

# Regional Policy Dialogue on Sustainable Urbanization in South Asia

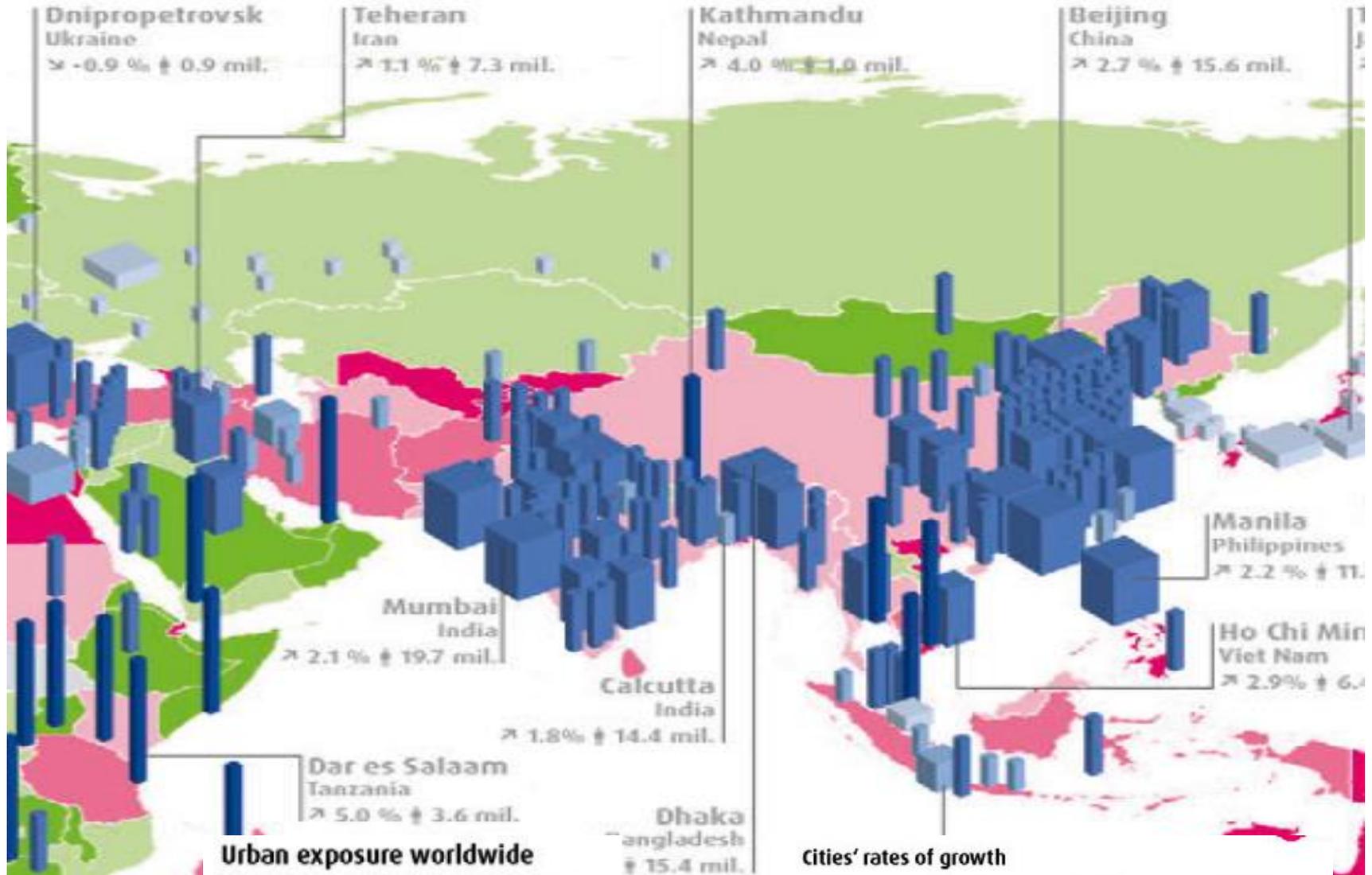
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Presentation by:

