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Planning for the Mumbai Metropolitan Region (MMR)

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MMR - The Regional setting

Issues in the Planning for MMR
Planning for Metros in India

States adopted the approaches of:
- Policy planning – regional planning
- Intervention – outer area development

The variety:
- Kolkata Metropolitan Development Authority – focus on socio-economic issues as well
- National Capital Region Planning
- Mumbai Metropolitan Region Planning – policy and coordination focus
- Urban Development Authorities
- Chennai Metropolitan Development Authority
- Delhi Development Authority – land-development focus
National Plans & Urban Development

Issues in the Planning for MMR

- There have been 10 national five year plans since independence
- Concept of Cities being engines of economic growth not appreciated
- Problems of urban areas treated as welfare related and sectors of residual investment rather than issues of national importance
- 8th Five Year Plan (1992-97) explicitly recognised importance of urban sector for national economy
- The financial outlays for housing and urban development sector have been between 1 to 3 percent
Basis for inclusion of areas adjoining Mumbai:

- Proximity due to commuting distance
- Areas exhibiting high urbanisation trend
- Areas exhibiting other homogeneous character
- Focus on spatial planning and development criteria, not economic integration
- Demand exists for inclusion of full districts of Thane and Raigad
Mumbai Metropolitan Region

4 Districts
Mumbai, Sub-urban, Thane, Raigad

7 Municipal Corporations
Greater Mumbai, Thane, Kalyan, Navi Mumbai, Ulhasnagar, Mira-Bhayandar, Bhiwandi-Nizampur

13 Municipal Councils

17 Urban Centres

1003 Villages

Area: 4355 Sq.Km.
Total Population: 19 millions

Pop. 1991 – 14.53 m
Pop. 2001 – 19.29 m
Pop. 2011 – 22.44 m

Urban: 18 million (94%)
Rural: 1 million (6%)
### Metropolitan Development Authorities

#### Issues in the Planning for MMR

<table>
<thead>
<tr>
<th>No.</th>
<th>Metropolitan Area</th>
<th>Area In Sq.Km.</th>
<th>Formed under Act</th>
<th>Population</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13 Corp.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13 Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000 villages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Healthcare Employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 Corp.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16 Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20 towns</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>214 villages</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Bengaluru,</td>
<td></td>
<td></td>
<td></td>
<td>Planning Projects Dev. Control</td>
</tr>
<tr>
<td>5</td>
<td>Hyderabad, (under formation)</td>
<td>7000</td>
<td></td>
<td>1 Corp.</td>
<td>Planning Projects Dev. Control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 Councils</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000 villages</td>
<td></td>
</tr>
</tbody>
</table>
Governance and Spatial Planning

Issues in the Planning for MMR

- 3 tier governance in India
- Central, State and Local (urban and rural) governments
- Spatial Planning - a local authority function under the constitution
- MPCs a constitutional requirement for spatial planning at metropolitan level - fill the gap of governance
- Metropolitan Level – only for spatial planning, development control and infrastructure development
- Existing Development Authorities to assist MPCs in preparation of Development Plans in future
Metropolitan Planning Committees

The Maharashtra Metropolitan Planning Committees (Constitution and Functions) Act, 1999

Functions
- to prepare draft development plan for the metropolitan area and recommend to govt.
- to ensure compliance of provisions of article 243-ZE of Indian Constitution

Constitution
- ex-officio - secretaries
- Nominated - C’man, CEOs, MLAs, experts
- elected from elected representatives
- Invitees – MPs/MLAs, DTP, CEOs of Infrastructure agencies of GoM & GoI

MMRDA to assist MPC in preparation of Development Plan
**SWOT of MMR**

**Issues in the Planning for MMR**

**Strengths**
- Presence of two sea ports and airport
- Long history of international trade and financial services
- Large talent pool, good work culture
- Efficient public transport
- Gifted hydrometric area ensuring water sources
- Positive urbanisation pattern with 20 ULBs

