

KOLKATA'S RETROSPECT

Dual Disasters: COVID-19 & Amphan

Governance | Risk Perception | Gender



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1 KOLKATA CANVAS



Kolkata
is the 'cultural
capital' of India



- 'City of Joy'

- Kolkata: Heart of West Bengal

- Amalgamation of tradition and modernity

- Land of Intellectuals

- Treasure trove of rich Indian History

- Capital of British Indian Empire (1772-1911 AD)

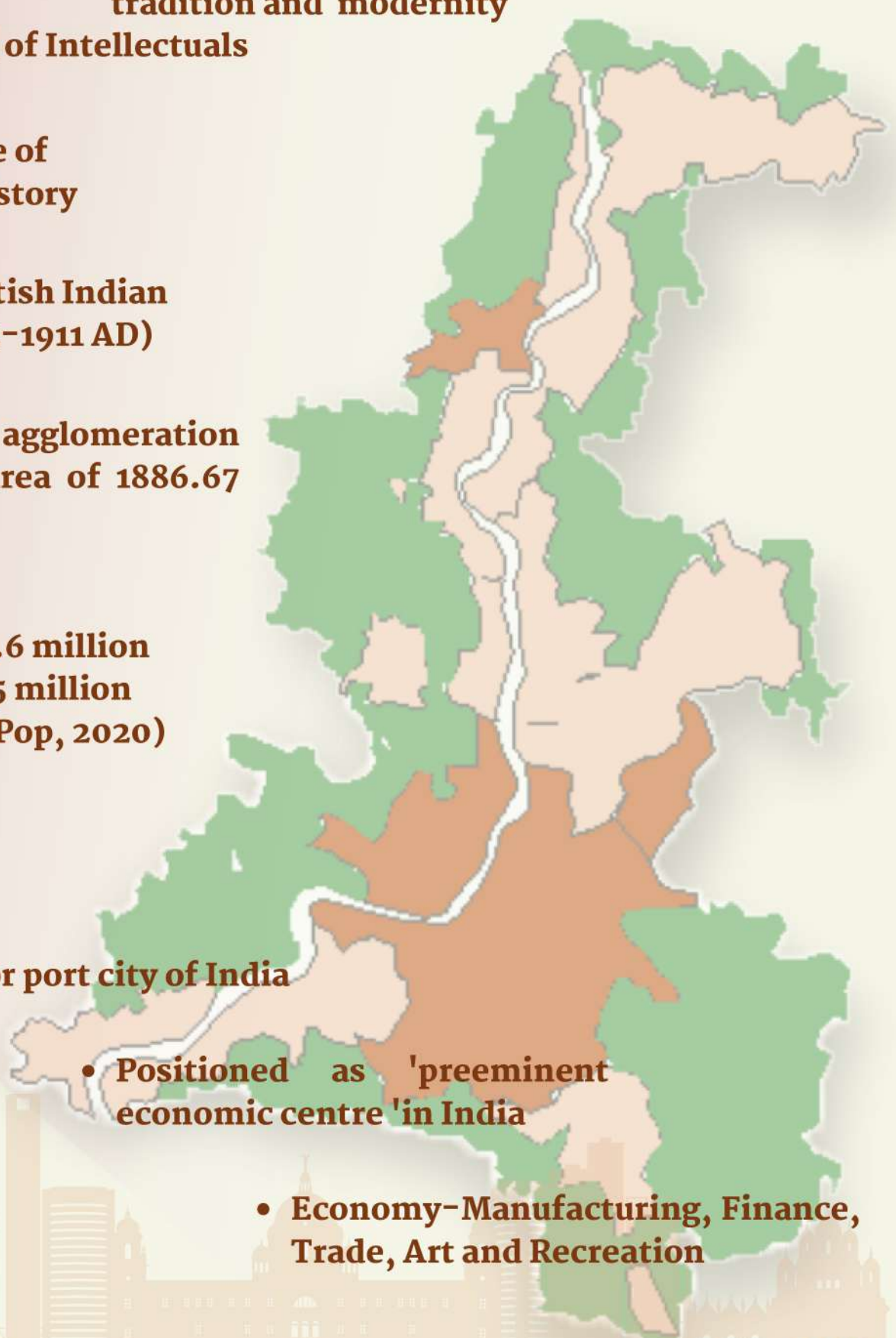
- Largest urban agglomeration covering an area of 1886.67 sq. km.

- Population- 4.6 million (Kolkata), 14.5 million (KMA)(WorldPop, 2020)

- Major port city of India

- Positioned as 'preeminent economic centre' in India

- Economy- Manufacturing, Finance, Trade, Art and Recreation





KOLKATA RISK LANDSCAPE

Kolkata is highly vulnerable to the multiple climatic hazards. The city has been featured by International Panel on Climate Change and Indian Meteorological Department among the coastal cities highly exposed and vulnerable to the impacts of sea-level rise, tropical cyclones, river flooding, heat waves, droughts and others.

Located on the extremely vulnerable Ganga-Brahmaputra coastal delta region, the city and metropolitan area have an elevation of 1.5–11 m above sea level (World Bank, 2011). The city is approximately 100 kilometers from the Indian Sundarbans which is at high threat to rising sea levels due to climate change.

