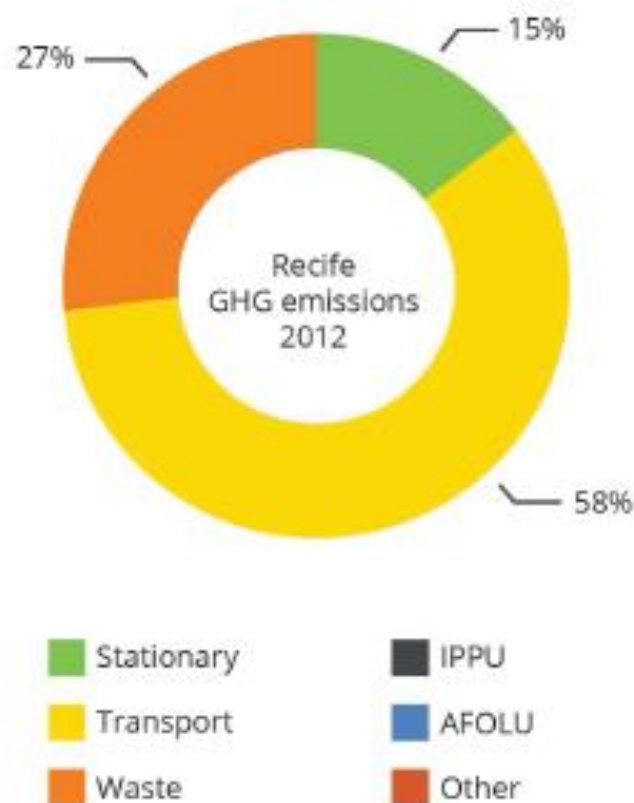
Model City Recife

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UrbanLEDs - I in Steve Tshwete

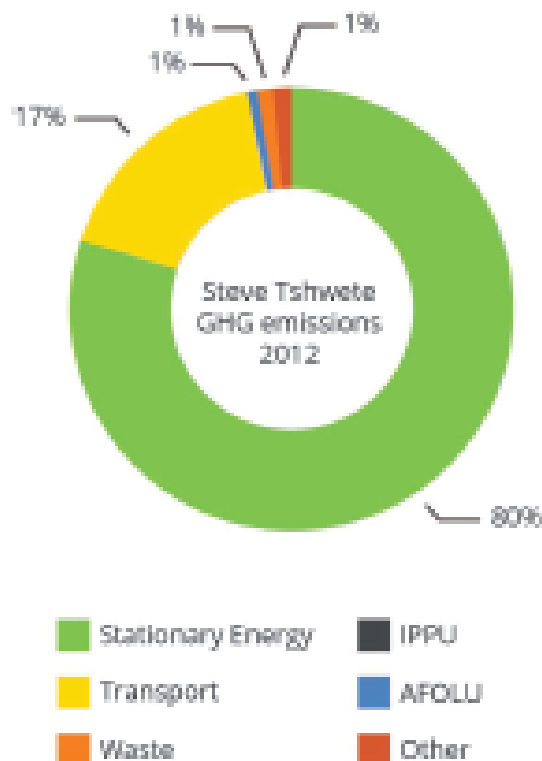
Model City **Steve
Tshwete Municipality**

South Africa

GHG inventory

GHG emissions from the community:

- 3773288 tCO₂e (2012)



Commitments

The following aspirational target was recommended for inclusion in the Low Emission Development Position Statement:

- 42% emissions reduction in line with the national peak plateau and decline long-term mitigation scenario (baseline, 2012, target 2030).

The target is aligned with the following national government commitments: the Climate Change Response Strategy committed to reduce GHG by 34% by 2020 and 42% by 2025 against BAU, the National Development Plan and the Renewable Energy target (to install 5395 MW).

Strategy

The Steve Tshwete Low Emission Position Statement was finalized and sent to the Municipal Council for approval in February 2016.

