

# UNDERSTANDING DISASTER VULNERABILITY OF CHENNAI'S HOMELESS

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## About the Organisations



[Okapi Research and Advisory](#) is a research and consulting group focused on helping our clients better understand policy ecosystems, design resilient solutions, and facilitate sustainable social and environmental transformations in cities.

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The research centre at [Azim Premji University](#) largely focused on issues that have social relevance and impact and that contributes to knowledge in practice beyond contribution to scholarly knowledge.

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## List of Abbreviations

BPL	Below Poverty Line
CBA	Community-Based Adaptation
CAG	Citizen Consumer and Civic Action Group
CDMP	Chennai Disaster Management Plan
CBDRR	Community Based Disaster Risk Reduction
CBO	Community Based Organisation
CMA	Chennai Metropolitan Area
CSR	Corporate Social Responsibility
CPR	Cardiopulmonary Resuscitation
DDMP	District Disaster Management Plans
DMTs	Disaster Management Teams
DRM	Disaster Risk Management Programme
DRR	Disaster Risk Reduction
DAY	Deendayal Antyodaya Yojana
EFI	Environmental Foundation of India
EOI	Expression of Interest
EWS	Economically Weaker Sections
FEMA	Federal Emergency Management Agency
FGD	Focused Group Discussions
GIS	Geographic Information System
GOI	Government of India
GCC	Greater Chennai Corporation
GSDMA	Gujarat State Disaster Management Authority

HUDD	Housing and Urban Development Department
HQIMS	Home Quarantine and Isolation Management System
IMD	Indian Meteorological Department
IRCDUC	Information and Resource Centre for Deprived Urban Communities
LAPD	Los Angeles Police Department
MoUD	Ministry of Urban Development
MOU	Memorandum of Understanding
MRTS	Mass Rapid Transit System
NDRF	National Disaster Response Force
NDVI	Normalized Difference Vegetation Index
NULM	National Urban Livelihoods Mission
NDMA	National Disaster Management Authority
OSDMA	Odisha State Disaster Management Authority
PAR Model	Pressure and Release Model
PWD	Public Works Department
PDS	Public Distribution System
SEOC	State Emergency Operations Centre
SDGs	Sustainable Development Goals
SDMPP	State Disaster Management Perspective Plan
SOP	Standard Operating Procedures
STPs	Sewage Treatment Plants
SUH	Shelter for Urban Homeless Programme
SDMP	State Disaster Management Plans
TNSDMA	Tamil Nadu State Disaster Management Authority
TNIFMC	Tamil Nadu Infrastructure Finance Fund Management Corporation
TNHB	Tamil Nadu Housing Board
TNSCB	Tamil Nadu Slum Clearance Board
TNEB	Tamil Nadu Electricity Board
UDPFI	Urban Development Plans Formulation and Implementation
UHI	Urban Heat Island
ULB	Urban Local Bodies
UPHC	Urban Primary Health Centre
UNSD	United Nations Statistical Division
UNDP	United Nations Development Programme
UN	United Nations
WHO	World Health Organisation
WASH	Water, Sanitation and Hygiene

## EXECUTIVE SUMMARY

### Introduction – Contextualizing the Homeless People’s Vulnerability to Disasters

Over the years, there have been several enumerations of homeless in the city ranging from 40,763 in 1989-90 by Chennai Metropolitan Development Authority (CMDA 2008) to the most recent 9087 by Greater Chennai Corporation (Uravugal Social Welfare Trust 2018). While the number of homeless may vary, their vulnerabilities have remained similar and related to lack of access to housing and basic services such as water, sanitation, food, education and healthcare. Marginalisation and destitution lead to high degrees of vulnerability amongst the homeless who suffer the most when faced with disasters (Edgington, 2009; Sturgis et al. 2010; Wisner, 1998; Wisner et al. 2012). The COVID-19 pandemic has also exposed the vulnerabilities of the homeless and highlighted the importance of access to basic services in reducing risks associated with the virus. Despite these linkages, city, state and national level disaster related policies and programmes in India are yet to explicitly recognise the homeless as a vulnerable group who require special attention. Further, researchers and practitioners increasingly recognise that disasters are not isolated from existing societal context, but are produced through various social, political and economic forces, putting individuals and communities at risk. Motivated by this understanding, Okapi Research & Advisory collaborated with Information and Resource Centre for the Deprived Urban Communities (IRCDUC) to develop a sociological understanding of disasters focusing on the homeless community’s everyday access to resources which in turn shape their ability to cope with disasters and the broader socio-political and economic context within which their vulnerabilities unfold.