**Opportunities**
- Opportunities for improved external trade, export, international financial services Centres, IT and ITES
- Growth of high end manufacturing
- Potential of media and entertainment
- A dedicated institution for planning and development
Weaknesses
• Topographic constraints, limited land supply
• High real estate & housing prices, majority living in slums
• Inadequate power supply, water supply turning into weakness
• Overcrowded trains and slow moving buses
• Generally poor solid waste management
• Vulnerability to flooding and disruption to traffic
• Mumbai ranked 150 in quality of life index in international comparison.
• 11th rank amongst 12 Indian cities in “ease of doing business”

Threats
• Competition from other Indian & Developing Country cities for better quality of life at lower real estate and housing prices
• Inability to convert economic momentum into infra. Investment.
Hill ranges in MMR
Rivers in MMR

Issues in the Planning for MMR
Established in 1975 under MMRDA Act, 1974

for

Planning, co-ordinating and supervising the proper, orderly and rapid development of the areas in the region and executing plans, projects and schemes for such development, and to provide for matters connected therewith.
MMRDA’s Functions

Established on 26th Jan. 1975 under MMRDA Act, 1974
Main objective is to achieve rapid and orderly development of the region
Principal Functions:
- Regional Planning
- Project formulation
- Co-ordination
- Financing infrastructure development
- Implementation of select projects
- Micro-planning and dev. control in designated areas
Powers of MMRDA

- To freeze or restrict development where necessary
- To give directions
- To require local authority to assume responsibility in certain area
- To impose conditions while financing schemes
- To levy a cess on buildings and lands for the activities of the Act
- To levy betterment charges on increased land value as a consequence of its projects
- To levy, assess, settle and pay betterment charges
Mumbai Metropolitan Regional Plans
1973-1993, and
1996-2011
### Regional Plan for MMR -1973

#### Issues in the Planning for MMR

<table>
<thead>
<tr>
<th>Problems identified</th>
<th>Main proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid population growth of Mumbai</td>
<td>• Restrict industrial growth in Mumbai; delete 800 ha industrial zone in Mumbai.</td>
</tr>
<tr>
<td>Over concentration of jobs in Mumbai</td>
<td>• Develop Bandra Kurla complex</td>
</tr>
<tr>
<td></td>
<td>• Limit Mumbai’s growth to 7 million population by 1991</td>
</tr>
<tr>
<td>Imbalanced growth caused by Mumbai’s geography</td>
<td>• Set up Navi Mumbai across harbour with target population of 2 million by 1991</td>
</tr>
<tr>
<td></td>
<td>• Develop new town at Kalyan; develop new township around railway stations in Vasai Virar and north of Kalyan</td>
</tr>
<tr>
<td>Congestion, lack of infrastructure</td>
<td>• Shift the State capital complex to Navi Mumbai</td>
</tr>
</tbody>
</table>
Regional Plan for MMR -1973 .... (2)

Issues in the Planning for MMR

Result:

- Limit Mumbai’s growth to 7 m population by 1991
- CIDCO was appointed in 1971 as NTDA to develop Navi Mumbai
- New Industrial Location Policy was introduced for MMR
- Office development in the Island city was banned.
- FSI in the Island city was restricted
- Wholesale markets identified for relocation; some relocated
- Bandra Kurla complex is being developed by MMRDA
- New town at Kalyan was notified by MMRDA
**Context of RP 1996-2011**

**Issues in the Planning for MMR**

**Situation at the time of Revision of the Plan**

- Mumbai’s population growth could not be arrested
- Industrial employment did not increase as expected, it declined.
- Mumbai’s economy indicated stagnancy and decline
- Navi Mumbai was established but could not reach growth target
- No new town could be established at Kalyan
- Large growth in Vasai Virar sub-region
- Urban growth did not confine to urban centres, but urbanisation intensified along the transport corridors
RP 1996-2011 proposals

• Develop International Finance & Business Centre in Bandra-Kurla Complex

• Remove direct controls on office development by modifying Development Control provisions

• Facilitate office growth by
  - allowing currently consumed FSI for reconstruction of office stock in old buildings
  - allowing use conversions and internal redesigning of heritage bldgs for office use and thereby conserve them.
RP 1996-2011 proposals (Contd)

• redeveloping old business areas with environmental improvement through urban renewal.