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**Deputy Secretary General, ICLEI Global &  
Executive Director, ICLEI South Asia**





# COST OF CLIMATE CHANGE ADAPTATION IN SOUTH ASIA

## BUSINESS-AS-USUAL SCENARIO

**\$73 BILLION**

or **average of 0.86% of GDP** per year between now and 2100



Assumes no global deviation from a fossil-fuel-intensive path, with rise in global temperatures at 4.5° - 4.6°C

## COPENHAGEN-CANCUN SCENARIO

**\$41 BILLION**

or **average of 0.48% of GDP** per year between now and 2100



Global temperature rise should be kept to a maximum 2° - 2.5°C

## IMPACTS AND ADAPTATION MEASURES ON VULNERABLE SECTORS

Almost all areas of South Asia will suffer as temperatures rise due to climate change under a business-as-usual scenario. Building resilience requires identifying the risks in each sector and identifying adaptation measures that are possible and economically sound.

### AGRICULTURE



By the 2080s, warmer weather could increase rice production by **as much as 16% per year in Nepal**, but drop **as much as 23% per year in Bangladesh, Bhutan, India, and Sri Lanka**

### COASTAL AREAS



A one-meter rise in sea levels would affect **95 million people** and **another 100 million** when there are storm surges

### ENERGY AND WATER



Changes in precipitation will make it harder to meet energy and water needs, with India's water shortfall forecast to hit **400 billion cubic meters by the 2050s**

### HUMAN HEALTH



Climate and anomalous weather events will likely result in a rise of vector- and water-borne diseases **such as dengue and diarrhea**

# India' National Action Plan on Climate Change

- On June, 2008, India's first National Action Plan on Climate Change (NAPCC) was released outlining existing and future policies and programs addressing climate mitigation and adaptation.
- The plan identifies eight core "national missions" running through 2017 and directs ministries to submit detailed implementation plans to the Prime Minister's Council on Climate Change by December 2008

Mission	Objective	Concerned Ministry
1. National Solar Mission	20 GW by 2022	Ministry of New and Renewable Energy (MNRE)
2. National Mission for Enhanced Energy Efficiency	10 GW of EE savings by 2020	Ministry of Power (MoP)
3. National Mission on Sustainable Habitat	EE in residential and commercial buildings, public transport, water supply, urban planning, Solid waste management, urban transport, urban storm water management	Ministry of Urban Development (MoUD)
4. National Mission for sustaining Himalayan Ecosystem	Conservation and adaptation practices, glacial monitoring	Ministry of Science & Technology (MoST)
5. National Mission for a Green India	6 mn hectares of afforestation over degraded forest lands by the end of 12th Plan	Ministry of Environment & Forest (MoEF)
6. National Mission for Sustainable Agriculture	Drought proofing, risk management, agricultural research	Ministry of Agriculture (MoA)
7. National Water Mission	Water conservation, river basin management	Ministry of Water Resources (MoWR)
8. National Mission on Strategic Knowledge Management	Vulnerability assessment, Research & observation, data management	Ministry of Science & Technology (MoST)