### Motivation and Methodology

Through a year-long effort engaging directly with the Chennai’s homeless and individuals/agencies working closely with them, a comprehensive community - based understanding of homeless peoples’ vulnerability to disasters has been developed. Using a mixed methods and participatory approach (including a comprehensive literature and policy review, stakeholder interviews (13), community mapping (1), surveys (299), focussed group discussions (3) and GIS analysis), this project examines the following issues:

- a. the state of disaster vulnerability amongst the homeless;
- b. everyday vulnerabilities with respect to access to basic resources that aggravate homeless persons’ disaster vulnerability;
- c. coping strategies and government support to deal with everyday and disaster vulnerabilities;
- d. needs/gaps that should be addressed to strengthen current city disaster management plan and disaster governance to build resilience amongst the city’s homeless community.

The project focused on the homeless living on the streets more than those living in the homeless shelters as initial conversations with shelter coordinators and social workers revealed that the former group was more vulnerable due to lack of access to basic resources like housing, water, sanitation facilities, health care etc. Homeless living in shelters received support with respect to all these basic services, albeit with limitations in quantity and quality. Further, much of the field work was concentrated in Zone V which has the largest concentration of homeless in the city. The goal of the project is to inform policy and support



more equitable thinking and action in Chennai city's governance of disaster management efforts.

## Key Findings and Recommendations

Existing disaster related and development policies do not categorically recognise the vulnerabilities of the homeless. Further, for the homeless, everyday vulnerabilities with respect to access to basic resources, safety, and social acceptance remain more relevant and immediate concerns than one-time disaster events. These everyday precarities aggravate their vulnerability not only during the occasional disaster events, but also during the yearly cycle of rain and heat commonly experienced in Chennai. As such, during interactions with the homeless it was evident that in their collective memory, 2015 floods or the more recent drought of 2019 did not stand out as exceptional events. This highlights the need to address the broader socio-political context to improve the general condition of the homeless which will automatically reduce their vulnerability to disasters. Vickery suggests that this approach reflects how "...individuals and households respond and adapt to disaster within the constraints of the contexts in which they live. They draw upon resources to the extent that those resources are available and accessible both before and during time of disaster" (Vickery 2017:24).

### Building resilience in everyday lives

**A. *Providing access to shelters (including transit shelters)/ housing:*** Shelter / housing constitute the first line of defence against any disaster. In Chennai, homeless families who have been living on the streets for several generations need access to permanent housing or temporary shelters. For homeless individuals, there is a need to provide different kinds of affordable housing arrangements such as working men's / women's hostels, rental accommodation etc. as acknowledged by the recently released TN Affordable Urban Housing and Habitat Policy 2020. For homeless to access housing schemes, convergence is required between Municipal Administration and Water Supply Dept. which implements the Shelter for Urban Homeless (SUH) programme and Housing and Urban Development Department which implements housing projects. Further, Tamil Nadu Slum Clearance Board (TNSCB) would need to recognise homeless as potential beneficiaries for their schemes and consider different kinds of ownership models which do not depend on 10% financial contribution from the beneficiaries. Additionally, it is also recommended to set up transit shelters as a first entry point into the system where a thorough examination of homeless persons' mental and physical condition, background and needs can be assessed, based on which they can be directed to the appropriate institution which could be a regular shelter, hospital, or care home.

**B. *Providing access to basic services:*** Access to basic services such as water, sanitation, hygiene, food and healthcare (WASH) is closely related to access to shelter. In the absence of shelters, homeless communities also lack access to these basic services in a safe, affordable and adequate manner. For instance, our survey of homeless families reveals that 95% use poorly maintained public toilets for which they have to pay ₹5 per use. This restricts the number of times they can use the toilets. Also, there are no permanent arrangements to provide water to the homeless living on the streets who depend on Chennai Metrowater tankers. This inadequacy in WASH services has put the homeless into

a specifically vulnerable spot during the Covid-19 pandemic. It is recommended that GCC increase the number of public toilets through the Swachh Bharat Initiative, especially in homeless hotspots and make these free for the homeless and provide access to potable and affordable drinking water perhaps through more *Amma Kudineer*<sup>1</sup> counters set up in the hotspots. With respect to health care, homeless shelters need to mandatorily have at least one staff who is a professionally trained psychiatrist.

**C. *Single window system for provision of entitlements:*** District Collectors are mandated to provide entitlements to the homeless through a single window system for those applying through shelters. Homeless families on the streets cannot access these entitlements because there are no dedicated shelters for them leading to disenfranchisement. Further, shelter staff are struggling to provide their residents with Aadhar cards, ration cards and other entitlements, because of the complexity in paperwork. The District Collectorate / GCC can consider opening a dedicated 'e-seva' counter (with staff who are sensitised to the condition of the homeless and aware of the SUH programme) for homeless persons to register for Aadhar cards and other entitlements like ration cards, livelihood and housing schemes etc.