• planning and developing business centres by allowing recycling of land under obsolete uses (e.g. textile mills and cotton godowns of BPT)

• Allowing offices in industrial zones thereby making industries and offices to compete for space.

• Above recommendations are in the advanced stage of implementation by GOM & MCGM
New Industrial Location Policy 1993

Zone - I:
- Greater Mumbai,
- Thane &
- Mira - Bhayandar

Zone - II:
- Vasai - Virar,
- Bhiwandi, Kalyan,
- Ulhasnagar,
- Ambernath,
- Badlapur,
- Navi Mumbai & Uran

Zone - III:
- Rest of MMR

Sche-I Industries:
- Non-polluting, hi-tech, high value added

Sche-II Industries:
- Highly polluting, hazardous
## New Industrial Location Policy 1993

<table>
<thead>
<tr>
<th>Issues in the Planning for MMR</th>
<th>Zone I</th>
<th>Zone II</th>
</tr>
</thead>
<tbody>
<tr>
<td>New units and expansion of Schedule - I units</td>
<td>Allowed</td>
<td>Allowed</td>
</tr>
<tr>
<td>New units and expansion of Schedule - II units</td>
<td>NA</td>
<td>Allowed in MIDC areas Allowed elsewhere with special permission</td>
</tr>
<tr>
<td>New units of other types</td>
<td>NA</td>
<td>Allowed</td>
</tr>
<tr>
<td>Expansion of other types</td>
<td>Allowed</td>
<td>Allowed with 25% extra power</td>
</tr>
<tr>
<td>No restriction for any unit in Zone III</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Emerging spatial structure

- Core Pentagon: Mumbai - CBD, BKC, Vashi, Navi Mumbai - CBD and JN Port
- Concentric arcs:
  - Mira-Bhayandar, Thane, Panvel, Pen and Alibag
  - Vasai-Nalasopara, Bhiwandi, Kalyan, Ulhas Nagar, Ambernath, Karjat and Khopoli

Issues in the Planning for MMR
## Regional Plan 1996-2011

### Land-use

<table>
<thead>
<tr>
<th>Use</th>
<th>Area in sq.km</th>
<th>% age</th>
</tr>
</thead>
<tbody>
<tr>
<td>U1 Zone</td>
<td>791</td>
<td>19</td>
</tr>
<tr>
<td>U2 Zone</td>
<td>217</td>
<td>5</td>
</tr>
<tr>
<td>I Zone</td>
<td>129</td>
<td>3</td>
</tr>
<tr>
<td>G1 Zone</td>
<td>1350</td>
<td>32</td>
</tr>
<tr>
<td>G2 Zone</td>
<td>303</td>
<td>7</td>
</tr>
<tr>
<td>Forest</td>
<td>976</td>
<td>23</td>
</tr>
<tr>
<td>Wetlands</td>
<td>116</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>231</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
<td><strong>4355</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Zoning System of RP 1996-2011

Development Areas (34%)
- Urbanisable Zone-1
- Urbanisable Zone-2
- Industrial Zone
- Recreational and Tourism Development Zone.

Conservation Areas (66%)
- Forest Zone
- Green Zone-1
- Green Zone-2
- Quarry Zone
- Coastal wetland
Conservation Areas

Issues in the Planning for MMR
Development areas

Issues in the Planning for MMR
Proposed Land-use

Issues in the Planning for MMR
Proposed SPA areas

Issues in the Planning for MMR

- BHIWANDI
- PANVEL
- KARJAT
- ALIBAG
- MUMBAI
- VIRAR
- KALYAN
- KANVEL

Map showing proposed SPA areas in the MMR region.
In summary, MMR Planning has

**Issues in the Planning for MMR**

**Strength**
- Good town planning framework
- Dedicated institution established for regional planning and development, with sound revenue source for the time being
- MMRDA acting as nodal agency and also development financing the ULBs along with technical assistance where necessary
- An industrial locating policy for MMR in place

