

# **URBAN GREENS : MAKING CITIES LIVEABLE**

**Director  
Association of Municipalities &  
Development Authorities (AMDA)**

# THE CONTEXT

- ❑ 21 Century is first URBAN CENTURY
- ❑ 50% World's Population in Town and Cities
- ❑ In India 31% Urban Population
- ❑ By 2030 Urban Population is estimated at 40%
- ❑ Urbanization if not channelized properly lead to deterioration of quality of urban environment
- ❑ Urban Greens become the causality of increasing demand for competing built urban areas
- ❑ Urban Greens provide healthy environment and material benefits besides being repositories of bio-diversity
- ❑ In growing urban areas with upgradation of grey infrastructure in terms of roads, utilities and services green infrastructure also need to be expanded

# ROLE OF GREEN SPACES

## Ecological & Environmental

- Moderate the impact of human activities
- Healthy urban environment
- Lower down surface temperature
- Manage effect of urban heat islands
- Preservation of natural & cultural heritage
- Serve as lungs of city

# **SOCIAL BENEFITS**

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- **Refreshing and stimulating**
- **Opportunities for wide range of activities**
- **Place for recreation and interaction for all groups**
- **Emphasize the diversity of urban areas**
- **Enhance cultural life**
- **Key benefits for public health, wellbeing and social activities**

# PLANNING AND DESIGN

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- **Network of high quality green spaces improve accessibility and attractiveness of urban hubs and nodes**
- **Safety for travel by foot and bicycle**
- **Act as Green Corridors**
- **Barrier to noise and function as visual screen**
- **Encouragement for walking**

# ECONOMIC BENEFITS

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- Neighbourhood in vicinity of urban green fetch good premium
- Dwelling near urban greens more expensive than others
- Attract investment
- Reduction in Air Conditioning cost
- Provide Employment & livelihood to large number of people
- More benefits than investment per tree

# MITIGATING CLIMATE CHANGE

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- Reduction in Carbon emission and better physical living environment
- Act as Climate Modifier
- Better Cooling effect as park cool islands
- Meet urban heat island effect
- Enrich water regime and replenish ground water
- Absorb Green House Gases

# SOME INTERNATIONAL EXPERIENCES OF GREENING CITIES

## TOKYO (Japan)

- Shift in Urban Greening Approach since 1990
- Developed parks as public amenities for diverse social needs
- Urban Park Act, 1956 – sets standards for framework of local open spaces
- Tokyo's Green Space Plan 2000 to be implemented by 2015
- Partnership with Private Sector



# SOME INTERNATIONAL EXPERIENCES OF GREENING CITIES

## Aarhus (Denmark)

- Linking local urban green spaces to broader National policies
- Priority to Environmental issues
- Adoption of Eco-Accounting
- Emphasis on Green Space Management
- Prepared Green Structure Plan

# SOME INTERNATIONAL EXPERIENCES OF GREENING CITIES

## **Curtiba (Brazil)**

- **Urban Green – major political priority**
- **Places not only for leisure but for the protection of national forests, waterways and flood control**
- **Attract investment in Green Spaces**
- **Green Concisouness in City's image**

# SOME INTERNATIONAL EXPERIENCES OF GREENING CITIES

## **Malmö (Sweden)**

- **Green Space issues are taken as local political agenda**
- **Marketing the benefits of parks and green spaces**
- **New and Refurbished open spaces**
- **Urban Greens are taken not as drain on resources but are for improving the quality of life**

# SOME INTERNATIONAL EXPERIENCES OF GREENING CITIES

## Putrajaya City (Malaysia)

- Developed on the theme of 'City in A Garden'
- 38% city area under parks, lakes and wetlands
- Putrajaya lake is important landscape feature – which serves as climate moderator
- Lake used for boating, canoeing, kayaking and fishing