**D. *Creating awareness among the homeless for welfare schemes:*** Interactions with the homeless revealed that a majority of them are unaware of several Government of India and Government of Tamil Nadu welfare schemes, such as the Chief Minister's Health Insurance Scheme. It is recommended that awareness is created on these and other relevant schemes supporting the homeless. This can be done through SUH programme's monthly meetings and mass awareness drives on the streets. A dedicated day, perhaps once in three months, can be selected to create awareness at the shelters (depending on availability of the residents), while on the streets, plays, mime, songs, street theatre etc. can be used to spread the word. NGOs working with the homeless and who are active in specific areas may also be roped in for this purpose.

**E. *Sensitising general population and government departments on homelessness:*** Restrictive policies and negative social attitudes aggravate homeless people's vulnerability by criminalising and disempowering them. Public sensitisation campaigns are essential to showcase the invaluable contribution of the homeless in the local economy and can happen through the radio, events in public spaces like malls / beaches and social media challenges involving celebrities (like the #SafeHands challenge propagated by World Health Organisation (WHO) for tackling COVID-19). World Homeless Day which is already being utilised by GCC to create awareness on the shelter programme, can be leveraged for this purpose.

It is important to sensitise other line department personnel in addition to the SUH staff including those from Parks, Roads and Storm Water Drains departments, TNSCB, Chennai Metrowater, and most importantly Police. A mandatory sensitisation workshop can be held twice a year for these key personnel, facilitated by the SUH team and other NGOs working on the ground. The workshop can include details on how to communicate with /

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<sup>1</sup> *Amma Kudineers* are water ATMs which supply RO purified water free of cost to those who cannot afford it.

handle homeless persons and how to contact/ direct the homeless to the SUH team and/or homeless shelters.

**F. *Provision of timely relief/ preparing for the more common / everyday threats in the short run:***

The homeless are highly vulnerable to everyday social and environmental vulnerabilities including mental and physical harassment, road accidents, rain, heat, common diseases (cholera, dengue) etc. They feel more threatened by these everyday risks than by major disasters. Vulnerability of homeless can be greatly reduced if adequate and timely warnings and Standard Operating Procedures to deal with these less-than-disaster situations are systematically provided. Also, simple measures can be adopted especially for those living on the streets. For instance, providing tarpaulin covers to protect belongings and raincoats for children can be extremely beneficial support before the Monsoon season. Similarly, to deal with heat, water / buttermilk / elaneer stations can be set up in homeless hotspots.

**G. *Develop an urban homeless policy:*** There is currently no homeless policy in the country and the homeless shelters are being administered through the SUH scheme under the Deen Dayal Antyodaya Yojana - National Urban Livelihoods Mission (DAY- NULM) programme., which restricts the scope of the shelters since the programme is a livelihood mission and not a housing programme. The SUH scheme does not directly help address broader issues of lack of access to permanent housing or basic services which are linked to homelessness. Further, there is no certainty in its continuance and funding is restrictive as SUH is only one component of the DAY-NULM programme. Therefore, there is a need for evolving a comprehensive policy for the urban homeless that will, among other things:

- recognise and mainstream issues of the homeless in all existing housing, disaster and welfare policies and programmes of the state and central government such as the Smart Cities project etc.;
- improve access to entitlements by enhancing coordination between government departments and through convergence of schemes and laws;
- suggest inclusion of homeless shelters and hotspot locations in the master plan to ensure integration into the formal planning process;
- explicitly recognise that the homeless are not a homogeneous group, but are very diverse with different demographic and social characteristics who have different needs (e.g. children, women, elderly persons with disabilities) and equip shelters in terms of qualified staff and infrastructure to cater to their varied needs;
- facilitate reintegration with families by linking with Missing Persons Registry and referral to long term institutional care where reintegration is not possible;
- enable access to socio-economic and psycho-social rehabilitation processes and;
- implement a dedicated homeless programme with budgetary allocation from the TN Shelter Fund.

#### [Building resilience to cope with disasters](#)

Mainstreaming disaster risk reduction in urban homeless policy and programming is essential for inclusive and just disaster management. The SUH scheme, like most other development programmes, does not incorporate disaster risk reduction officially in its framework. Rather, SUH officers undertake ad-hoc actions to reduce disaster impact including advising shelters

to keep stock of essentials before onset of the monsoon. To effect sustained, long term change, more systemic actions are required to target homeless shelters and homeless individuals and families on the street. Some of these actions include:

- A. *Integrating risk assessments in SUH programme:*** Disaster risks need to be recognised and integrated in the shelter programme. This should be done by introducing risk assessments in identification of spaces for shelters (e.g. is the street flood prone), and/or assessing general accessibility (e.g. is the street too narrow for emergency services) in existing shelters and their exposure to disasters.
  
