Sustainable Buildings:
Local Action, Global Partnerships

UNEP- Sustainable Buildings and Climate Initiative (UNEP-SBCI)

Sustainable Building

- Has attracted the attention of governments, NGOs, Trade Organizations, Industry Representatives, Research Institutions
- Common objective for various organizations presents an opportunity for partnerships and transformational change
- Need to capitalize on momentum

Sustainable Buildings are key to addressing multiple challenges

- Population Growth
- Quality of life/Modernization
- Housing
- Infrastructure Needs
- Resource Efficiency
- Energy Efficiency
- Climate Change
- Green Economy
- Sustainable Development
- Poverty Eradication
- Resource Scarcity
- Access to water, electricity, materials

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The global impact of buildings

ECONOMIC

- Building sector represents 10% of global GDP- higher in some rapidly developing countries
- Employs 111 million people
- More than $7 trillion in annual expenditures in the sector- expected to increase to $12 trillion by 2020
- Nearly $100 trillion will be spent in construction sector over the next 10 years

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The global impact of buildings

ENVIRONMENT

1/3 of global GHG emissions is from the building sector- the single largest contributor of emissions

40% of global energy use
25% of global water usage
40% of global resources
60% of world's electricity consumed in residential and commercial buildings

- **Energy used for heating, cooling, ventilation lighting, plug loads, water production, etc.**
- **Growth regions: Africa, Asia, Middle East, and Latin America**

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The social challenges ahead.....

By 2030, 80% of the world's population will be living in cities in Africa, Asia, and Latin America

By 2030, 40% of the population (3 billion people) will need access to housing

How to meet this demand in a resource efficient way?

Need for housing, commerce, schools, hospital.....

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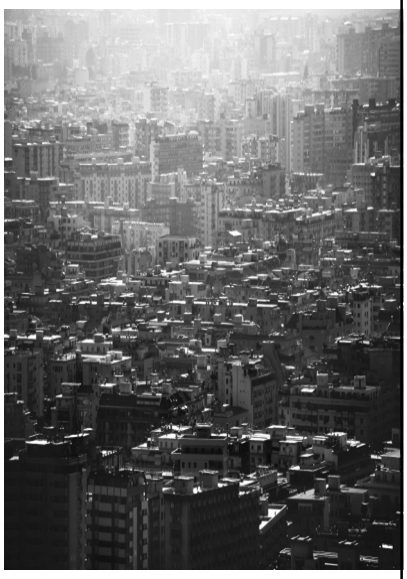
Challenges

Climate Change
- Mechanisms for climate finance in sector
- Validating impact and progress

Energy and Environmental
- Managing energy use and emissions
- Access to electricity, fresh water, waste management

Data and Information
- Measure of performance
- Accuracy of data
- Understanding the impacts

Retrofitting and New Construction
- In developed countries, majority of projected 2050 buildings already exist
- In developing countries, majority of projected 2050 buildings remain to be built



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SBCI Partnership

UNEP Sustainable Buildings and Climate Initiative
Promoting Policies and Practices for Sustainability

Mission Statement:

UNEP-SBCI works to promote sustainable building policies and practices worldwide, with a special focus on buildings and climate change.

Stated Goals of the Initiative:

1. Provide a common "language" to allow international cooperation on sustainable buildings.
2. Develop tools, methodologies and data that help to identify barriers and enabling measures to wider adoption of sustainable buildings worldwide.
3. Support policy makers and relevant international processes to recognize and realize the role of buildings.
4. Demonstrate through Pilot Projects

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As of June 2012


Common Language
• To enable policy making.
• For developed and developing countries
• For individual buildings as well as for building portfolios and city/nation assessments
• Need to ensure consistency between objects and over time
➢ The SB Index
➢ Common Carbon Metrics
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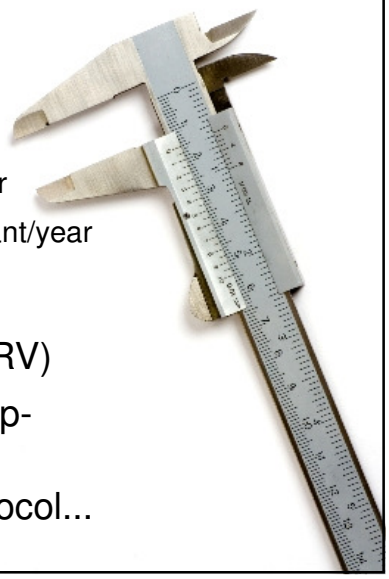
The Common Carbon Metric

- A methodology used to define buildings climate impact
- Energy & Carbon intensity:
  - kWh/m^2/year
  - Kg CO_2 eqv/m^2/year
  - Kg CO_2 eqv/occupant/year
- Meets the requirements that reporting is measurable, reportable and verifiable (MRV)
- Allows for bottom-up, and top-down data compilation
- Aligned with ISO, GHG Protocol...



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Defining the Benefits

Energy
- Reduced demand, operational cost
- Management of long-term supply
- Creating renewable energy markets

Infrastructure
- Sustainable building reduces infrastructure needs, costs, promotes resource efficiency
- Smart urban planning linked to sustainable building policies

Water
- Efficiency in green buildings= cost savings for the supply of water
- Helps address water scarcity issues

Waste and Material
- Efficient use of land and materials
- Limit construction waste
- Reduce environmental impacts at global and local levels

Low Net Cost
- Strong Investment case
- Generates savings

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Tools & Data

UNEP Sustainable Buildings and Climate Initiative

Promoting Policies and Practices for Sustainability

Country level baseline and 'State of Play' assessments

- ⇨ Mexico
- ⇨ India
- ⇨ S. Africa
- ⇨ USA (in progress)
- ⇨ SE Asia (in progress)
  - ⇨Thailand
  - ⇨Singapore
  - ⇨Malaysia
  - ⇨Brunei Darusallam
  - ⇨Malaysia
  - ⇨Myanmar
  - ⇨Vietnam
  - ⇨The Philippines
  - ⇨Indonesia

Tools development

- ⇨ Policy Models
- ⇨ Carbon Metric
- ⇨ 'Sustainable Buildings Index"
- ⇨ Pilot projects

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Summing up: Resource Efficiency, Buildings and Partnerships

Progress requires collaborations at all levels

Greening the building sector can lead a transformation to greening of other sectors and a transition to greater resource efficiency and sustainable development

Economic, Environmental and Social objectives can all be advanced through sustainable buildings:

- Good business case
- Sustainable buildings result in greater energy and resource efficiency
- Sustainable building can help meet social objectives such as housing, good jobs

THANK YOU VERY MUCH

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