**Weaknesses**
- No focus on housing
- Approaches to regional planning varying
- Inadequate pro-active interventions in the provision of regional infrastructure
- MMRDA not well represented by the constituents of the region
- There is an urban bias
The performance of RP 1996-2011

**Issues in the Planning for MMR**

- Growth centres recommended with micro-planning agencies (SPAs)
- Direct intervention in transport linkages by MMRDA
- Linear devp. along transport corridors identified as urbanisable
- Incentives offered for land assembly
- Restrictions placed on devp. of small plots
- Devps such as SEZ, Port, Power Plant coming up

- Not all have institutions for detailed planning
- Largely confined to Mumbai city
- Did not happen on ground
- Not utilised by developers
- Created hardship
- RP did not place impediments
The performance

- Census 2001 proved population projections largely true
- MMRDA played key role in subsequent infrastructure planning in the region
- Undertook Capital Investment & Financial Operations Plan for all big towns in the State
- Established Societies to provide grants for studies and projects, for Heritage Conservation and Environment Improvement
- Acting as nodal agency for channelisation of state/national/international funds for regional infrastructure development
- Prepares ToR, provides grants for infrastructure studies, acts as info exchanger to local bodies in MMR
The Opportunity

**Issues in the Planning for MMR**

- Floods of 2005 brought focus on to regional drainage
- Difficulties of land-fill sites in municipal areas sought regional interventions
- Comprehensive Transportation Study ongoing - will provide valuable inputs for revision of RP
- Business Plan for MMR underway – will provide valuable inputs for revision of RP
- Need for regional transport and water source development authorities felt – UMTA and MMRDA to play this role
- Public debate going on including in Courts of law, about city development and imbalance within the region
Orientation of Regional Plans of MMR
Orientation of the Regional Plans

1. First prepared in 1973, revised in 1996, due for another revision by 2011
2. Orientation of Regional Plans: Physical development
   - Development Finance
   - Development Co-ordination
3. 1973, 1996 Regional Plans laid framework for addressing these above issues
4. 1973 RP – philosophy of urban containment, socialistic approach, prescriptive, land banking, had measurable objectives
5. 1996 RP – reflecting economic liberalisation in India, market orientation, not easy to measure outcome, interventions for land-assembly through regulatory mechanism, environmental focus
The next RP

RP of 2011 will be based on:

- Synthesis of two earlier approaches
- Interventionist at regional level
- Monitor regional trends, including economic growth
- Target and projects driven
- New studies of:
  - Comprehensive transportation study
  - Business Plan for MMR
  - Development Plans (spatial and statutory) of ULBs and SPA areas
  - JNNURM intervention: City Devp. Plans (capital investment plans and non-statutory) of ULBs
  - Large-scale ready projects prepared for posting for GoI and GoM assistance under JNNURM
Context of next RP

Issues in the Planning for MMR

Legend
- Forest
- Water Bodies
- MMR Region
- MMR Industrial
- Built up Area 1988
- Built up Area 2001
- MMR Port Airport

Urban Sprawl
Economic growth trends

Issues in the Planning for MMR

Sectoral Growth Rates

- Primary Sector
- Registered Manufacturing
- Unregistered Manufacturing
- Construction + Utilities
- Transport & Storage
- Communication
- Trade, Hotels & Restaurants
- Banking & Insurance
- Real Estate, Public Admin & Other Services
Travel Demand

RP projection:
In 2011 daily trips:
- Total trips 16.3 millions
- Train trips 46.63%
- Bus 38.04%
- Car & Taxi 15.34%

Average trip length:
- Bus 4.67 km.
- Rail 17.22 km.
- Private 12.00 km.
Current and future scenario