- B. *Early warning and communication:*** An essential part of disaster mitigation is to communicate to communities well in advance, about upcoming disasters so that they have the time to prepare and respond effectively. This involves setting up early warning communication / announcement systems that can quickly/easily communicate warnings to shelters. Some kind of transmission system originating from the GCC control room with loud speakers on the other end at each shelter and homeless hotspot locations on the streets, can be set up. Information that can be relayed would include: warnings, government guidelines, contact info of emergency services. A similar kind of message was relayed by Government of Tamil Nadu for COVID-19 on the phone. Downloading the Tamil Nadu State Disaster Management Authority (TNSDMA) app can also be made mandatory among shelter coordinators and staff.
  
- C. *Aggressive communication campaigns:*** Information regarding disaster risks, preparation and rescue/recovery efforts need to be widely available through multiple media and in multiple languages as the homeless comprise of a diverse group of people including differently abled persons from across the state and country, with low levels of education and limited access to smart phones. This could include: print media - newspapers, visual media – street art and posters (with braille options), street plays and theatre (with scripts available in braille), radio campaigns and phone calls. Shelters for the disabled can consider recruiting professionals who can communicate this information to persons with disabilities especially those who have visual or hearing impairments. The campaigns can be conducted aggressively before impending disasters and before specific seasons like the monsoon and summer. Advertising agencies can be roped in as consultants for this purpose through Corporate Social Responsibility (CSR) programmes.
  
- D. *Community led disaster preparedness plan:*** Disaster risks can be significantly reduced if communities are actively involved in planning for disasters. Traditional knowledge and experience can often be more effective and sustainable in managing disasters than more contemporary methods. Therefore, including the homeless and organisations/ people working closely with them in any disaster management planning exercise should become an institutionalized practice. The SUH team has a very good working relationship with all shelters and can easily conduct these planning meetings every year along with the periodical monitoring meetings that are already underway. However, a separate action plan needs to be incorporated to involve homeless families living on the streets in this process and may be done by conducting focus group discussions in hotspot locations.

**E. *Revise the City-disaster management plan / create a disaster preparedness guide relevant for Chennai's homeless:***

The city disaster management plan brought out by GCC in 2018 sets out the roles of and responsibilities of government departments within and outside GCC and identifies streets and areas at high risk from flooding. However, it does not include specific steps to involve communities in disaster management and does not include targeted actions to address vulnerabilities of marginalised communities especially the homeless. The following recommendations can be incorporated in the existing plan / new plan:

- **make provisions for affordable, adequate and safe basic services** such as water ATMs, sanitation and handwashing facilities in homeless hotspots;
- **build capacity of homeless people (including those on the streets) to act as first responders** for instance, by sharing information on how they can connect to SUH staff and other essential services like police, health care, National and State Disaster Response Force (NDRF/SDRF);
- **build capacity of shelter staff** on how to manage disasters effectively. The capacity building session will include training on disaster preparedness, mitigation and response and how to provide emergency first aid for specific disasters. Some of this is happening but is not systematic - The NDRF team from the 4th Battalion, Arakkonam provided training on “Community awareness/ preparedness programme on Disaster Management” for all the shelter Coordinators last year. Programmes like these can be conducted every year or twice a year before the monsoons and summer;
- **build capacity of other government agencies** apart from GCC such as Police, Chennai Metrowater and TNSCB on how to engage with the homeless specifically during disaster situations;
- **leverage social capital** to reduce disaster impact. Discussions with the homeless reveal that for the homeless, their social ties and networks are the primary strength and coping mechanism during difficult times. For instance, collective kitchens thrived during lockdown in April – May 2020 when homeless families requested for dry rations as relief so that a few of them could cook together. Even during normal circumstances, they support each other, and often have a “go to” person within the community to help. These ties can be leveraged by officially identifying community leaders who can coordinate and lead disaster efforts on the ground.

**F. *Government-NGO coordination for disaster risk reduction:*** Good coordination within and across government and nongovernmental organisations is crucial for managing and mitigating disasters risks. The current State Disaster Management Plan 2018 and City Disaster Management Plan 2018 detail management structures, roles and responsibilities for government agencies but do not include non-governmental organisations in their framework. The important role NGOs and citizen groups play in rescue and relief was highlighted during the 2015 floods, cyclone Vardah and COVID-19 pandemic. Coordination can be strengthened by:

- **mobilizing existing institutional structures** such as SUH programme, Domestic Workers Association and Street Vendors Association. Periodic first responder training can be provided to residents and staff of shelters, homeless community leaders from the streets and members of these above-mentioned associations as many homeless

are part of these. Through the programme a volunteer army of first responders can be trained who can be called upon to assist in the event of a disaster;

- **mobilizing volunteer / NGO base** and creating an inventory of organisations with data on which communities they work with and socio-economic characteristics of these communities. Some of this data can be digitised and can direct relief operations during disasters and can greatly reduce duplication of efforts and ensure all those who need relief have access to it. However, for this exercise to work, private-public collaborations are essential and need to be based on trust. Trust- building exercises, can be conducted not just before disasters but periodically through the year and a formal structure of collaboration can be devised and detailed in the disaster plans.