# SOME INTERNATIONAL EXPERIENCES OF GREENING CITIES

## Singapore

- Area under greens increased considerably
- City aims to go from being a garden city to a city in garden
- It is ranked as most liveable eco-city
- Aggressively pursuing the policy of green city since seventies
- Bay South Garden have giant conservatories which are developing as architectural landmark for Singapore

# INDIAN EXPERIENCES OF URBAN GREENING

## Delhi

- **Most Greenest Capital in world**
- **Emphasis on growing more trees and strict monitoring of tree cutting permission**
- **About 20% of city area under green cover**
- **Many Agencies working on Green Capital Mission**
- **Ridge, Lodhi Garden, Mughal Garden, Deer Park, Budha Jayanti Samarak Park, Indraprastha Park, Garden of Five Senses, Bio-diversity Park are some of the important greens**

## Chandigarh and Gandhinagar

- **Urban Greens are properly integrated in their City Master Plans at plan preparation and implementation stage**

# INDIAN EXPERIENCES OF URBAN GREENING

## Mumbai

- Borivilli National Park lungs of Mumbai in an area of 104 sq.km.
- Perhaps one of its own kind situated so close to city
- Serve as Catchment area for Tulsi and Vihar lakes which are important sources of water for Mumbai
- Park influences the climate of the city in a big way

# INDIAN EXPERIENCES OF URBAN GREENING

## Chennai

- Guindy National Park – lungs of city
- Important forest area located in city
- It has amazing bio-diversity
- Ariygnar Anna Zoological Park – popularly known as Vandalur Zoo is another important lung to the city

## Kolkata

- Maidan is the biggest breather in the heart of the city
- Victoria Memorial and Eden Garden located around Maidan are other important spaces
- Main concentration of greens is around Rabindra Sarovar Area



# INDIAN EXPERIENCES OF URBAN GREENING

## Kolkata

- Botanical Garden is perhaps the most important garden in India having large variety of flora and fauna
- Alipore Zoo is perhaps the largest in the country

## Bangalore

- Famous Garden City with tanks, lakes and vast green spaces
- It has biggest urban forest in the heart of the city
- Water bodies are being developed to attract birds and animals

# ISSUES AND IMPERATIVES

- **Lack of information about quantity and quality of urban green spaces**
- **Needs to be thoughtfully planned and inclusively managed**
- **Appropriate standards to be formulated for per capita green spaces**
- **Development of green spaces should be as part of Network – Patch – Corridor – Network Structure**
- **15-20% of city areas to be under urban greens**
- **Strict Enforcement of landuse and Building Code for protection and improvement of urban greens**

# ISSUES AND IMPERATIVES

- **Green Corridors for walking and cycling to be developed along linear natural features**
- **Individual green assets to be encouraged and enhanced**
- **Maintenance and Management of Greens with active participation of RWA, Private Sector and Corporate Sector**
- **GIS Mapping of Green Areas and information of urban greens should be available on public domain**
- **Mechanism for acquisition and development of urban green spaces earmarked in the Master Plan needs to be spelt out**

# ISSUES AND IMPERATIVES

- Green Cover needs to be regulated through proper land use zoning and development control regulations
- Landscape Plan to be integrated with city planning
- Emphasis should be on Protection of green spaces as per requirements of Green India Mission
- Green spaces should not be taken as luxury by few but be equally distributed in city
- Green cover for rejuvenation of water bodies
- Urban Greens can be created on abandoned landfill sites
- An hierarchical system of green spaces should be developed in the city

# ISSUES AND IMPERATIVES

- Species in urban greens should be as per local climatic condition and availability of water
- Minimize the hard surface in city public spaces to protect environmentally sensitive areas and improving the green cover
- Green Homes, Green Buildings, Green Campus and Green City should be the motive for enhancing the green cover
- Rain water harvesting be made mandatory
- Protect the already created greens with the involvement of local people and develop the degraded parks and gardens
- Critical role for Municipalities and Development Authorities in development and upkeep of green spaces in terms of enhancement of green cover with active involvement of administration and citizen participation

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THANKS