PROMINENT HAZARDS IN KOLKATA



Flood



Thunderstorm



Cyclone



Heatwave



Earthquake



Drought

Add on to the natural risk factors are the anthropogenic factors of rapid population growth, unplanned and unregulated urbanization, urban sprawl, informal settlements and many others. A special characteristic of the city is the spatial segregation of the urban poor who reside in slum and squatters within the city. This feature of slums and squatters of unsafe location, mixed use of residences and informal economy, lack basic infrastructure and services exacerbates Kolkata's vulnerability to already increasing climate and hazard risks.

The city and urban agglomeration's preparedness and resilience to handle the crises have been put into test time and again. The recent compounding disasters is a wake up call for the fellow residents and administrators to emphasize on resilience building in the city's key infrastructure sectors.

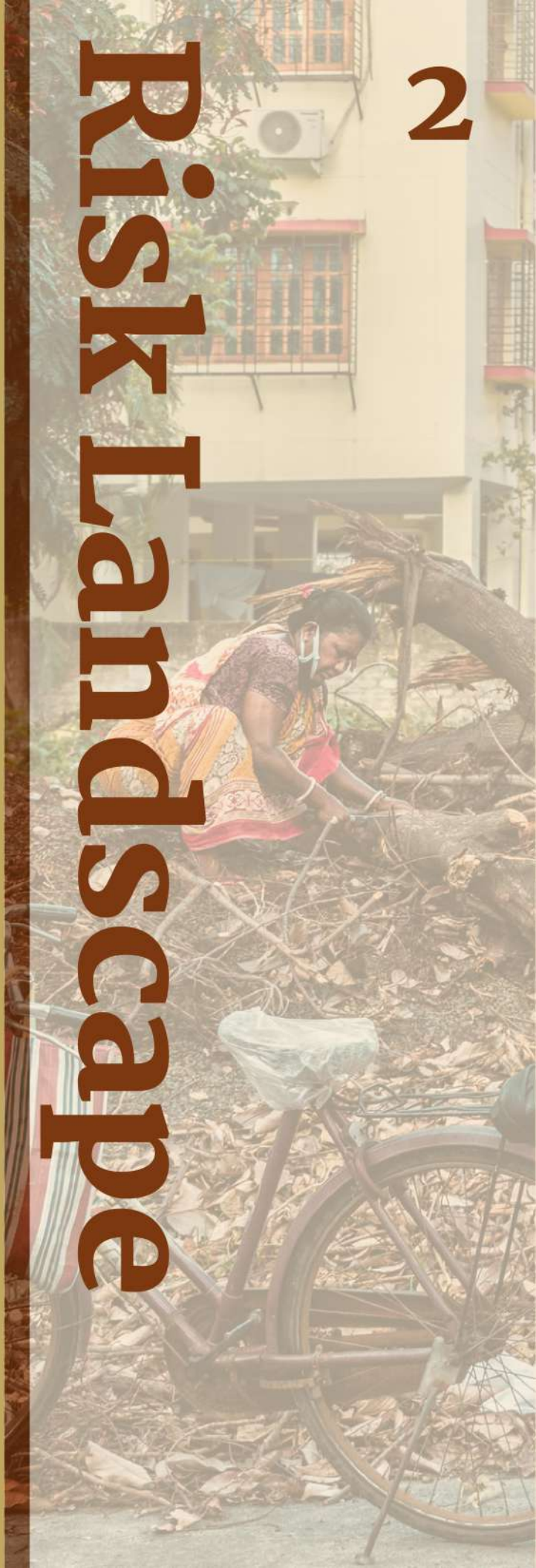
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It was very difficult to manage and provide services to this high-density population in Kolkata city, particularly in slum areas, and when it is a disaster, the scenario worsens.