## CHAPTER 1: INTRODUCTION

“Disaster vulnerability is socially constructed...it arises out of the social and economic circumstances of everyday living.”

(Morrow, 1999, p. 1)

Addressing issues of sustainability from an equity and social justice perspective is gaining importance (Winkler & Satterthwaite, 2017). Theoretically, the sustainable development goals (SDGs) emphasize “leaving no one behind” in its commitment to achieve sustainable development in all three dimensions - economic, social and environmental – in a balanced and integrated manner (UNGA, 2015, p. 3). As signatories of this declaration, the onus then falls on countries to align their policies towards these goals. Within India, several states including Tamil Nadu are linking their policies and programmes to the SDGs and their targets (Shivakumar, 2018). While the aim of reducing inequalities is more apparent in certain sectors such as water and sanitation, it is less so in others such as disaster management, especially at the city level (Walters & Gaillard, 2014). This is albeit the fact that those who are at the margins of the society (socio-culturally, economically, politically or otherwise) are the most vulnerable to disasters (Wisner et al., 2012; Edgington, 2009; Sturgis et al., 2010). The COVID-19 pandemic has reiterated this inequality of how disasters disproportionately impact different populations leading to different experiences of disasters.

Individuals and groups who have historically faced discrimination based on varied axes including economic status, gender, age, disability, ethnicity, place of living and occupation, require more assistance to prepare for and respond to disasters (Walters & Gaillard, 2014). This is because, disaster exposure is exacerbated by socioeconomic conditions such as poverty, precarious livelihoods, insecure housing and dependence on state services (Wisner, Gaillard, & Kelman, 2012). Williams *et al.*, (2019) and Gran Castro & Ramos De Robles (2019) highlight how informal settlements, chronically underserved in terms of provision of basic services and characterized by poverty, face heightened risk of exposure to climate and non-climate related disasters in South Africa and Mexico respectively. While, Walters & Gaillard (2014) illustrate the extent of suffering by homeless people in New Delhi as a result of their political and economic marginalisation and poor living conditions in disaster vulnerable locations.

Disasters, therefore, amplify marginalized communities’ everyday hardships. Yet disaster management efforts have rarely acknowledged “the complex ways in which social, economic and political structures result in the vulnerability of those they are meant to protect and serve” (Morrow, 1999). Furthermore, while some marginalized groups have received specific attention in disaster literature and risk reduction policy, such as women (Phillips & Morrow, 2008), children (Anderson, 2005), ethnic minorities (Bolin & Bolton, 1986), people with disabilities (Alexander, Gillard, & Wisner, 2012) and slum dwellers (The World Bank, 2011) the homeless<sup>2</sup>, characterized by the most “advanced level of destitution and denial of basic

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<sup>2</sup> Homeless communities are most often identified based on their access to housing and thus range from informal settlers who can get evicted at any time, to pavement dwellers, those sleeping rough, or in homeless shelters (Amster, 2004; Wasserman & Clair, 2010). In this study we refer to those living without a roofed shelter in places like temporary shelters for homeless, pavements, roadsides, or other open/public spaces.

rights”, have received limited attention in disaster research and policy realm (Walters & Gaillard, 2014). Therefore, there is a theoretical and empirical gap in studying the “socially constructed” nature of disaster vulnerability (Morrow, 1999), specifically of the homeless, and an associated gap in informing policy.

### 1.1. Research Objective and Questions

This research study aims to fill this gap in recognizing the needs of the homeless population in research and policy specifically in the context of Chennai city. While there is large variation in the estimated number of homeless in the city, the Greater Chennai Corporation has identified nearly 9000 homeless people in the city (based on those who visit their shelters) (Suresh, 2018). The actual number is likely much higher and also dynamic with thousands of migrant laborers coming to Chennai from across the state and the nation. It is this population that remains most vulnerable to the range of climate related disasters Chennai is prone to including droughts, floods, heatwaves, storm surges, cyclones and sea level rise (Resilient Chennai, 2019). The extreme vulnerability of this population has become even more apparent in the face of the ongoing Covid-19 pandemic as the homeless, especially those living on the streets find it difficult to abide by any of the key recommendations relating social distancing, maintaining hygiene, and wearing masks largely due to their limited access to appropriate resources such as toilets, handwashing facilities, money to buy masks and sanitizers etc.

