UN Climate Change Conference November 2021 Organized by : Stanford University, USA and Institute for Sustainable Development and Research (ISDR),India

Panel: CHALLENGES FOR SUSTAINABLE CITIES FOR CLIMATE CHANGE MITIGATION: IMPLEMENTING SDGS FOR SUSTAINABILITY

Title: Climate change and urbanization impacts

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Date : Wed, 10 Nov 2021*
Time : (12:20-12:45 BST) *(16:50-17:15 IST)*

	STATE	'Million Hect.'
1.	Uttar Pradesh	7.34
2.	Bihar	4.26
3.	Punjab	3.70
4.	Rajasthan	3.26
5.	Assam	3.15
6.	West Bengal	2.65
7.	Haryana	2.35
8.	Odisha	1.40
9.	Andhra Pradesh	1.39
10.	Gujarat	1.39
11.	Kerala	0.87

Map of Top Ten Flood Prone Areas In India

URBAN FLOOD RISK IN INDIA

➢Increasing trend of urban flood disasters in India over the past several years whereby major cities in India have been severely affected.

➢Hyderabad in 2000, Ahmadabad in 2001, Delhi in 2002 and 2003, Chennai in 2004, Mumbai in 2005, Surat in 2006, Kolkata in 2007, Jamshedpur in 2008, Delhi in 2009 and Guwahati and Delhi in 2010.

➢Unplanned urbanization and natural disturbances: Mumbai floods of 2005; Leh cloudburst in 2010; Uttarakhand flash floods of 2013; Kashmir floods of 2014; cyclone Phailin of Odisha and Andhra Pradesh in 2013; Chennai urban floods of 2015.

➢Sudden release or failure to release water from dams can also have severe impact.

➢The urban heat island effect has resulted in an increase in rainfall over urban areas.

➢Global climate change is resulting in changed weather patterns and increased episodes of high intensity rainfall events occurring in shorter periods of time.

➢Threat of sea-level rise , threatening all the coastal cities. Cities/towns located on the coast, on river banks.

Heavy to very heavy rain, lightning, hail storms and high speed winds (60-70 kmph) have been predicted by the Met department for all 13 districts of Uttarakhand between October 17 and 19,2021

JULY 26 ,2005
:The Mumbai city received a rainfall of 944 mm, a 100-year high, in a span of 24 hours. 1,000 people lost their lives and 14,000 homes were destroyed.

Mumbai : Deonar dumping ground of Mumbai is the largest dumping ground of India where waste has reached up to the height of 164 ft.

MUMBAI: The four-decade-old Mulund dumping ground stopped receiving garbage ,it has filled up. The 1,500 tons of garbage, sent daily to Mulund and it will diverted soon to Another landfill site

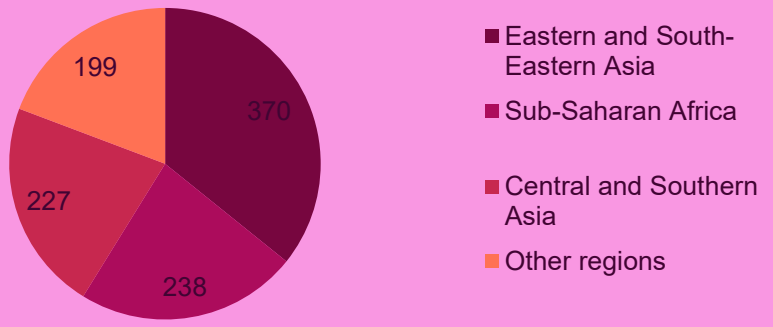
	Mumbai City(2011)	Mumbai UA(2020)
Population	**12.4 million**	**20.4 million**
Area	603 sq km	4355 sq km
Rank	1 (India)	9 (World)

11 SUSTAINABLE CITIES AND COMMUNITIES

Make cities and human settlements inclusive, safe, resilient and sustainable

Urban population living in slums or informal settlements, 2018

(millions of people)



The World's Largest 5 Slums:

Khayelitsha in Cape Town (South Africa): 400,000
Kibera in Nairobi (Kenya): 700,000
Dharavi in Mumbai (India): 1,000,000
Neza (Mexico): 1,200,000
Orangi Town in Karachi (Pakistan): 2,400,000

Redevelopment of Mumbai chawls to begin soon and many redevelopment project already in progress.
195 BDD chawls in south Mumbai , spread across 86.98 acres.
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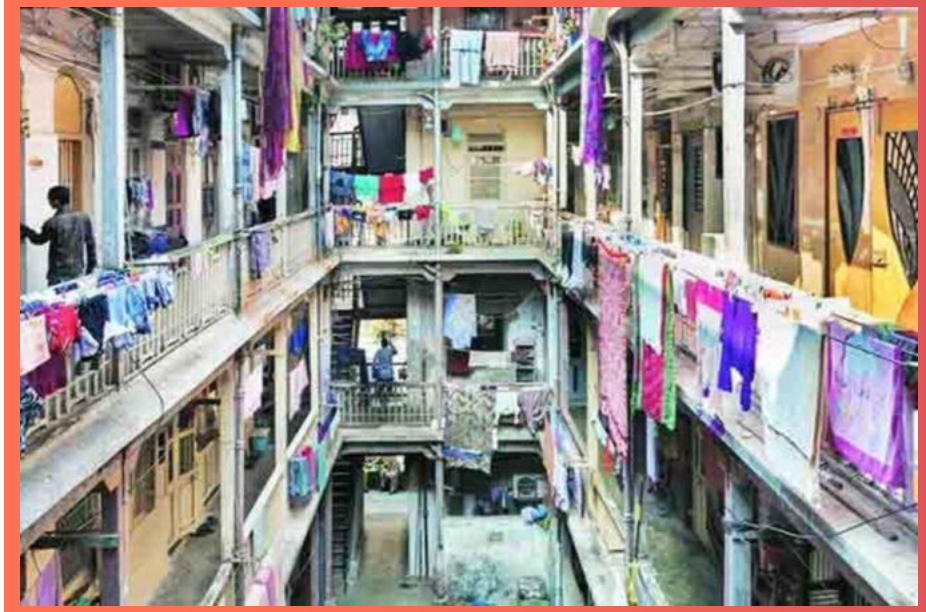

Mumbai's Bhendi Bazaar Redevelopment First Phase Completed
(Involvement of 20,000 people across 250 dilapidated buildings.)

Traffic and public transportation in Mumbai city

▪Approximately 8 million commuters use the 2900 trains of the suburban rail system.
▪Peak hours trains are overcrowded to nearly four times the network's capacity.
▪Best buses , private Vehicles, Metro, monorail are another alternatives .
▪Scope of ICT in transformation of Mumbai Transportation may bring sustainable transportation in future .

•Today more congestion on the streets of Mumbai city which is leading to problems like **road accidents, air and noise pollution, posing serious health hazards for citizens** .
• To build inclusive, safer, and more sustainable cities of tomorrow, technology will play a decisive role in identifying mobility gaps and transforming existing transportation services.