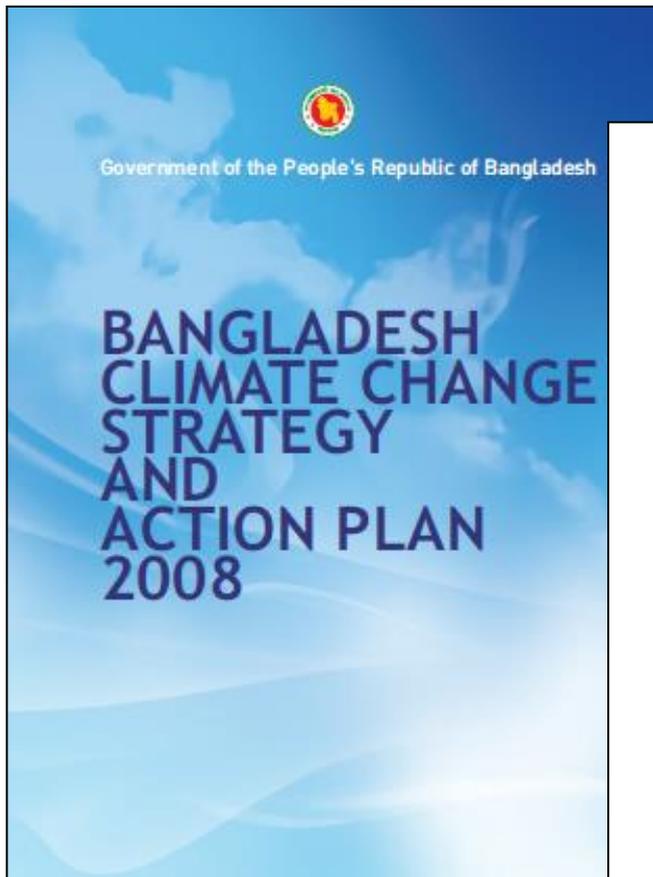
# National Mission on Sustainable Habitat

With an objective to translate certain strategies in residential and commercial buildings, water supply and waste management systems, urban transport, and better urban planning, the Sustainable Habitat Parameters have been developed under the NMSH.

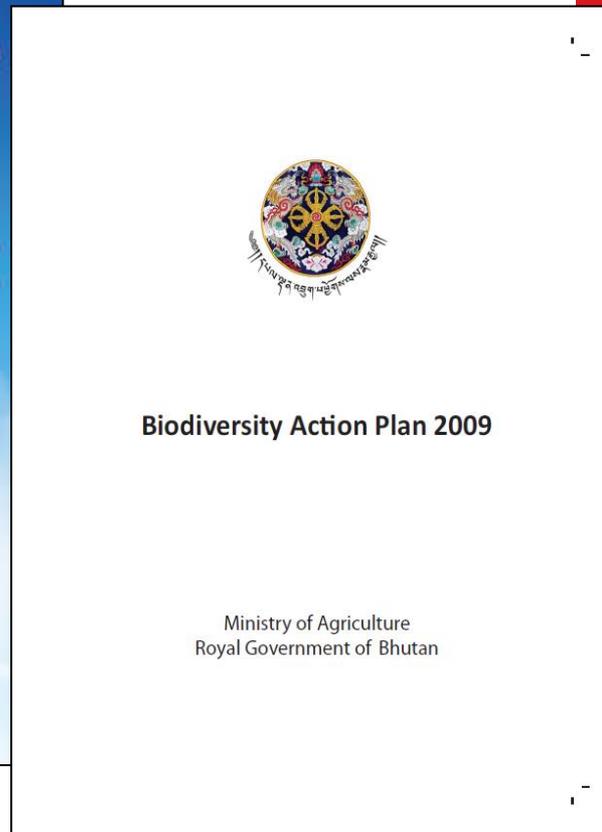
Sectors	Description
<b>1. Promoting energy efficiency in the residential and commercial sector</b>	A diverse portfolio of policy instruments have been suggested as part of NMSH to address the barriers to implementation of energy efficiency interventions
<b>2. Solid Waste Management (SWM)</b>	The need for technological R&D for the development of better bio-methanation, waste to energy initiatives, plastic and e-waste recycling have been emphasized.
<b>3. Promotion of Sustainable Urban Public Transport</b>	<ul style="list-style-type: none"> <li>• Guidelines to facilitate a modal shift in public transport and providing affordable, efficient and comprehensive public transport services</li> <li>• Integration of measures related to parking, taxation, congestion charges, etc. through the introduction of a common mobility card</li> <li>• Additionally - incentivizing non-motorized transport, development of guidelines for registration of diesel vehicles and the integration of urban transport into master plans of all states</li> </ul>
<b>4. Water Supply</b>	Guidelines for rainwater harvesting and provisions for mandating energy/water audit for water utilities are proposed
<b>5. Urban Storm water Drainage</b>	Methods and guidelines for improving storm water drainage through changes in building codes and the construction of embankments in flood prone areas are proposed
<b>6. Urban Planning</b>	Modification of town and country planning act for promoting urban renewal, environmental management, improved coastal zone management, spaces for plantation at plot level for increasing tree cover, structural safety, hazard and risk mitigation, transport planning and optimal urban forms are proposed.