Issues in the Planning for MMR

<table>
<thead>
<tr>
<th>No.</th>
<th>City</th>
<th>71-81</th>
<th>81-91</th>
<th>91-01</th>
<th>01-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gr. Mumbai</td>
<td>3.28</td>
<td>1.87</td>
<td>1.90</td>
<td>1.79</td>
</tr>
<tr>
<td>2</td>
<td>Thane</td>
<td>10.76</td>
<td>5.41</td>
<td>4.62</td>
<td>3.79</td>
</tr>
<tr>
<td>3</td>
<td>Kalyan-Dombivali</td>
<td>14.40</td>
<td>3.55</td>
<td>3.82</td>
<td>3.19</td>
</tr>
<tr>
<td>4</td>
<td>Navi Mumbai</td>
<td></td>
<td></td>
<td>8.26</td>
<td>6.30</td>
</tr>
<tr>
<td>5</td>
<td>Mira Bhayander</td>
<td></td>
<td></td>
<td>11.48</td>
<td>4.98</td>
</tr>
<tr>
<td>6</td>
<td>Ulhasnagar</td>
<td>4.97</td>
<td>3.04</td>
<td>2.53</td>
<td>1.10</td>
</tr>
<tr>
<td>7</td>
<td>Ambernath</td>
<td></td>
<td></td>
<td>4.94</td>
<td>4.60</td>
</tr>
<tr>
<td>8</td>
<td>Kulgaon-Badlapur</td>
<td></td>
<td></td>
<td>6.51</td>
<td>5.43</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>3.92</strong></td>
<td><strong>2.78</strong></td>
<td><strong>2.70</strong></td>
<td><strong>2.40</strong></td>
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</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>2005</th>
<th>2031</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Population</td>
<td>20.8 million</td>
<td>34 million (2031)</td>
</tr>
<tr>
<td>2</td>
<td>Slum Population</td>
<td>Around 47%</td>
<td>Around 14%</td>
</tr>
<tr>
<td>3</td>
<td>Average Household Size</td>
<td>4.22</td>
<td>3.90</td>
</tr>
<tr>
<td>4</td>
<td>Workforce participation rate</td>
<td>0.37</td>
<td>0.45</td>
</tr>
<tr>
<td>5</td>
<td>Total employment</td>
<td>7.75 million</td>
<td>15.3 million</td>
</tr>
<tr>
<td>6</td>
<td>Working in Offices</td>
<td>2.36 million (30.4%)</td>
<td>6.43 million (42%)</td>
</tr>
<tr>
<td>7</td>
<td>Working in Industries</td>
<td>1.53 million (19.7%)</td>
<td>4.51 million (30%)</td>
</tr>
<tr>
<td>8</td>
<td>Formal employment</td>
<td>Around 55%</td>
<td>70 – 80 %</td>
</tr>
</tbody>
</table>
Transportation

MMR Transit Network 2031

MMR Road Network 2031
# Capital investment needs of Metropolitan level infrastructure 
**MMR, 2021** (Rs. in Cr.)

## Metropolitan level investment needs

<table>
<thead>
<tr>
<th>Sectors/Macro Projects</th>
<th>Investment Requirement</th>
<th>Investment Requirement 2005-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005-11</td>
<td>2011-16</td>
</tr>
<tr>
<td>Water Source Development</td>
<td>2941</td>
<td>8822</td>
</tr>
<tr>
<td>Transit Infrastructure</td>
<td>20169</td>
<td>34754</td>
</tr>
<tr>
<td>- Metro System</td>
<td>9110</td>
<td>24342</td>
</tr>
<tr>
<td>- Sub-Urban Rail improvement</td>
<td>10579</td>
<td>10412</td>
</tr>
<tr>
<td>- Water Transport</td>
<td>480</td>
<td>0</td>
</tr>
<tr>
<td>Highway System</td>
<td>9473</td>
<td>16665</td>
</tr>
<tr>
<td>Transport Terminals</td>
<td>407</td>
<td>612</td>
</tr>
<tr>
<td>Drainage</td>
<td>900</td>
<td>800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>33,890</td>
<td>61,653</td>
</tr>
</tbody>
</table>