Currently the National Disaster Management Guidelines (2019 draft) are being formulated with a central attention to Community Based Disaster Risk Reduction (CBDRR) paradigm, that highlights the need to include the marginalized and the vulnerable at the centre of planning and implementation of disaster risk reduction and preparedness efforts to ensure equity. As such, this is an opportune moment to think about how the vulnerable, specifically the homeless, who remain invisible within current state and city-level disaster management plans, can be brought to the forefront of such policy interventions.

Thus, the goal of this research study is to develop a community-based, thorough understanding of the homeless peoples’ vulnerability to disasters that will inform policy and support more equitable thinking and action in Chennai city’s governance of disaster management efforts. Engaging directly with the city’s homeless, this study examines the following key issues:

- a. the state and understanding of disaster vulnerability amongst the homeless;
- b. their everyday vulnerabilities with respect to access to basic resources that aggravate the homeless’ disaster vulnerability;
- c. their coping strategies and government support to deal with everyday and disaster vulnerabilities;
- d. needs/gaps that should be addressed to strengthen current city disaster management plan and disaster governance to build disaster resilience amongst the city’s homeless community;
- e. the impact of Corona virus on the homeless and other vulnerable communities.

### 1.2. Methodological Considerations:

We recognize the hybrid nature of homeless population’s disaster vulnerability, which is as much a function of exposure to environmental risks such as floods or heatwaves (which are



also influenced by human actions like land-use planning) as it is a function of their socio-economic limitations in terms of access to jobs, housing, healthcare etc. Therefore, in this project we adopt a sociological theoretical framework (Wiesner et al., 2003; Vickery, 2017;) to get a holistic understanding of the Chennai's homeless community's disaster vulnerability, wherein both 'disaster' and 'vulnerability' are understood as outcomes of social and ecological processes and conditions. Such a framework helps to situate the homeless' environmental vulnerability within the social context that more often than not limits their ability to cope with disaster situations.

The data collected in this project is meant to inform disaster management policy and to incorporate the voice of those homeless people into the policy decisions. Hence, the project was designed to be as participatory as possible prioritizing direct interactions with homeless followed by interactions with social workers, NGO representatives, and public officials working closely with this community. However, the Covid-19 situation put some restrictions on our field work. The fact that the Information and Resource Centre for Deprived Urban Communities (IRCDUC) was involved in relief work enabled us to carry out three focus group discussions, a survey with homeless people in Zone V, and a series of interviews with homeless individuals across the city, but under restricted conditions. Additionally, 13 semi-structured in-depth interviews with non-governmental organisations (NGOs) and public officials were also carried out in person or virtually.

This primary data collected from various relevant groups along with the secondary data from literature and policy review was thematically analysed for the purpose of this report. The assessment is presented under broad thematic categories as "everyday vulnerabilities amongst the homeless", "disaster vulnerabilities amongst the homeless", "community coping strategies", "governance challenges complicating Chennai's and specifically the homeless community's disaster experience" and "best practices". As a final output this report offers a set of recommendations that presents a holistic framework to a) address broader socio-political policy gaps that aggravate homeless populations' everyday and disaster vulnerability and b) address gaps in current disaster management process in the city to improve the ability of the homeless to cope with disaster events better.

### 1.3. Contribution to Existing Literature and Policy

This study will first and foremost fill-in the data gap on homeless community's vulnerability and experience of disasters. The study will also contribute towards a deeper understanding of the interlinkage between structural inequalities, everyday marginalisation, and disaster vulnerability, therefore theoretically and empirically contributing to the literature on sociological studies on disasters in the context of the homeless in Chennai. This will emphasize the need to conceptualize disaster management not just as a post-disaster process or a top-down technical response to a purely environmental threat, but rather a continued effort to mainstream the voices and needs of the homeless (and other vulnerable groups) in planning and preparing to improve their coping abilities to disasters that are themselves shaped by ecological and social processes.

Our study will contribute to this cause by:

- I. focusing on homeless population groups, who are one of the least understood and documented groups in academic and policy research;
- II. presenting insights on a community-based understanding of homeless group's vulnerability to disasters that details how their characteristics, perceptions, and context, shape their vulnerability (which may not coincide with the popular/generic interpretation);
- III. assessing community-defined vulnerability vis-à-vis the nature of current efforts of disaster management and response through a mixed methodology approach.

