



# Smart Cities in India

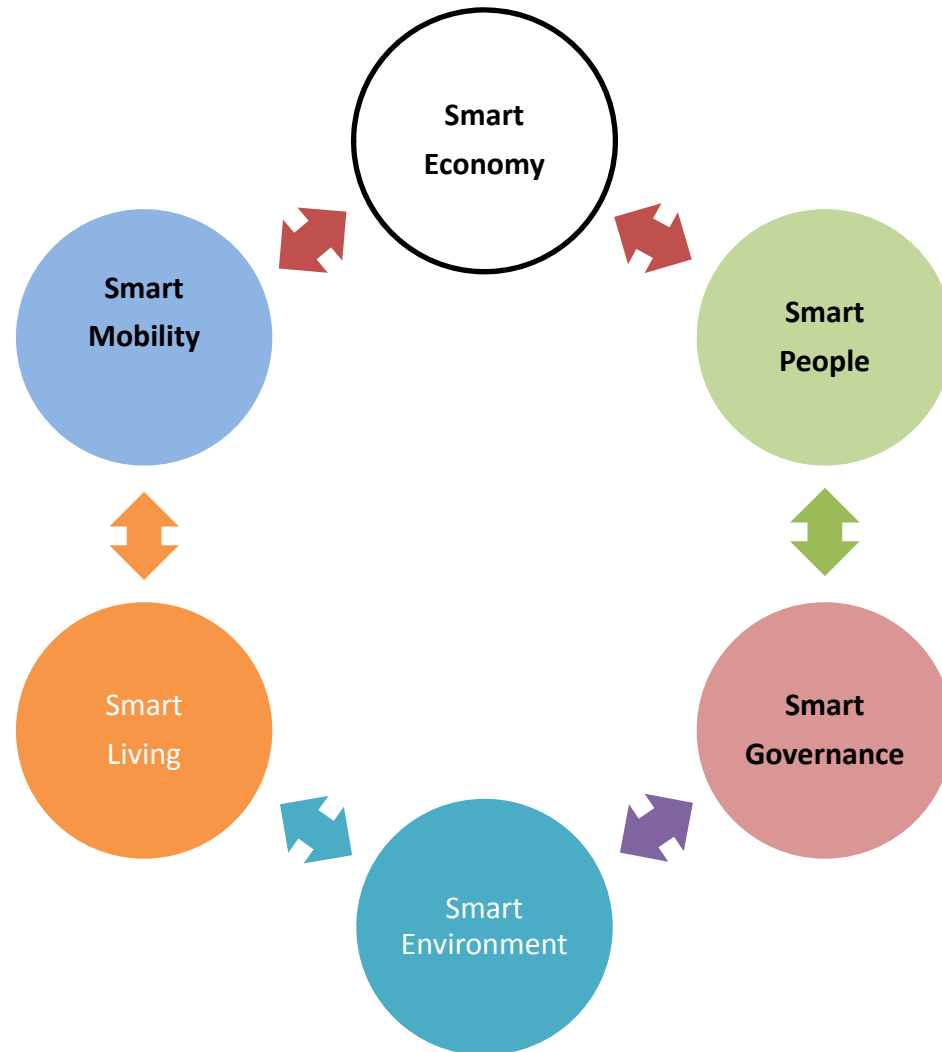
## and the International Policy Context

Subash Dhar  
UNEP DTU Partnership

Low Carbon, Smart and Sustainable Cities Workshop  
20 March, New Delhi



## Six Dimensions of Smart City



## Smart City: Opening Thoughts

- A large part is branding and self promotion
- Attracting business and knowledge workers
- Larger role for private sector
- A strong undercurrent of IT enabled services
- Key concerns
  - inclusiveness
  - Cost of public services

# Sustainable Development Goals (relevant for Urban Transport)



## Goal 3 - Good Health and Well Being

In 3.6.1 Death rate due to road traffic injuries

**Target - Half number of deaths by 2020**



## Goal 11 - Sustainable cities and communities

In 11.2.1. Proportion of population that has convenient access to public transport