## Total investment needs

<table>
<thead>
<tr>
<th>Area/Sector</th>
<th>Rs Cr.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan level infrastructure</td>
<td>1,66,244</td>
<td>80.70</td>
</tr>
<tr>
<td>Municipal infrastructure (ULB Level)</td>
<td>27,548</td>
<td>13.37</td>
</tr>
<tr>
<td>Land, real estate and housing</td>
<td>12,221</td>
<td>5.93</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,06,013</td>
<td>100.00</td>
</tr>
</tbody>
</table>
MMR’s investment needs, 2021

Issues in the Planning for MMR

• India Infrastructure Report, 1996 estimated investment need for urban water supply, sanitation and roads as Rs. 28,000 Cr.
• Central Public Health Engineering in 2001, estimated water supply and sanitation needs as Rs. 173,000 Cr.
• Rail India Technical and Economic Services estimated the investment need for urban transport sector as Rs. 207,000 Cr. for cities with more than 100,000 population in next 20 years

Draft Business Plan for MMR
• Calculated the investment need of Rs. 206,000 Cr. in next 20 years in the sectors of transportation, water supply, sanitation, solid waste management, storm water drainage and intervention housing

Key questions are:
• Can public funds be mobilised to meet the above need?
• If not, what is the strategy for private sector involvement?
• Plough a proportion of real estate development into infrastructure fund
Proposed Planning Process for MMR

20 year Regional Plan prepared by MMRDA / MPC

20 year Development Plans of ULBs

Strategic Plan proposing spatial and sectoral targets to be achieved at Metropolitan scale

Strategic Plan proposing sectoral targets to be achieved at ULB scale

Metropolitan CIP including consolidated ULB CIPs

CIP of ULBs and parastatals

Mid term review of Metropolitan CIP

Mid term review of ULB CIP

Monitoring & Evaluation

MMR Public Debate
Business Plan suggestions

Functions that need to be adequately addressed:

- Planning for economic growth
- Water resource planning and development
- Transit and Metropolitan Road Network - Planning and Development
- Planning and Development of Greenfield Land Development in conjunction with Transit Development
- Raising resources for Metropolitan Development
- Hand holding of smaller ULBs

Institutional restructuring, improved management practices and legal reforms to enable the above
Goals for attaining Vision
Business Plan

Economic Growth
• GDP growth rate of 12-15% per annum
• Ranking amongst top 3 in ‘ease of doing business’ among Indian cities
• Enhancing work force participation rate to 40%
• Significant increase in formal employment

Resource Mobilization and ULB Finance
• Operating Ratio not to exceed 0.9
• 50% private investment in infrastructure (billable services)
• ULBs to charge a proportion of new real estate development for infrastructure development
• ULBs to improve debt servicing capacity
Goals for attaining Vision
Business Plan

Issues in the Planning for MMR

Land, Real Estate and Housing
• Bring down the office rentals to comparable cities in Asia
• Median House Price to Median Annual Income ratio to be 5
• Reduce proportion of Slum Dwellers to 20%

Infrastructure
• 24/7 power & water supply, 100% sewerage in entire MMR
• Water supply of 240 & 240 lpcd in Gr.Mumbai & rest of MMR
• Flood mitigation
• Daily 100% collection of solid waste and its environmentally compliant disposal
• Maximum Density of passengers in trains to be 7/sq.m.
• Bus speeds to be 20 km/hour and vehicular speed to be 30 km/hour
In summary: Issues in Metropolitan Planning

- Setting logical framework for metropolitan development
- Delineation of the region
- Planning and strategizing regional development
- Creation of Institutional mechanism
- Raising sustainable resources for financing regional infrastructure – unlike ULBs, rest of the region will not have revenue streams
- Identification, promotion and co-ordination of multi-agency projects
- Operating within the constitutional framework
- Playing significant role in preservation of natural resources and environmental management
Thank you
## Investment need