The priority action sectors are:

- Local Economic Development & Job creation
- Electricity Services
- Municipal & Community Facilities
- Spatial planning & land-use management/human settlements
- Roads and stormwater
- Environmental management/solid waste management
- Water/water & sanitation
- Parks and playing equipment
- Human Resource Management
- Performance management
- Public Participation & communication



UrbanLEDs – South-South-North Exchange



carbonn® Climate Registry

The world's leading reporting platform to enhance transparency



725

10% of the world population represented



971

Number of entities registered to the cCR



84

Countries



1450

Climate Targets



6167

Mitigation and Adaptation actions



1.1

Committed GHG emission reductions by 2020

The cCR is the reporting platform of:



In partnership with:



MICHAEL R. BLOOMBERG

UN Secretary-General's Special Envoy for Cities and Climate Change



Plan de Acción Climática Municipal



● www.carbonn.org

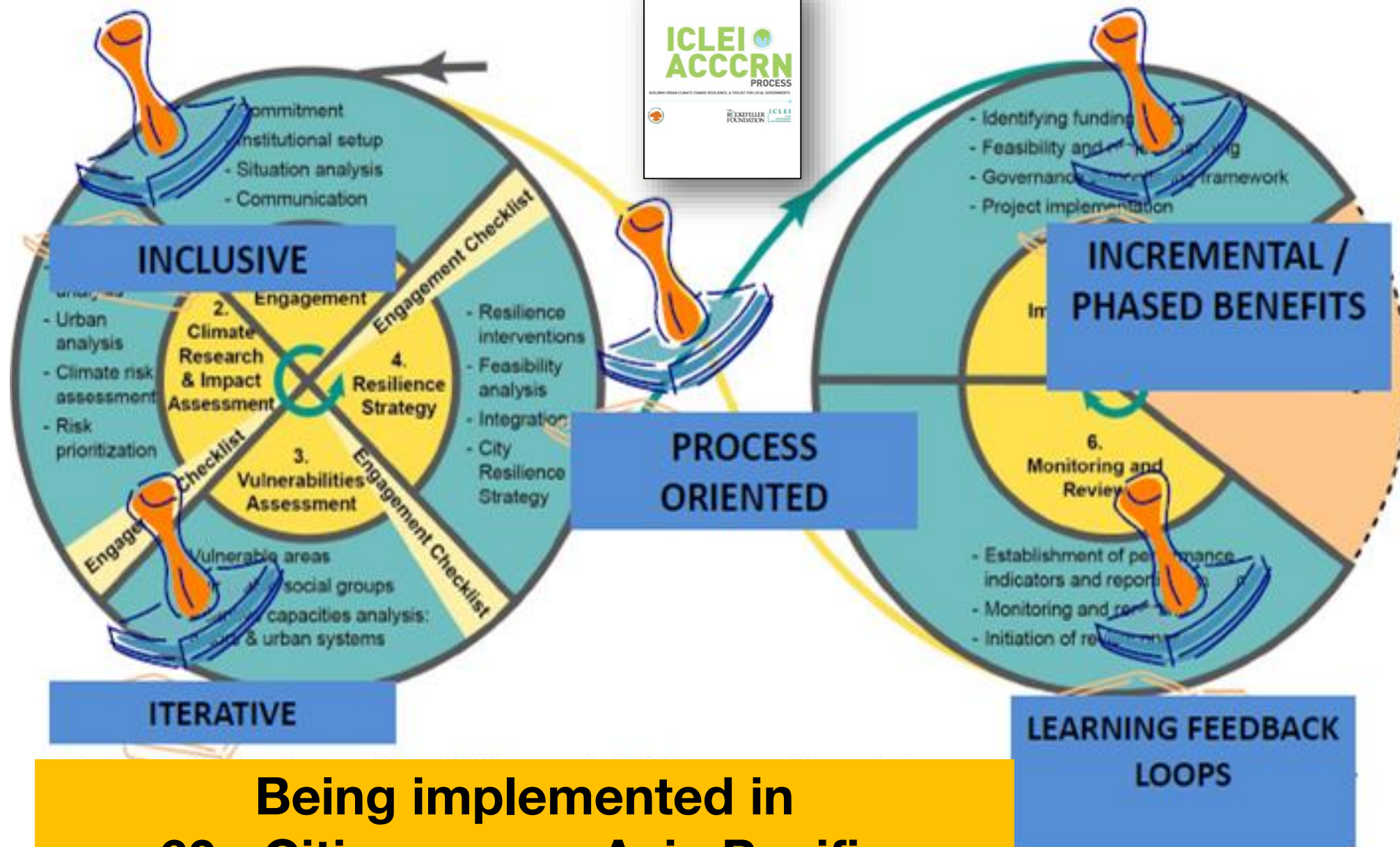
Global Covenant of Mayors for Climate & Energy

I.C.L.E.I
Local
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for Sustainability