**Target - All population by 2030**

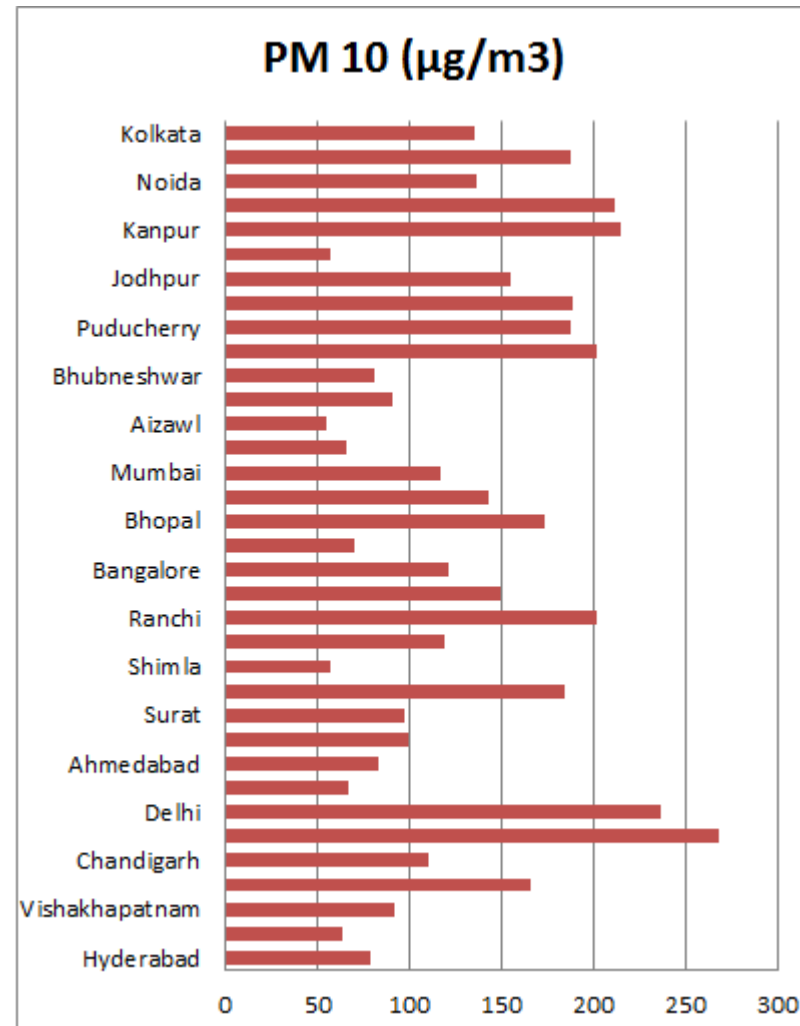
In 11.6.2. Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities

**Target - Reduce by 2030 (??)**



## Goal 13 - Climate Action

In 13.3.1 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions



Source : Central Pollution Control Board

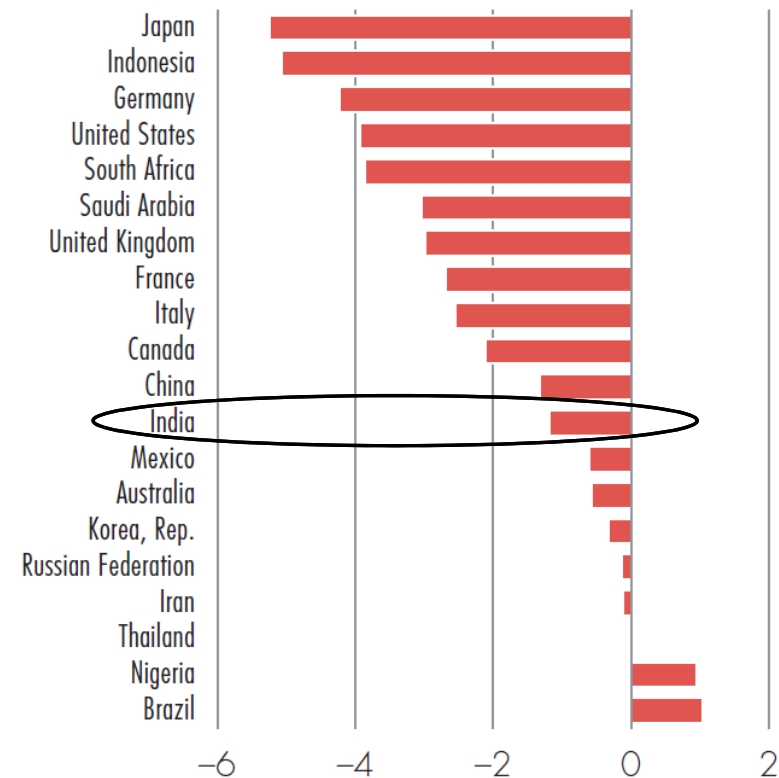
# Sustainable Energy for all (SEforall)

