City Actions to Achieve Global Climate and Sustainable Development Objectives

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WRI ROSS CENTER FOR SUSTAINABLE CITIES

Supporting partners to create local solutions by adapting, learning, course correcting.

Using evidence and measurement to shape action.

Through systematic learning, building consensus to shift local and national policies and the global agenda.

220 staff
8 Countries
55 cities
8 practice areas
Building Efficiency, Energy & Climate, Health & Road Safety, Urban Mobility, Urban Development, Resilience, Governance, Water
Cities Hold the Key:

Over 50% of the global population live in cities and urban areas, rising to 70-80% of population by 2050.

Chart: Number and share of urban people

Source: New Climate Economy
INEFFICIENT BUILDINGS ARE MAJOR CONTRIBUTORS TO ILLNESS AND DEATH RELATED TO AIR POLLUTION

Sources of Air Pollution-Related Deaths in 2010

Mortality Linked to Outdoor Air Pollution in 2010

Source: [http://www.nature.com/nature/journal/v525/n7569/full/nature15371.html](http://www.nature.com/nature/journal/v525/n7569/full/nature15371.html)
The New Climate Economy:

500 cities will account for 60% of GDP and also half of energy related emissions by 2030

$3 trillion in savings from global infrastructure spending to 2030 from more compact, connected urban development

1. Compact urban growth
   Managed expansion, mixed-use urban form, good quality urban design

2. Connected infrastructure
   Smarter transport systems, utilities and grids, and buildings

3. Coordinated governance
   Integrated land use & transport authorities, integrated planning, PPPs
Our vision:
Buildings are solutions for the cities of the future. Productive, actively managed buildings can integrate multiple systems (energy, water, waste, transportation) and improve the lives of urban residents.

Four work areas:

1. City-scale **public-private collaboration** for efficiency policies and projects;
2. Scalable **business and finance models** for sustainable approaches to urban services;
3. Improved **building performance information** and transparency;
4. High-performance and **net zero buildings** and urban energy systems.
Barriers to Project Implementation: *institutional*, not technical or Economic

<table>
<thead>
<tr>
<th>Awareness and Incentives</th>
<th>Implementation Capacity</th>
<th>Access to Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Limited awareness</strong></td>
<td><strong>Low levels of capacity</strong></td>
<td><strong>Restrictions on municipal funding</strong></td>
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<tr>
<td>- Low priority attached to energy issues</td>
<td>- Limited municipality technical capacity</td>
<td>- Inadequate revenue base</td>
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<tr>
<td>- Lack of awareness of EE potential</td>
<td>- Limited financier technical capacity</td>
<td>- Limited revenue-raising powers</td>
</tr>
<tr>
<td>- Inadequate information on energy use and costs</td>
<td>- Lack of familiarity with EE technologies</td>
<td>- Limited borrowing powers</td>
</tr>
<tr>
<td><strong>Incentive incompatibility</strong></td>
<td><strong>Nature of municipal projects</strong></td>
<td><strong>Restriction on use of funds</strong></td>
</tr>
<tr>
<td>- Split incentives (between ownership and financing)</td>
<td>- Restrictive public procurement rules</td>
<td>- Barriers to commercial financing</td>
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<tr>
<td>- Energy prices below the costs of supply</td>
<td>- Need to work across multiple municipalities</td>
<td>- Requirements for collateral and recourse</td>
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<td>- Failure to price negative externalities of energy use</td>
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<td>- Assessing creditworthiness</td>
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<td>- Uncertain regulatory framework</td>
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<td>- Absence of ‘hard’ cash flows</td>
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Different Urban Leaders influence action across the Building Lifecycle

<table>
<thead>
<tr>
<th>NEW BUILDINGS</th>
<th>EXISTING BUILDINGS</th>
<th>RETROFIT</th>
<th>DEMOLITION &amp; DECONSTRUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use/Planning</td>
<td>Design</td>
<td>Construction</td>
<td>Sale or Lease</td>
</tr>
<tr>
<td>Local governments</td>
<td>Design &amp; construction professionals</td>
<td>Building investors</td>
<td>Developers and self-help builders</td>
</tr>
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<td>Developers and self-help builders</td>
<td>National and provincial governments</td>
<td>Suppliers &amp; manufacturers</td>
<td>Building occupants</td>
</tr>
<tr>
<td>Local governments</td>
<td></td>
<td></td>
<td>Design &amp; construction professionals</td>
</tr>
</tbody>
</table>

Source: World Resources Institute
The Building Efficiency Accelerator

- 35 global groups
- 28 Cities

OEC Din
Milwaukee, USA
Tokyo, Japan

CENTRAL & EASTERN EUROPE
Alba Iulia, Romania
Belgrade, Serbia*
Bucharest, Romania
Eskişehir, Turkey*
Riga, Latvia
Warsaw, Poland

MIDDLE EAST
Dubai, UAE

LATIN AMERICA & CARIBBEAN
Bogotá, Colombia*
Medellín, Colombia
Mérida, Mexico
Mexico City, Mexico*
State of Jalisco, Mexico

BRASIL
Porto Alegre, Brasil

SOUTH ASIA
Coimbatore, India
Rajkot, India*
Shimla, India

AFRICA
Kisii County, Kenya
Nairobi, Kenya
Tshwane, South Africa

SOUTHEAST ASIA
Da Nang, Vietnam*
Iskandar, Malaysia
Mandaluyong, Philippines
Muñoz, Philippines
Santa Rosa, Philippines

*City selected for “Deep Dive” engagement

Organisers: 

International Co-owners:
Deep Dive Case Study: Mexico City

September 2014 commitment from Mexico City government to:
- Implement a building energy code
- Retrofit public buildings

Launch workshop for common vision: March 2015
- 100 multi-stakeholder participants – including city government, federal government, businesses, finance, civil society and consulting

Action plan: 4 workgroups chaired by Mexico City staff and an SEforALL partner, project managed by WRI
- Technical workshop on building retrofits and finance
- Recommendations on action by government and stakeholders delivered in October; Actions announced at COP 21 in December
- Program implementation phase 1: 4 Audits, new construction code
- June 2016: New energy code adopted; public building audits approved
- December 2016: Funding secured for retrofits
- March 2017: announcement 30% of public buildings audited for retrofit; establishment of new city energy office.
Thank you