# Other South Asian Countries' Initiatives

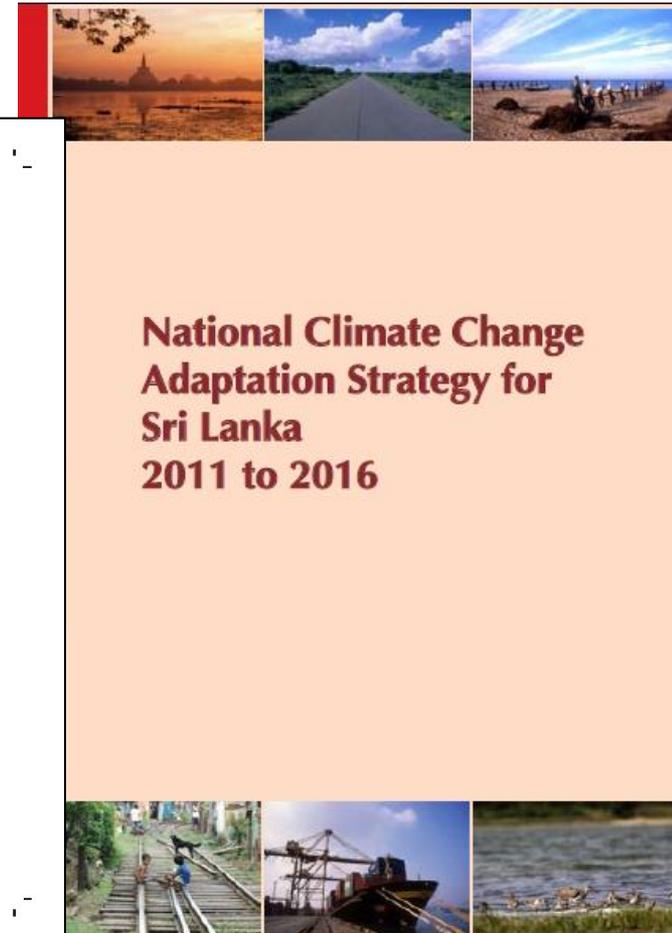
## Bangladesh's Climate Change Strategy and Action Plan



## Bhutan's Biodiversity Action Plan



## National Climate Change Adaptation Strategy for Sri Lanka 2011 to 2016



# Potential Low Carbon Areas



## Street Lighting

High Potential of Energy Saving  
20-25% Energy Saving

Few technology:

- Programmable Timer with the dimming technology
- Energy Efficient appliances
- Design Based Street Lighting
- LED Technology

## Water Supply system



## Solid wastemanagement



- Major issues in all south Asian cities
- Few Cities are doing well
- Good potential for CDM project
- Composting, RDF, etc

## Building & Facilities

Municipal & Office building has a high Potential of Energy Savings 20-30% Energy Saving, and Energy Efficiency is key solution



Water Supply system is major energy consumer in Municipal Corporation  
High Potential of Energy Savings

- 30-40% Energy Savings
- High UFW-about 20-40%
- Energy Efficiency is key solution