### Issues in the Planning for MMR

<table>
<thead>
<tr>
<th>Sectors/Macro Projects</th>
<th>Investment Requirement2005-2021</th>
<th>Financing Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public Investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inter-Governmental Transfers</td>
</tr>
<tr>
<td><strong>METROPOLITAN INFRASTRUCTURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Source Development</td>
<td>14703</td>
<td>4411</td>
</tr>
<tr>
<td>Transit infrastructure</td>
<td>99863</td>
<td>19931</td>
</tr>
<tr>
<td>- MMR Metro System</td>
<td>69911</td>
<td>11031</td>
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<tr>
<td>- Sub-Urban Railways</td>
<td>29472</td>
<td>8842</td>
</tr>
<tr>
<td>- Water Transport</td>
<td>480</td>
<td>58</td>
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<tr>
<td>Highway system</td>
<td>47640</td>
<td>11143</td>
</tr>
<tr>
<td>Terminals</td>
<td>2038</td>
<td>428</td>
</tr>
<tr>
<td>Drainage</td>
<td>2000</td>
<td>600</td>
</tr>
<tr>
<td>Power</td>
<td>54521</td>
<td></td>
</tr>
<tr>
<td>TOTAL(with Power)</td>
<td>2,20,765</td>
<td></td>
</tr>
<tr>
<td>TOTAL(without Power)</td>
<td>1,66,244</td>
<td>36,513</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>21.96</td>
</tr>
<tr>
<td><strong>MUNICIPAL INFRASTRUCTURE (ULB LEVEL)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Supply</td>
<td>865</td>
<td>216</td>
</tr>
<tr>
<td>Sewerage</td>
<td>7931</td>
<td>1983</td>
</tr>
<tr>
<td>Solid Waste Management</td>
<td>612</td>
<td>153</td>
</tr>
</tbody>
</table>
Issues in the Planning for MMR
Proposed policy

- Develop International Finance & Business Centre in Bandra-Kurla Complex
- Remove direct controls on office development by modifying Development Control provisions
- Facilitate office growth by
  - allowing currently consumed FSI for reconstruction of office stock in old buildings
  - allowing use conversions and internal redesigning of heritage buildings for office use and thereby conserve them.
Proposed policy (Contd)

Issues in the Planning for MMR

- redeveloping old business areas with environmental improvement through urban renewal.
- planning and developing business centres by allowing recycling of land under obsolete uses such as, textile mills and cotton godowns of BPT.
- Allowing offices in industrial zones thereby making industries and offices to compete for space.
- modifying Rent Control and Property Tax provisions to capture true market value of properties as a pre-condition for the above changes.
3. Shelter Policy

Shelter in MMR

- Present need - 85,000
- Formal supply - 40,000 units p.a.
- Deficit of 45,000 will increase slum Hhs. from 11 to 26 lakhs during 1991-2021 with increased improvement need
Issues in Shelter Policy

Shelter Supply

- Inadequate supply of serviced land.

- Conventional housing by private and public agencies unaffordable.

- Public policy emphasis continues on provision of houses rather than facilitating housing.
Public Repairs and Reconstruction of Dilapidated Buildings.

- Public resources and rate of reconstruction grossly inadequate.
- Repairs of limited use.
- Ownership transfers are resisted and problems of upkeep and maintenance continue in reconstructed buildings.
- Does not improve surrounding environment.
- New Rent Control Bill does not propose any change in the provisions for old buildings.
Improvement of Slums

- Multiplicity of programmes based on various standards for improvement and cost recovery
- Slums on private lands and at dangerous locations remain outside the purview of improvement.
- Slum Improvement Programme (SIP) provides inadequate level of services due to cost ceilings. Services are not maintained since tenure is not transferred.
- Slum redevelopment with 2.5 FSI has limited application.
Shelter Strategy

- Facilitate increase in shelter supply by providing critical inputs of land and infrastructure.

- Cut down subsidies by choosing cheaper supply options like sites and services which provide scope for differential pricing.

