NIDM- APHRD I online Training Programme
on
Revisiting Urban Planning Practices for tackling Complex Disaster Situations

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COVID-19 An Unprecedented Event at Global Scale!
COVID-19

• Massive Disruption of “Jaan” and “Jahan” across the global regions

• Cities are the center of COVID actions- Much of the COVID-19 Cases and Impacts are in urban areas

• COVID-19 has brought the debate of “Density” and “Resilience” back

• Issues of Urban housing, infrastructure and parks and open spaces

• Opportunity to Build Back Better? Living Back Safer?
Better Air Quality

Air Quality Across Cities

Delhi
Pune
Mumbai
Ahmedabad

AQ Index

After Lockdown
Clear Sky

Himalayans seen from Indian State over 100 miles away

Mountain range are visible from Jaladhar, Punjab
Better Water Quality

Ganga water turns cleaner during lockdown

Lockdown does, what decades of schemes couldn’t: CLEAN GANGA
• Epidemics and Urban Planning
Great Stink of London

- Cholera from Asia in 1830-40s
- Over crowding of Industrial Towns
- Low sanitary conditions in most towns
- The crisis came to a peak in the 'Great Stink' of London in 1858. Such was the overpowering smell from the Thames, that the curtains of the Commons were soaked in chloride of lime in a vain attempt to protect the sensitivities of MPs.
- British Public health Act in 1875
Epidemic Diseases Act, 1897

• The **Epidemic Diseases Act, 1897** is a law which was first enacted to tackle bubonic plague in Mumbai (formerly Bombay);

• The law is meant for containment of epidemic by providing special powers that are required for the implementation of containment measures to control the spread of the disease

• The Act has been routinely used to contain various diseases in India such as swine flue, cholera, dengue and malaria;

• In 2018, the Act was enforced as cholera began to spread in a region of Gujarat. In 2015, it was used to deal with dengue and malaria in Punjab and in 2009, it was invoked in Pune to combat swine flu.
Epidemics and Urban Planning In India

• Bubonic Plague and Sanitary Disorder in Mumbai at the end of 19th Century

• Bombay City Improvement Trust was created in 1898 to improve the sanitary living conditions of the worker

• New forms of Urban Planning initiated through “civil lines” and “cantonment” to stay away from the natives (Guha and Spodek etc)

• Civil lines and cantonments, unlike the rest of the native town were distinguished by large open spaces, planned roads, and administrative buildings located at the centre. The health and security of British elites were prime concerns

• Since the health and well-being of British officials were of great concern, the British also developed hill stations in an attempt to replicate the British countryside complete with schools, hospitals, clubs and hotels.
Colonial Urbanization in India

- Colonial urbanisation in India unfolded through:
  - The development of three metropolitan port cities -- Madras, Calcutta and Bombay ·
  - Hill stations in and around these metropolitan cities and in the foothills of the Himalayas and in South India ·
  - Settlements around tea and coffee plantations like Guwahati in Assam and Darjeeling in West Bengal ·
  - Introduction of civil lines and cantonment areas ·
  - Industrial towns like Jamshedpur and Asansol ·
  - Settlements or railway colonies in and around major railway stations like Bareilly and Meerut
What Is Urban Planning?

- Framework for provision of Public Goods and Services
- Managing Negative Externalities
• Increasing Vulnerability of Cities
Cities projected to receive at least 0.5 meters of sea level rise by the 2050s under RCP8.5

77% of Latin American population at risk from sea level rise live in cities.

410 million Asian urban dwellers at risk of coastal floods by 2025

Urban populations at risk 2050s

African cities to suffer disproportionately as the region is warming up 1.5 times faster than the global average.

Urban poor particularly vulnerable to climate risks and extreme weather events
Inevitable **Urban Expansion** in Indian Cities...

- **Delhi NCR**: 54 sqkm/year
- **Mumbai**: 5 sqkm/year
- **Pune**: 42 sqkm/year

**Source**: World Resources Institute (WRI)
• Building Back Better- Lessons from Singapore
Singapore's green and blue spaces – land use plan 2030.

Restored natural river in Bishan park, permeable surfaces, shaded streets, green and blue spaces, TOD.

The green increased from 36% in the 1980s to 47% now

Specific program examples:
- Active, Beautiful, Clean Waters (ABC Waters) program
- Landscaping for Urban Spaces and High-rises (LUSH) program
- Green Mark Rating scheme
- Ecosystem based adaptation

Flood prone area reduced from 3,178 ha in 1970s to only 34 ha in 2013
Singapore LUSH (Landscape for Urban Spaces and High Rises)
GnPR

- Green Plot Ratio (GnPR): 
- The Green Plot Ratio (GnPR) provides an objective measure of the density of greenery within a site. The formula for computing GnPR and the minimum GnPR requirement is as follows:

\[
\text{Green Plot Ratio} = \frac{\text{Total leaf area of greenery counted as Landscape Replacement (softscape)}}{\text{Development Site Area}}
\]
Space out Strategy: Case of Singapore
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COVID-19 and New Urban Development Paradigm

1. Focus on Access to Core Services
2. Affordable Housing and Public Spaces
3. Integrated Green and Blue Spaces
4. Increase City-Regional Planning
5. More City-Level, Granular Data
New Normal – Living With Safe Social Distancing
Living with Safe Social Distancing
Risk Sensitive Urban Planning?

**Approach: Area Based, Linked to Residential Types in the City**

Various Residential Area Types exist in a city based on different population densities, dwelling size, household size, available street widths (for access to services), levels of amenity, demographics etc. These also broadly represent community needs, constraints and existing governance structures such as RWA / panchayats, (or lack thereof), which become essential to respond to.

The following RA Types have been identified for this exercise (these can be aligned to categories in current legislative frameworks such as Master Plans, City Development Plans etc. for each city):

**RA 01**
Slums / Jhuggi Jhopdi Clusters

**Priority #1**

**RA 02**
Habitation / Unauthorized / Jhuggi Jhopdi Clusters

**Priority #1**

**RA 03**
Govt. / Semi Govt. Housing / Low-rise Group Housing

**Priority #2**

**RA 04**
Cooperative Group Housing Schemes, Integrated Townships

**Priority #2**

**RA 05**
Planned Housing < 100 – 300 sqm

**Priority #2**

**RA 06**
Planned Housing > 300 sqm

**Priority #2**

**RA 07**
Villages

**Priority #1**

**Priority #1:** Areas that have a likelihood of greater uncontrolled spread due to extremely high densities and poor living conditions; therefore needing urgent proactive response.

**Priority # 2:** Areas with lesser population, better living conditions and greater access to health services for initial screening. They also have self-governance structures such as RWAs which can be quickly mobilized for monitoring and enforcement.
Build Back Better?

By 2030
Latin America: USD 7.8 trillion
Asia-Pacific: USD 26 trillion

60% of the world infrastructure we’ll see by 2030 is yet to be built
Live
Back
Safer?
• Thanks!
• Email: saswatb@cept.ac.in