From a policy perspective, this study would help strengthen the disaster planning paradigm through its emphasis on a bottom up, community driven approach to identify vulnerabilities of homeless people. Based on interviews with representatives working on various needs of Chennai's homeless, this work will help identify hotspots where vulnerability of this group is acute and where additional resources can be directed. Furthermore, the rigorous mixed methodology approach adopted by this study will suggest a set of recommendations that will have deeper impact on addressing the concerns of homeless people in the event of a climate or disease related disaster. The recommendations from this study can potentially feed into Chennai City's Disaster Management Plan or can be the basis for formulating a special disaster response plan for the homeless to help them cope better during such extreme events.

Urban sustainability rests primarily on the theme of equitable development and just society (UNGA, 2015). As cities like Chennai work hard to address myriad challenges, including aggravated exposure to disasters and extreme events, they need to ensure that their efforts are equitable, just and inclusive. In fact, developing a detailed disaster response plan for vulnerable communities is one of the recommendations of the Chennai City Resilience Strategy 2019<sup>3</sup> to ensure inclusivity and equitability. The strategy, prepared by Rockefeller Foundation and Greater Chennai Corporation (GCC), highlights the need for a targeted plan for vulnerable communities such as low-income groups, women, differently-abled etc. as disasters affect them unequally (Resilient Chennai, 2019). Recommendations for a sustainable and more equitable disaster response plan for Chennai's homeless will present a policy framework that can be adopted by other metropolitan cities across India with similar political-economic and governance context.

The rest of the report is structured to include the following chapters:

**Chapter 2: Theoretical background** – describes the theoretical lens through which we make sense of disaster vulnerability amongst the homeless.

**Chapter 3: Research methodology** - presents the methodological considerations, strengths, and limitations, especially under Covid-19 pandemic scenario.

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<sup>3</sup> Okapi Research and Advisory was the strategy lead to develop the Resilient Chennai Strategy, funded by Rockefeller Foundation's 100 Resilient Cities Programme.

**Chapter 4: Setting the context – Disaster Management, the Homeless and their Vulnerabilities** – describes the current state of the homeless community’s vulnerability and relief efforts, associated gaps and strengths drawing primarily on literature and policy review.

**Chapter 5: The Experience of Chennai’s Homeless – Coping with Everyday Disasters** – presents the voices of the homeless, the public officials, and NGOs to get an in-depth understanding of state of disaster vulnerability and needs of the homeless.

**Chapter 6: Disaster Governance – Chennai’s Past and Present Experience** – takes the case of the 2015 December floods and the ongoing COVID-19 pandemic to discuss the governance and management of disasters with relation to vulnerable communities.

**Chapter 7: Discussion: Understanding Disaster Vulnerability of the Homeless through a Sociological Lens** – uses the empirical findings discussed in Chapters 5 and 6, to present a few examples that highlight the importance of this sociological interpretation of disaster vulnerability of Chennai’s homeless and related policy implications.

**Chapter 8: Best practices** – highlights a few good national and international examples to offer ideas for strengthening disaster management practices for Chennai’s homeless community.

**Chapter 9: Recommendations** – Finally, this chapter draws on the community - knowledge and findings and best practices to offer a set of recommendations to make disaster management and other related activities more inclusive.

## CHAPTER 2: THEORETICAL FRAMEWORK: DRAWING ON SOCIOLOGICAL MODELS TO MAKE SENSE OF HOMELESS COMMUNITY'S VULNERABILITY

### 2.1. Disasters and Vulnerability

Disasters have been traditionally looked at as events concentrated in time and space, and external to the social order (Vickery, 2017) where “the social structure is disrupted and the fulfilment of all or some of the essential functions of society is prevented” (Fritz, 1961:655). This view of disasters has meant three things:

- a. disaster specialists have remained focused on large-scale disaster risk while ignoring the everyday hazards and small-scale, often chronic disasters, especially relevant for those living under marginal conditions (Walters and Gaillard, 2014). Such high frequency small scale events rarely profiled in the media have been referred to as the silent disasters (International Federation of Red Cross and Red Cross Crescent Societies, 2013).
- b. the broader social-economic context within which small and large-scale, natural and man-made disasters brew is not given due attention (Vickery, 2017). That vulnerability is related to broader development-related crises has therefore been neglected to a large extent (Walters and Gaillard, 2014) except in sociological studies of disasters.
- c. disaster management policies and actions have remained focused on post event relief and recovery until recently.

However, with time scholars have recognized disasters are not isolated or external to the existing societal context, nor are they necessarily one-time severe disruptive events (Blaikie et al. 1994; Wisner et al. 2003). Vickery thus contends that “...disasters are socially produced through political, economic, and social forces that place individuals and communities at risk...It is therefore essential to examine “natural” disaster events as bounded to the social” (2017:18). Accordingly, disaster risk and vulnerability have also been increasingly examined more effectively through a sociological lens (Wiesner et al, 2003).