-Senior Municipality Official

Risk Landscape

2

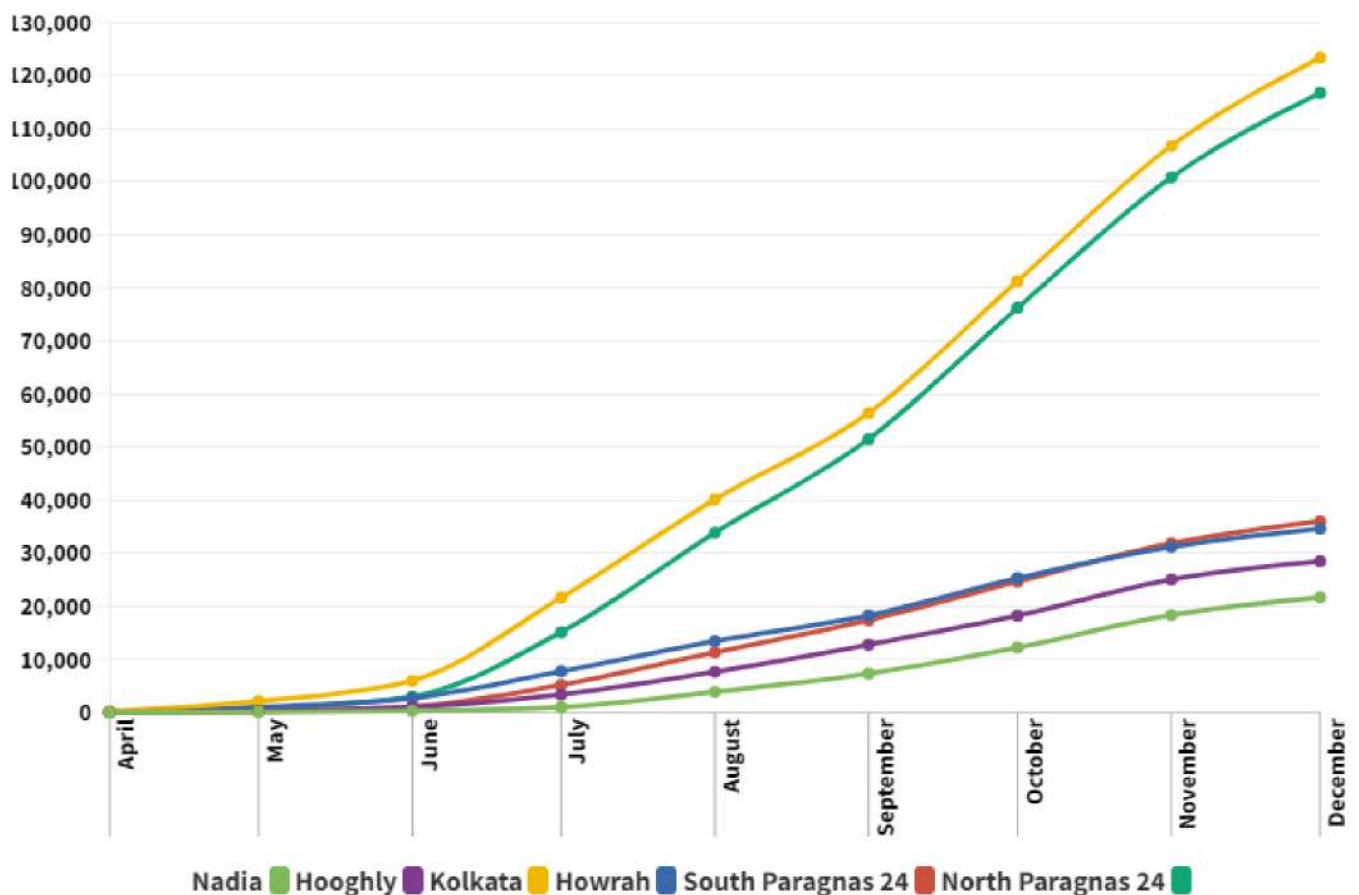


3 COVID-19 IMPACTS

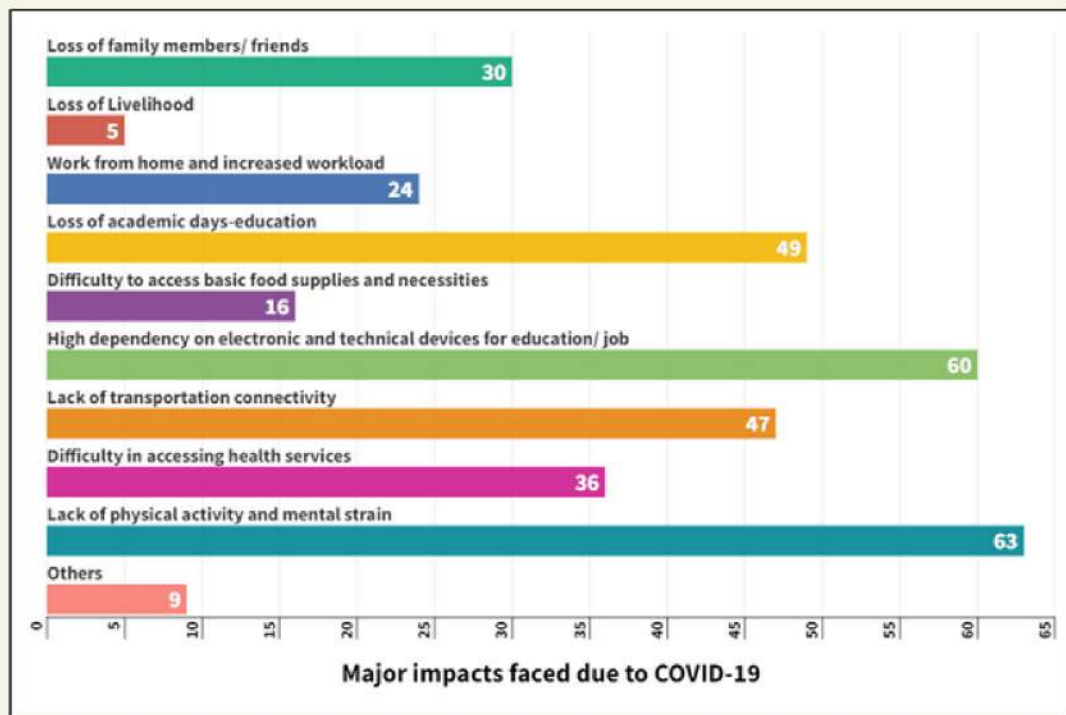
India is one of the worst hit countries by the pandemic. The virulent spread of coronavirus in West Bengal was initiated from Kolkata, with the first confirmed case reported in March 2020 (Deccan Herald, March 17, 2020). The surge in the cases was alarming attributed to foreign returnees through repatriation flights, migrant laborer's influx, and improving COVID-19 testing services (Mathur, 2020). Since then, Kolkata was enlisted as one of the worst-hit cities: 'Red Zone'.



