

Translating Locally-led Resilience into Action
in the Age of Complex Risk and Digital Transformation
복합위험과 디지털 전환시대, 지역주도 복원력의 실행

The 5th



International Disaster Resilience
Leaders Forum **Incheon 2026**

인천 국제재난복원력 지도자 포럼



2026. 9. 7.(월) - 9. 8.(화)
September 7-8, 2026



송도컨벤시아 그랜드볼룸 A
Songdo Covensia, Grand Ballroom A

Disaster Risk Reduction in the city of Mumbai

Mr. Abhijit Bangar, Additional Municipal
Commissioner (Projects),
Brihanmumbai Municipal Corporation
Mumbai, India

Mumbai In a Day

The City that never sleeps

Economic engine, mobility lifeline,
India's competitive edge.



~15M

Metropolitan
Population



~6%

Contribution to
India's GDP



7.5M+

Daily Suburban
Rail Commuters



~40%

Of Foreign Trade
Handled by Mumbai



If Mumbai stands still even for one day,
the estimated economic loss exceeds

US\$ 5.3 BILLION



Mumbai faces a multi-hazard risk landscape

Five interconnected risk shape the city's vulnerability



URBAN HEAT

+0.25°C /decade

rise in annual air temperature,
1973–2020



LANDSLIDES

249

landslide-prone areas



URBAN FLOODING

35%

of Mumbai's population
lives within 250 m of
flood hotspots



~16 days /year
with rainfall > 100 mm



28
high intensity rainfall
events in last 7 years



COASTAL RISKS

>50

slum localities
near coastline

18

storm events
2011–June 2021



AIR POLLUTION

1.5–2x
permissible limits

PM2.5 and PM10 concentrations
remained 1.5 to 2 times the
permissible limits between 2015–2019



>9,000
high-rise buildings
above 70 m



>16,000
dilapidated
buildings



Mumbai is in
Earthquake
Zone III

From where it started – 2005 Floods a wake-up call



**24-hour rainfall
figure of 944 mm
(37.17 inches)**



**More than 14,000
homes were destroyed**



**~ 1,094
people died**



**Over 700 flights were
either cancelled or
delayed**

Floods caused a direct loss of about ~ 0.6 Billion US dollars

The Journey of Building Resilience

01



State-of-the-art EOC
+ Integrated Early Warning



IRS

Incident
Response System



AI / ML

Decision Support



Co-ordinated
Response

02



India's First
Climate Linked Finance

US\$ 2.17 BN

43% of BMC CapEx
FY 2026-27



03



City Institute of
Disaster Management



Training &
Certification



Simulation &
Research



Backup EOC
at CIDM, Parel

04



City Disaster
Response Force (CDRF)



BMC Security
Force

+



Fire
Brigade

+



Doctors &
Paramedics



26-WARD
RESPONSE NETWORK

Central command.
Local execution.



14 EMERGENCY
SUPPORT FUNCTIONS

Roles defined.
Response aligned.



BUILT-IN
REDUNDANCY

Primary EOC + Backup EOC
+ 26 Ward EOCs

Resilience Building Matrix – Flood Management for Mumbai

 Dimension	 Current Baseline	 Resilience Target
 Early Warning	▪ Reactive; 0-hr lead time	▪ 6-hr advance warning ▪ Real-time inundation modelling
 Drainage Capacity	▪ Designed for 25mm/hr to 55 mm/hr rainfall ▪ 4 hours to 24 hours for water receding	▪ 90–120mm/hr rainfall (including climate change impact) ▪ Water receding in <30 mins
 River Health (Mithi, Oshiwara, Dahisar)	▪ Encroached, silted, polluted	▪ AI based Desilting annually; encroachment-free buffer zones
 Transport Resilience	▪ Suburban rail halts completely during waterlogging events affecting 8 million passengers	▪ Transport continuity without any interruption

Thank you

Mr. Abhijit Bangar – Additional Municipal Commissioner (Projects)
Brihanmumbai Municipal Corporation
www.mcgm.gov.in