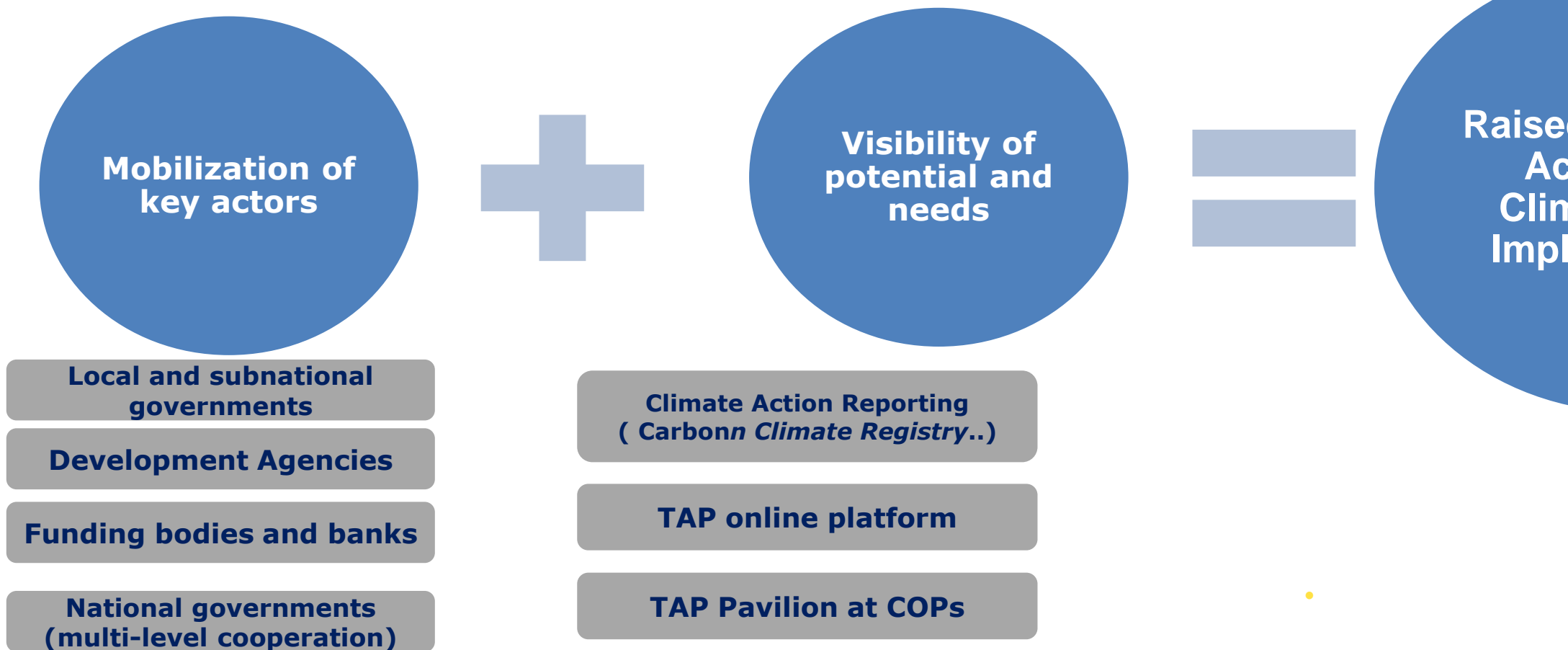
● www.compactofmayors.org/globalcovenantofmayors

