



# Climate Change Mitigation Through Urban Planning and Development – An Overview-



**UN-HABITAT**

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- An Overview -**

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# Urban Planning

- ❖ 2007 became the year where 50% of humanity lives in cities
- ❖ Ameliorates the use of space within cities to reduce urban sprawl
- ❖ Encourages mass and alternative transportation systems to reduce the populations' dependency on private vehicles
- ❖ Increases organized density in cities allowing for more efficient basic service delivery and reduces the need for private vehicles
- ❖ Allows decision makers to behave proactively by visualizing and setting out future growth strategies
- ❖ Reduces the 'heat island effect' through the creation of green spaces within urban areas



# 4 Entry Points to Sustainable Urban Development

- ❖ Transportation
- ❖ Homes and Office Buildings
- ❖ Industrial Production
- ❖ Poverty Reduction



# Transportation

- ❖ *Encourage the use of an optimal combination of modes of transport, including walking, cycling, public and private means of transportation* (ex: bus and bicycle lanes)
- ❖ Create government and private sectors incentives for public or alternative transportation including fuel efficient vehicles and car-pooling (ex: access to free parking close to office)
- ❖ Create disincentives for those who fail to adopt sustainable measures (ex: polluter pays mechanisms)
- ❖ *Promote, regulate and enforce, quiet, use-efficient and low-polluting technologies including fuel efficient engines, emissions controls and fuel with a low level of polluting emissions*



# Buildings

- ❖ *Stimulate through fiscal incentives or other measures the adoption of energy efficient and environmentally sound technologies* (ex: insulation, appliances, ventilation and lighting)
- ❖ Create disincentives for the purchase/use of harmful technologies/products.
- ❖ Encourage increased density in the CBD, efficient use of space, multi-residential buildings, etc
- ❖ Use legislation to create sustainable construction (ex: all new buildings must meet a certain environmental standard)
- ❖ Create of incentive to encourage the renovations of existing structures (ex: free home/office energy audits, BASF's 3 liter house)



# Industrial Production

- ❖ Reduce waste through disincentives (ex: higher costs of waste disposal) and through incentives (ex: markets for waste product)
- ❖ *Introduce or amend user charges and/or other measures to promote the efficient use of energy*
- ❖ Reduce fuel consumption through the adoption of efficient and economically viable technologies,
- ❖ *Encourage energy efficient systems such as combining heating and cooling systems that utilize waste heat recovery*
- ❖ Increase efficiency through free energy/waste audits and education programs for all employees



# Poverty Reduction

- ❖ Reduce the need for poor to use unsustainable energy sources such as charcoal and kerosene (explain charcoal)
- ❖ Incentives/disincentives will not work on those who cannot afford other energy sources therefore the reduction of poverty is key in the implementation of climate change mitigation.
- ❖ Create incentives for private sector involvement in poverty reduction
- ❖ Create educational and training initiatives to teach low income citizens and slum dwellers the importance of the environment and sustainable urban development



# Developing Countries

- ❖ Developing countries today account for approximately 25% of GHG emissions but are continuing to grow at high rates with their emissions following suit
- ❖ As a result of new technologies, they have an enormous and unique opportunity, if they plan correctly, to avoid the mistakes made by the developed countries
- ❖ Unfortunately, faced with budgetary constraints developing countries are unable to take full advantage of these opportunities and must continue to grow and increase their incomes in order to deal with the climate change issue
- ❖ Therefore developing countries must be supported in their efforts and given incentives to create mass transportation systems, construct low-emitting home/office buildings, create sustainable industrial processes and reduce poverty





# Government Roles

## ❖ Government

### – National level

- Create policies, incentive/disincentives that promote sustainable urban development
- Create education and training on climate change issues within all levels of the education system (primary to continuing education)

### – Local Authorities

- Enforce policies/regulations (ex: growth within city boundaries),
- Use transport oriented development to create mass and alternative transportation systems
- Set out future growth strategies



# Private Sector Roles

## ❖ Private Sector

- Continue to research and create alternatives to the environmentally unsustainable technologies and products/services on the market
- Create profitable business opportunities that also promote sustainable urban development
- Stay within the rules/regulations set by national and local governments



# Youth Roles

## ❖ Youth

- Educate adults and other youth on climate change and possible mitigation measures
- Pressure private sector and governments to adopt sustainable practices through purchase decisions and lobbying
- Start their own sustainable businesses
- Ex: A UN-HABITAT and Environmental Youth Alliance's Initiative : Environmental Entrepreneurship Program in which youth train and educate other youth about the income generating opportunities available within the environment sector



# UN-HABITAT's Roles

## ❖ UN-HABITAT

- Enable the Habitat Agenda Partners to implement the mandate in the Habitat Agenda, adopted by 196 UN member countries, on sustainable energy use and transportation and communication systems
- Facilitate stakeholders in their initiatives in their climate change mitigation strategies
- Encourage projects within UN-HABITAT such as the Sustainable Cities Program which attempts to strengthen local capacities in urban environmental planning and management.
- Catalyze partnerships with UNFCCC, UNEP, youth, women and other relevant stakeholders to mitigate climate change and strengthen urban planning and development



## Conclusions

- ❖ Well-planned cities are an efficient use of space and energy: they cluster large groups of people together, therefore reducing the need for transportation and reducing the infrastructure needed to give the population the basic services they require
- ❖ Technological solutions are available for climate change mitigation in developed countries but simply not being used on a wide scale in order to generate significant impact
- ❖ Developing countries will increasingly become important in addressing the global climate change challenge. This fact has not been fully recognized. With their resource limitations they are unable to take the necessary steps needed for mitigation.
- ❖ Developing countries need support in their efforts and to be given incentives to use sustainable technologies and practices during this high growth period
- ❖ UN-HABITAT is mandated to address the issue of climate change in the context of urban planning and development. However, it needs other Habitat Agenda Partners in order to achieve progress in that area