- Direct private investment for low income housing through schemes such as Guided Land Development.
Shelter Strategy (Contd)

Adapt a neighbourhood based urban renewal approach for reconstruction of old buildings with -

- appropriate land uses
- land assembly by owners; and
- equity participation of tenants and owners through the mechanism of Urban Renewal Mutual Fund (URMF).

Provide in-situ upgrading and land tenure to existing slum dwellers’ co-operatives as a basis for eventual redevelopment.
4. Urban Land Policy

Urban Land Policy Committee, GOI, 1965 proposed following objectives:

- Achieve optimum social use of urban land.
- Make land available in adequate quantity at right time and at reasonable prices to public authorities and individuals.
- Encourage cooperative community effort and bonafide individual builders for land development, housing and construction.
- Prevent concentration of land ownership in a few private hands to safeguard interest of the poor; and
- Use land as a resource for financing urban development by recouping unearned income.
### Gross water demand in MMR 1991-2011

<table>
<thead>
<tr>
<th>Zone</th>
<th>1991</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gr. Mumbai</td>
<td>3026</td>
<td>3848</td>
<td>4471</td>
</tr>
<tr>
<td>2. Western Region</td>
<td>102</td>
<td>245</td>
<td>441</td>
</tr>
<tr>
<td>3. North Eastern region</td>
<td>883</td>
<td>1338</td>
<td>1737</td>
</tr>
<tr>
<td>4. Navi Mumbai region</td>
<td>242</td>
<td>581</td>
<td>869</td>
</tr>
<tr>
<td>5. Neral-Karjat region</td>
<td>82</td>
<td>96</td>
<td>103</td>
</tr>
<tr>
<td>6. Panvel-Uran (outside NM)</td>
<td>34</td>
<td>66</td>
<td>98</td>
</tr>
<tr>
<td>7. Pen Region</td>
<td>9</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>8. Alibag Region</td>
<td>79</td>
<td>162</td>
<td>203</td>
</tr>
<tr>
<td><strong>Total Gross Demand</strong></td>
<td>4457</td>
<td>6354</td>
<td>7959</td>
</tr>
</tbody>
</table>
Potential availability of water

<table>
<thead>
<tr>
<th>Name of Valley</th>
<th>Yield est. by CDO 1994 95%DEP (Mcm)</th>
<th>Utilisation Planned @ 95% DEP.</th>
<th>Total utilisation Planned (Mcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaitarna</td>
<td>2416</td>
<td>1634</td>
<td>651</td>
</tr>
<tr>
<td>Ulhas</td>
<td>4681</td>
<td>1629</td>
<td>1241</td>
</tr>
<tr>
<td>Patalganga</td>
<td>489</td>
<td>379</td>
<td>147</td>
</tr>
<tr>
<td>Amba</td>
<td>284</td>
<td>237</td>
<td>146</td>
</tr>
<tr>
<td>Damanganga</td>
<td>1000</td>
<td>1000</td>
<td>0</td>
</tr>
<tr>
<td>Total (MCM)</td>
<td>8869</td>
<td>4878</td>
<td>2185</td>
</tr>
</tbody>
</table>
Population has grown by 2.75% per annum.
Vehicle ownership has grown by 8.84% per annum.
88% trips performed by public transport.
7% by private vehicles.
5% by taxis.
Between 1991 and 2011 vehicles will go up from 44 per th. to 61 per th.
Travel demand (Contd)

In 2011 daily trips:

- Total trips 16.3 millions
- Train trips 7.6 millions (46.63%)
- Bus 6.2 millions (38.04%)
- Car & Taxi 2.5 millions (15.34%)

Average trip length:

- Bus 4.67 km.
- Rail 17.22 km.
- Private 12.00 km.
Transportation Strategy

- Improve public transport - particularly railway in Greater Mumbai.

- Adopt demand management measures in Island City
  - Parking fees
  - Cordon pricing

- Road and highway improvement in suburbs and in rest of the Region.
Thank you