Increase in COVID-19 cases in Amphan affected districts

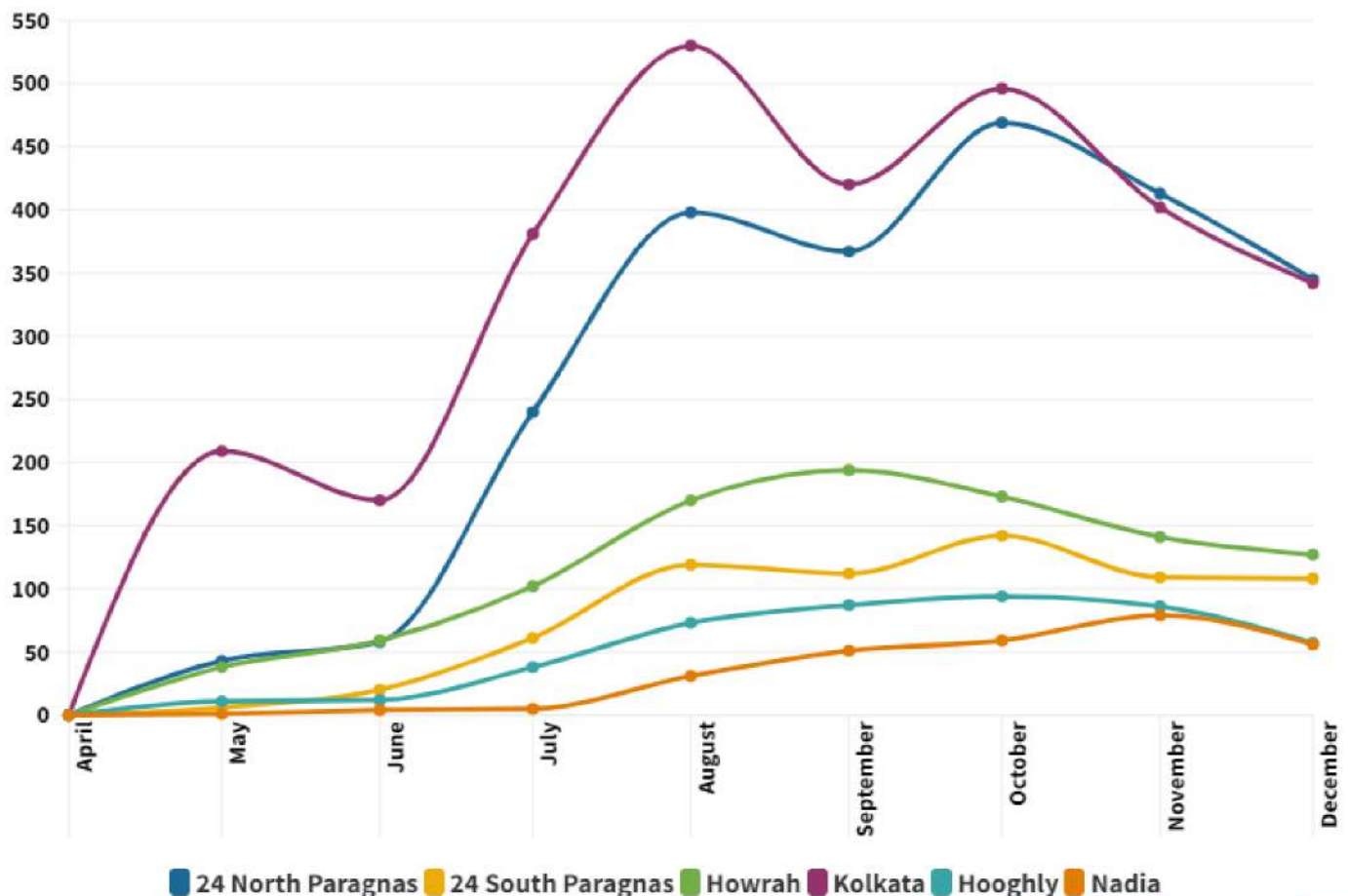


Increase in COVID-19 cases in Amphan affected districts



COVID-19 has resulted in multi-sectoral impacts in economy, education, health, employment, food security, transportation, travel and tourism, and environment.

Increase in COVID-19 related death cases in Amphan affected districts



Increase in COVID-19 related death cases in Amphan affected districts

Cyclone Amphan was the 'strongest super cyclone' to hit the Gangetic Delta post-Sidr 2007 and the 'first super cyclonic storm' to occur in the Bay of Bengal after Odisha Super Cyclone 1999.

Timeline of Super cyclone Amphan

13 May 2020- Formation of Amphan from a low-pressure area around 300 km east of Colombo in Sri Lanka.

18 May 2020 - Amphan reached peak intensity with windspeed of 240km/h.

20 May 2020 - Amphan intensified from 'cyclonic storm' to 'super cyclonic storm' and made landfall in Digha, south of West Bengal and Hathiya Islands, Bangladesh

Kolkata Metropolitan Area observed large destruction and Kolkata City suffered significant water-logging in the low-lying areas and high infrastructural damage.