- **SEforall Goals**

(Announced in 2011 and by 2030)

- Ensure universal access to modern energy services
- Double the share of renewable energy in the global energy mix
- Double the global rate of improvement in energy efficiency (2.6% Annual Improvement as per Global Tracking Framework).
  - Global Fuel Economy Initiative Goals (4 lit/100 km by 2030)

Annual Improvement in EI (2010-12)



Source : Global Tracking Framework Key Findings  
<http://trackingenergy4all.worldbank.org/~//media/GI-AWB/GTF/Documents/GTF-2015-Key-Findings.pdf>

# Intended Nationally Determined Contribution

- **Global Ambition** : limit global temperature increase to 2°C and an enhanced ambition of achieving a 1.5°C temperature (Paris Declaration)
- **National ambition** : Reduce emission intensity by 33-35% by 2030 from 2005 level.

**Achievement**

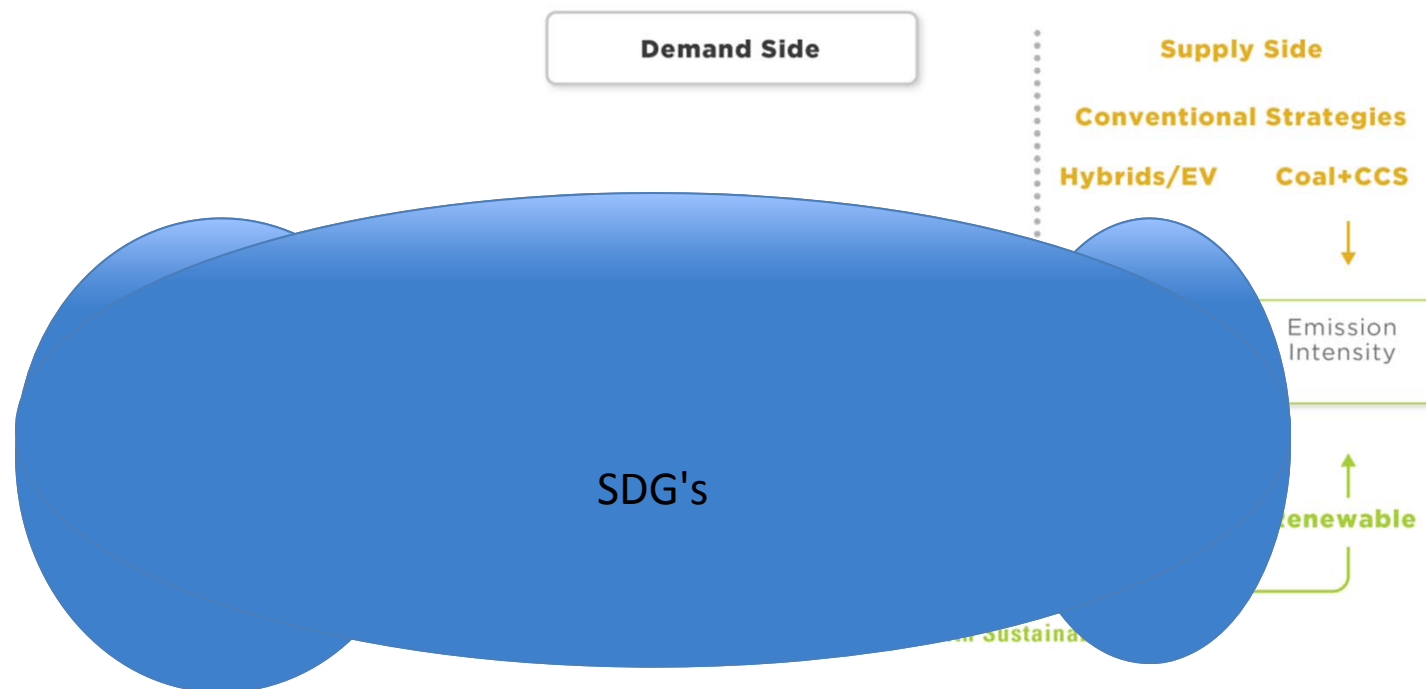
12% between 2005 and 2010

## Actions related to Urban Transport

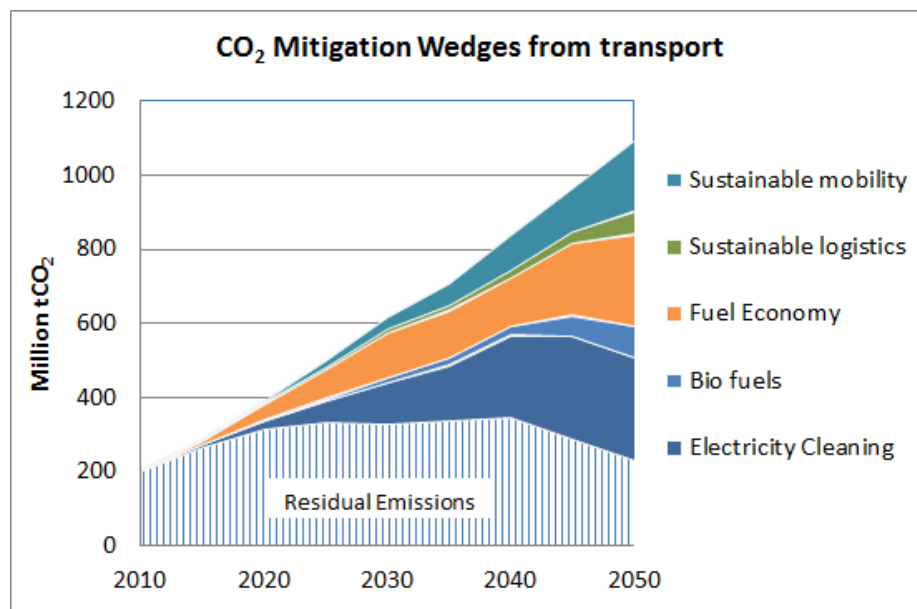
Action Area	Ongoing Policy/plan
<b>Urban Development</b>	National Mission on Sustainable Habitat Smart City Mission Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
<b>Electric Vehicles</b>	National Electric Mobility Mission Plan (NEMMP) Faster Adoption and Manufacturing of Hybrids and Electric Vehicles (FAME)