# Energy and Carbon Emissions Profiles of 54 South Asian Cities and Carbon Emission Inventory



## Energy and Carbon Emissions Profiles of 54 South Asian Cities

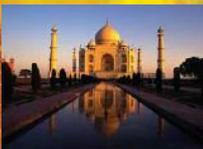
### About ICLEI-South Asia

ICLEI-South Asia, the South Asian regional chapter of ICLEI Local Governments for Sustainability has a mission to help regional cities in their efforts to promote sustainable development. The Secretariat is located at NOIDA, India and is functional since 2005. It has been working with several large and small local governments on the issues of environmental sustainability, energy and climate change. It provides solutions to local environmental issues through various programmes and influences international negotiations by raising collective voices of local governments at various international fora. It is part of a United Nations recognised, membership-based global association of over 1,100 local governments.

### About British High Commission

**Strategic Programme Fund:** The Strategic Programme Fund (SPF) is the UK Foreign and Commonwealth Office's (FCO) flagship programme budget. It was originally launched in 2003 under the name of the Global Opportunities Fund. The Foreign and Commonwealth Office's Strategic Programme Fund (SPF) seeks to create real, measurable outcomes in support of the FCO's policy goals. This programme supports FCO's Strategic Objective "To promote a low carbon, high growth global economy".

For more information on SPF, please visit [www.uldinidia.fco.gov.uk](http://www.uldinidia.fco.gov.uk)



### Agra

UTTAR PRADESH, INDIA

**Mr Anand Varadhan**  
Municipal Commissioner  
Tel: +91 562 2520 616

**Ms Anjali Singh Mahur**  
Mayor

Population	Area
1.27 Million (2001)	188.40 sq km

#### City Profile

Situated on the banks of the river Yamuna - Agra is a major tourist destination in India. Its Mughal era buildings, especially the Taj Mahal, has given it fame across borders. It has also been a vibrant centre of culture, art and religious philosophies and is noted for its leather products, glass products, handicrafts, carpets, etc.

#### Community Energy Consumption

Sector	Energy/Fuel	Quantity
Residential	Electricity (Million kWh)	413.83
	LPG (MT)	10,013.96
	Kerosene (kl)	53,408
Commercial	Electricity (Million kWh)	114.97
	LPG (MT)	NA
	Electricity (Million kWh)	83.09
Industrial	Diesel (kl)	50,442
	Petrol (kl)	49,376
	CNG (kg)	930,271
	Auto LPG (kg)	1,548
Waste	MSW (tpd)	710
	Electricity (Million kWh)	318.09
Others	Fuel Wood (MT)	7,500

- Activities in Agra contribute to 1.02 Million TcCO<sub>2</sub> annually
- Per capita emissions for Agra have been 0.647 T/Year in 2007-08
- The Corporation Level Emissions are about 10.29 per cent of the total city emissions

### Ahmedabad

GUJARAT, INDIA

**Mr Indrajit Prasad Gattam, IAS**  
Municipal Commissioner  
Tel: +91 79 2539 1811-30

**Mr Amit Shah**  
Mayor



Population	Area
5.5 Million	466 sq km

#### City Profile

The largest city in Gujarat, Ahmedabad is a 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.

#### 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
	Diesel (kl)	272,140
Transportation	Petrol (kl)	200,824
	MSW (tpd)	2,242
Waste	Auto Gas (MT)	43,046
	CNG (MT)	58,034

- Activities in Ahmedabad contribute to 6.78 Million TcCO<sub>2</sub> annually
- Per capita emissions for Ahmedabad have been 1.207 T/Year in 2007-08
- The Corporation Level Emissions are about 2.91 per cent of the total city emissions

#### Corporation Energy Consumption

Sector	Energy/Fuel	Quantity
Building and Facilities	Electricity (Million kWh)	0.77
Street Lighting	Electricity (Million kWh)	33.17

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_4757](https://www.yunbaogao.cn/report/index/report?reportId=5_4757)