The cyclone made landfall amid the COVID-19 pandemic, which resulted in intersecting crises and secondary hazard like urban flood and inundation . The cyclone created high infrastructure damage impacting electricity, communication, drinking water, health services and, with strict restrictions to contain COVID-19, exacerbated the already critical situation affecting the disaster management and response effort resulting in cascading impacts.



Amphan Impacts 4



Total death toll: 87

Death toll in Kolkata: 19

Affected Population: 13 million



Economic Loss

West Bengal: USD 13.5 billion

Kolkata: USD 647 million



10.5 million buildings
damaged



5.0 million trees
uprooted



4000 electric poles
uprooted



Mobile towers toppled in
240 out of 273 substations



Damage of 17,000 sq. km
agricultural land crops



Damage of 8007
fishing boats

Amphan compounded with COVID-19 resulted in direct loss (death, economy, infrastructure) as well as indirect (well being, health- physical, mental, emotional) loss along with impact on multiple sectors.

5

Life & Liv

Kolkata is the prime business, commercial and financial hub of Eastern India.

Kolkata is entitled as the third richest city in South Asia after Mumbai and Delhi with GDP contribution of 150.1 trillion in the year 2020.

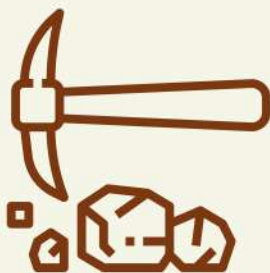
According to the Global Metro Monitor 2018 by Brookings, Kolkata ranks 138 in the 300 largest metro areas on the Economic Performance Index.



Kolkata is the main sea port of communication in North East India along with Haldia.



Home to some major Industry and Manufacturing- steel, iron, minerals, textiles, jute



Kolkata is the centre of India's mining and resources sector.



Trade and Transportation are one of the most intensive industries.

velihood

The knowledge base of Kolkata has strong foundations in **mining, property management and forestry.**

Kolkata is a significant healthcare hub for eastern India and Bangladesh with a large number of super speciality hospitals and diagnostic centres.

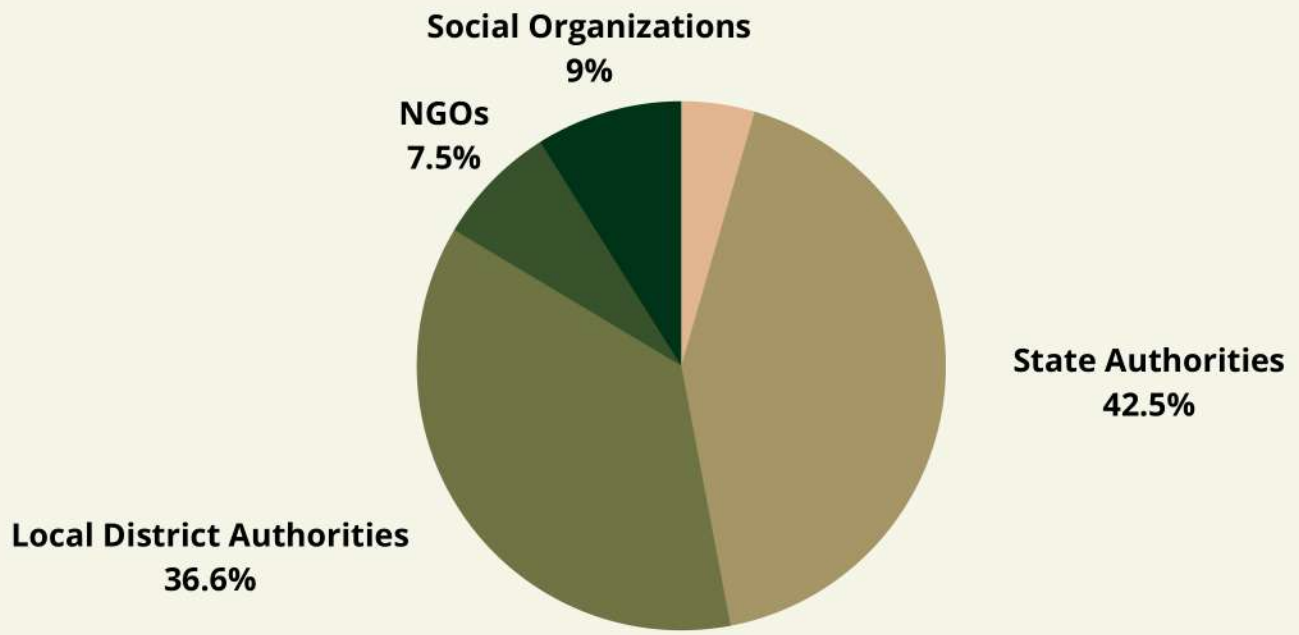
Kolkata suffers the rural-urban divide and menace of exclusion.

The slum population are engaged in informal sector, services and labor work.

“

Kolkata is poised to emerge as the epicentre of global financial centre by 2030.