<b>Vehicles</b>	Auto Fuel Policy for fuel quality and vehicle emission norms, 2014 Energy Consumption Standards for Motor Vehicle, 2014
<b>Biofuels</b>	National Policy on Biofuels Biofuel pricing, 2014 Marketing rights, 2015

# Integrating Climate Goals, SDG's and SEforall

## Emission Identity



## Mitigation Wedges for Transport: 2° C Scenario



Source : Dhar & Shukla, 2015.

["Promoting Low Carbon Transport in India"](#)

## Achievement with respect to Global Targets in 2030

SMART City Dimension	Global Policy	Target	BAU	2°C
<b>Smart Mobility</b>				
Modal Shares Public /Para Transit	SDG	All people have access to PT	50%	54%
<b>Smart Economy</b>				
CO <sub>2</sub> Emissions Intensity	INDC	33% to 33% reduction	-29%	-66%
Energy Intensity	SEforall	-2.60%	-3.1%	-3.4%
<b>Smart Environment</b>				
Air Pollution (PM 2.5 )	SDG	Reduce Pollution	-9%	-39%
<b>Smart Living</b>				
Road traffic injuries (per million) *	SDG	Reduce fatalities by half	217	147

(\* ) LCMP Rajkot, 2014, The scenario is PT + NMT Intervention

- SMART Mobility need investment into Public Transport and NMT infrastructures
- Goals for SDGs, SEforall and INDC congruous with SMART city dimensions



## *A Toolkit for Preparation of Low Carbon Mobility Plan*



September 2016