ICLEI ACCCRN Process: Building Urban Climate Change Resilience



**Being implemented in
60+ Cities across Asia Pacific**

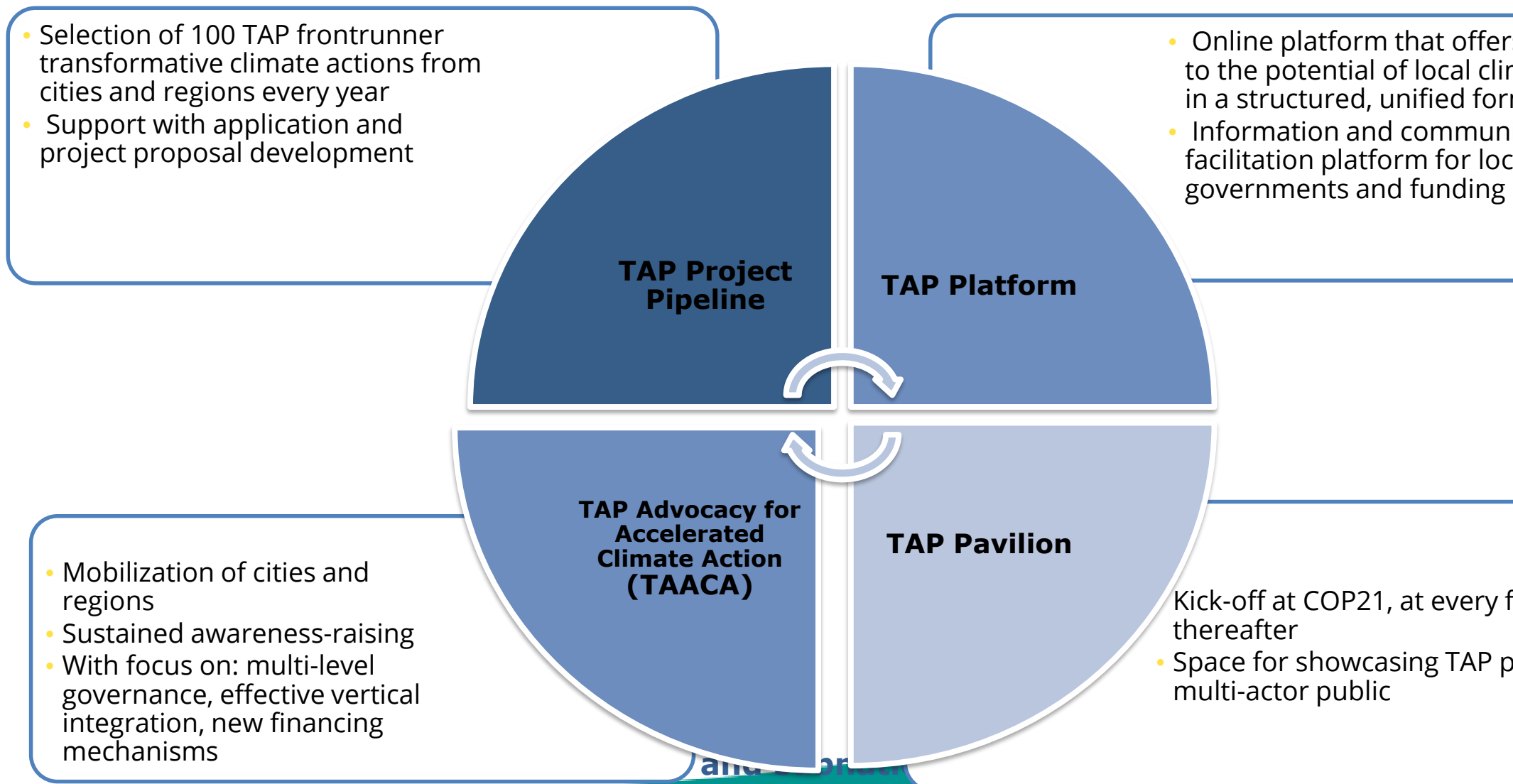
Transformative Actions Program



TAP the potential of local and subnational climate action!

Transformative Actions Program

The 4 Action Pillars of the TAP



Support – from process to projects



**Mega cities
Alliance for Water
and Climate**

ICLEI South Asia – Glimpse of Outputs

Cities Baseline GHG Emission Inventory in the South Asia and South East Asian Region



68



ICLEI
Local Governments for Sustainability



Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

An Accounting and Reporting Standard for Cities

URBAN LEDS



| Cities | Target GHG emission reduction (Million tCO ₂ e) | GHG emission reduction target by 2019-20 from the base year 2012-13 (%) |
|--------|--|---|
| Rajkot | 0.45 | 26 |
| Thane | 0.62 | 31 |
| Panaji | 0.02 | 19 |



Solar Cities targets **10%** reduction in conventional energy demand

Ten Indian Solar Cities cumulative targets

| Energy Saving | GHG Reduction | Renewable Energy Potential | Investment |
|------------------|---------------------------------|----------------------------|-----------------|
| 1777 Million kWh | 1.37 Million tCO ₂ e | 244942 kW | 864 Million USD |

ICLEI South Asia prepared Panaji Smart City Proposal worth **266 Million USD** which focuses on Retrofitting of city core and Solid Waste and Mobility for Pan-City.

Handholding supported extended to Jaipur, Udaipur, Kakinada and others



Thank You !



Soumya Chaturvedula

Deputy Director

ICLEI South Asia Secretariat

E-Mail: soumya.chaturvedula@iclei.org, iclei-southasia@iclei.org

Websites: www.iclei.org, www.southasia.iclei.org