- Senior West Bengal Government Official



Perceived agency or institution to initiate the response to COVID-19 and Cyclone Amphan



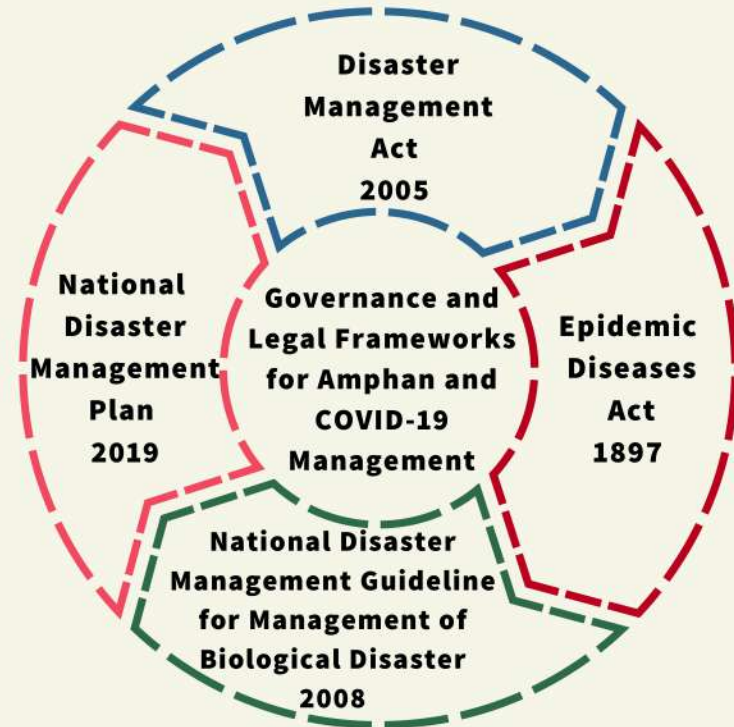
Metropolitan Risk Governance 6

COVID-19

- Release of series of guidelines, advisories, Dos and Dont's with regards to surveillance, preparedness, strategies and measure for testing, management protocols by National and State Disaster Management Authorities since January.
- Four phases of nation and state wide lock-down since March.
- Announcement of schemes and insurance for life and employment security.

Cyclone Amphan

- 'Amphan' early warning and forecasts by Indian Meteorological Department since the end of April
- Advisories released by State Government and Indian Meteorological Department
- Evacuation and cyclone response planning
- Evacuation of approx 5 million people
- National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), Fire and Disaster Management Group (DMG), Civil Defense, Kolkata Police, Volunteers were active during evacuation and post-cyclone relief, response and management.



COVID-lockdown makes a huge real-time shortage of manpower in CESC and when AMPHAN made landfall- it was a nightmare to get the personnel to deploy in crisis management for electricity restoration.

-Senior Official Kolkata Metropolitan Corporation

Impact on Women >



Social factors



Men centric approach



Lack of opportunities for women to participate



Lack of interest to participate in such roles



Lack of trust on leadership of women



Religious factors



Economic factors



Cultural factors



Political factors



Lack of adequate information



Level of education not enough



Others



0 5 10 15 20 25 30 35 40 45 50 55 60 65 %

Perceived challenges for Women Participation in Decision making and Governance



“

Women should be given more opportunity to make decisions and executing them for proper planning and management in times of crisis.

On a scale of 1-4 with 4 being the highest, how important is female representation in the decision-making role/position?



“
*In the city of **Durga** (the goddess) and the state led by woman leadership, women should be involved as much as possible in decision making and planning at various levels.*

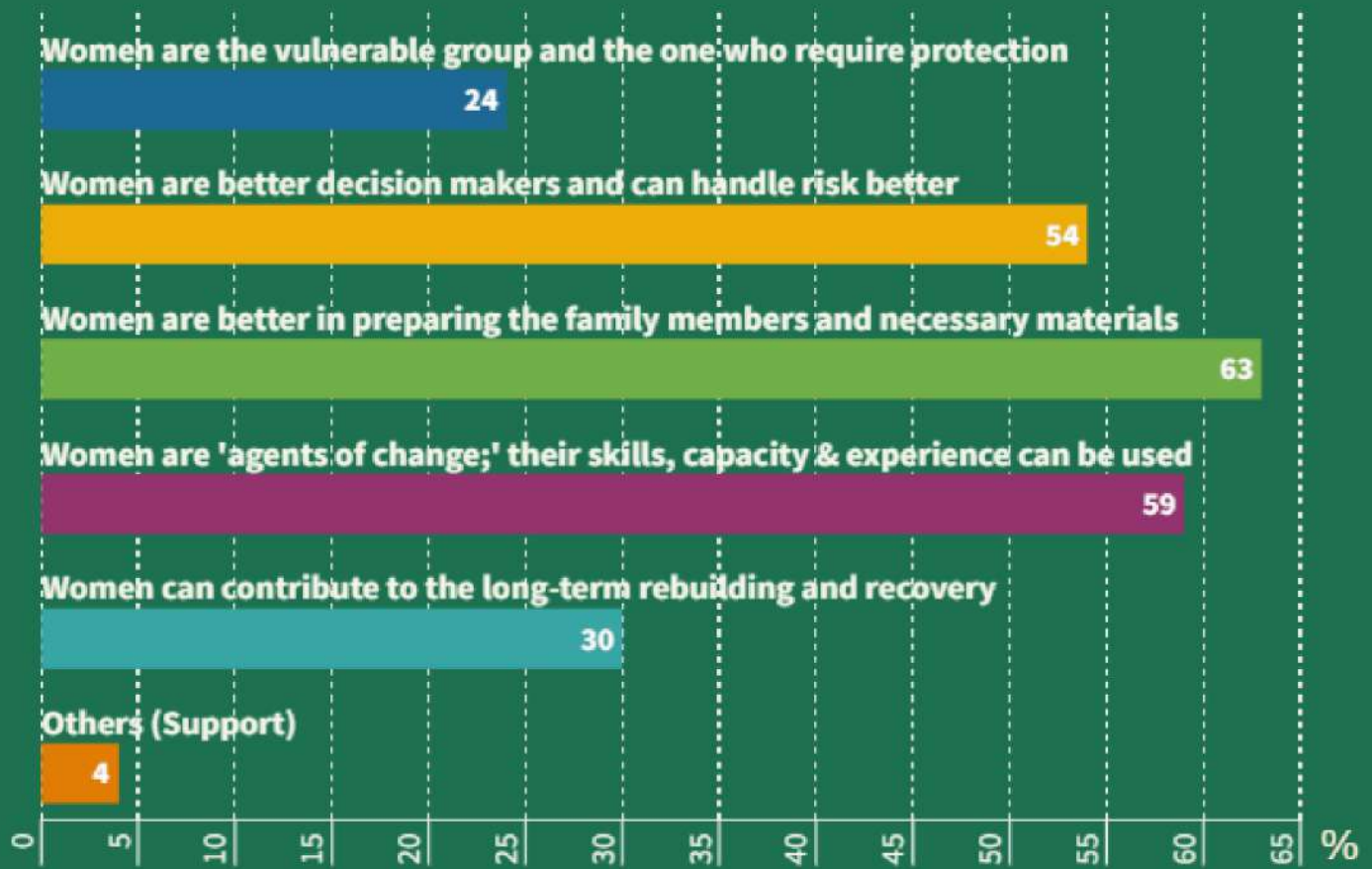
-Senior Politician



Role of Women in Disaster Governance

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Women representations should be a bottom up approach.



Perception on the role of women in disaster preparedness and management



RISK PERCEPTION

ATTITUDE

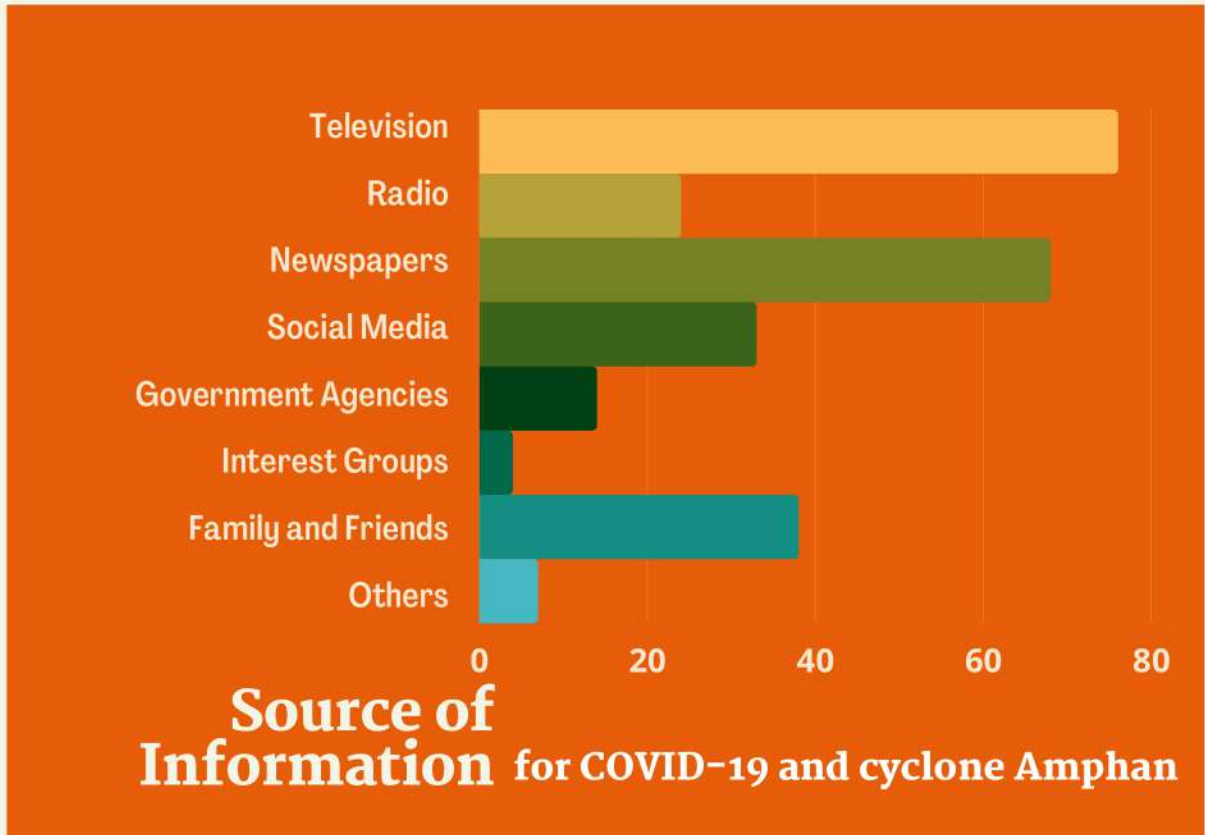
BEHAVIOR

COVID-19 led to the realisation of the uncertainty in life and instilled the major shifts in the perception of life, livelihood and critical services. Cyclone Amphan instilled into the citizens and concerned authorities the importance of preparedness and resilience building of critical infrastructures .

The experiences of compounding disasters and cascading impacts were eye-opening for the city dwellers and administrators, hence leading to the adoption of preparedness measures in the cyclone which hit West Bengal post-Amphan in 2021- cyclone Yaas.



Risk Perception



“
The chief minister had once said the state had learnt from Amphan and taken measures during Yaas. It showed the government was aware of what to do.
- Anup Karanth,
DRM Specialist, World Bank



CITY RESILIENCE

It matters for the future

Warning and communication about cyclone Amphan.

77

Maintaining social distance and hygiene during Evacuation.

34

Frequent updates on the situation and orders for stay-at-home and safe areas.

33

Clearance and removal of hoarding boards, wires, poles, street lamps and others.

27

Resources on standby to revive electricity, water, communication, and the internet.

24

Resources on standby for road clearance to resume transportation.

32

Other:

3

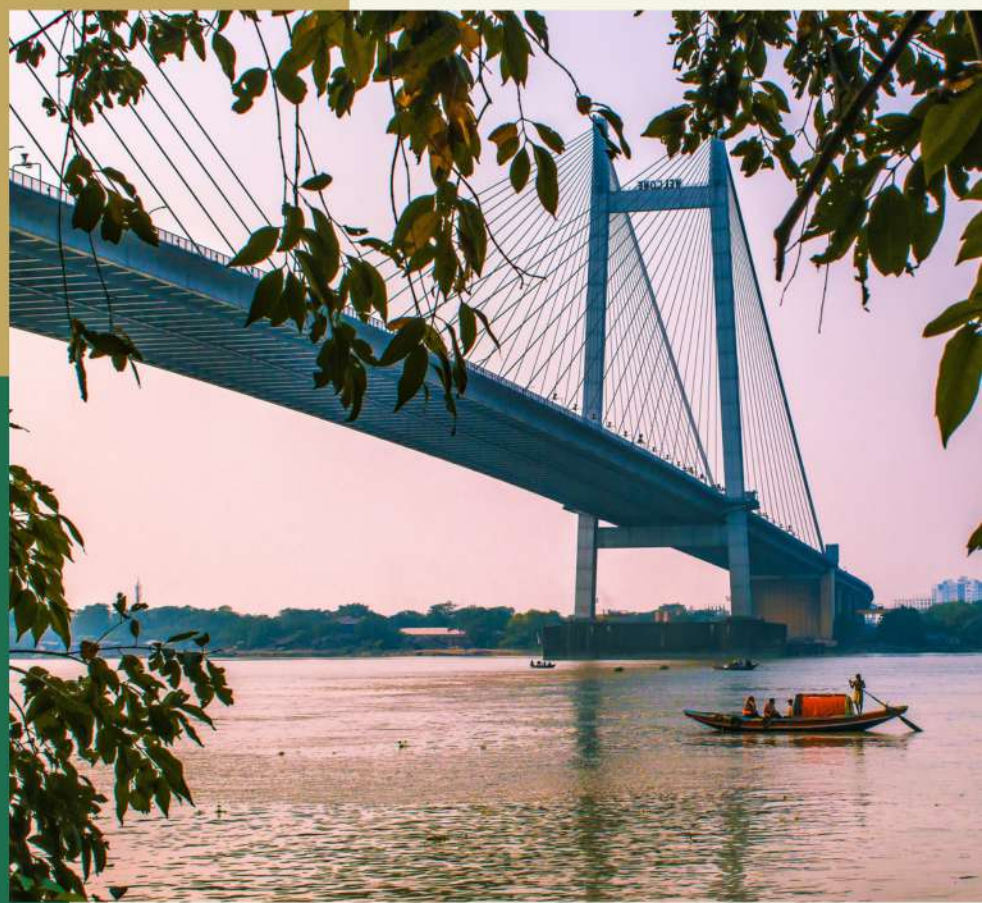


Publicly recognized response by authorities during Amphan



10

Kolkata's response and management of COVID-19 and cyclone Amphan have revealed the capacity of the city to deal with the increasing weather-related hazards and climatic risks. A number of points ought to be considered to pave the way forward in terms of resilience building and adaptive capacity of the city in multi-hazard scenarios in terms of both hard and soft infrastructure.



Raising community awareness and communication on natural hazards and COVID-19

71

Assess the operational and staff capacity for future natural hazards in the COVID-19 context

36

Prioritization of preparedness, mitigation, and capacity building to tackle hazards

43

Proper planning and contingency to help to mitigate hazards

44

Improve trust and coordination between different levels of authorities, government, and people

16

Public-Private- People Partnership for disaster preparedness, mitigation, and management

35

Other

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0 10 20 30 40 50 60 70 80

Points to be considered by Authorities for strengthening multi-hazard management

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DPMM
Disaster Preparedness,
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