The shift towards recognizing the social embeddedness of disasters and vulnerability to disasters has resulted in an important paradigm shift from disaster relief, response and recovery to disaster risk reduction (DRR) (figure 1). This has highlighted the need to be proactive and to identify and take actions that reduce the vulnerabilities of communities, often created/aggravated by the existing social, political, economic conditions, before hazards transform into major disasters (Collier, et al. 2009; Klein et al, 2003).

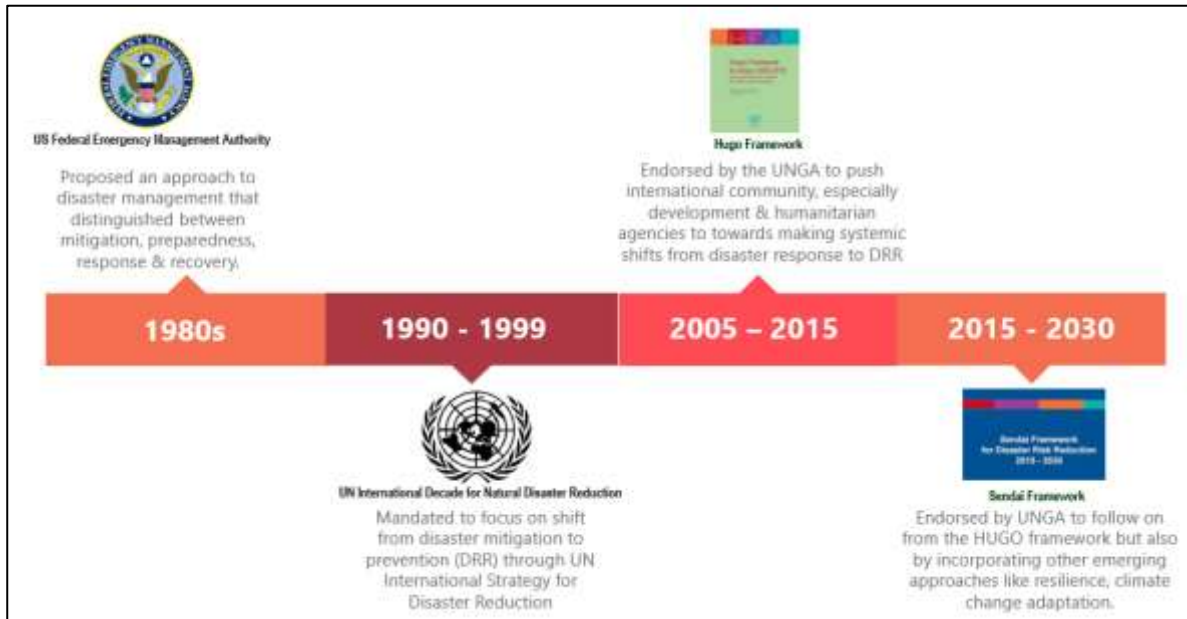


Figure 1: Timeline illustrating change in disaster management approach | Source: Collier et al., 2009

With the recognition that disasters are socially produced, researchers also started to identify the inequalities in socioeconomic outcomes within disaster-affected communities across disparate racial, ethnic, and economic groups (Bolin, 2006; Blaikie et al., 1994). Individuals and groups who have historically faced discrimination based on varied axes including economic status, gender, age, disability, ethnicity, place of living and occupation, require more assistance to prepare for and respond to disasters (Walters & Gaillard, 2014). This is because, disaster exposure is exacerbated by socioeconomic conditions such as poverty, precarious livelihoods, insecure housing and dependence on state services (Wisner et al., 2012).

Blaikie et al (1994) specifically developed the concept of social vulnerability to disasters and highlighted how “...social vulnerability results from a lack of capacity to prepare for, manage, and recover from disasters” (Vickery, 2017: 20; Blaikie et al., 1994). More recently Wisner et al. describe vulnerability as, “the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard (an extreme natural event or process). It involves a combination of factors that determine the degree to which someone’s life, livelihood, property and other assets are put at risk by a discrete and identifiable event (or series or ‘cascade’ of such events) in nature and society” (2003:11).

However, to acknowledge the social situatedness of the disaster outcomes in sociological disaster scholarship is not to deny agency of the individuals/communities who are more vulnerable. Morrow therefore suggests that, “[t]he proposed identification and targeting of at-risk groups does not imply helplessness or lack of agency on their part” (1999:11). Instead, she emphasizes the need to recognize the vulnerable groups themselves as active agents and key resources in building “disaster resistant communities.” This also resonates with the more

recent emphasis within disaster management policies and action to involve communities (NDMA, 2019)<sup>4</sup>.

Sociological disaster scholarship has increasingly been focused on the unequal impact on different individuals and communities. For instance, the specific vulnerabilities of the slum dwellers are considered by Pelling & Wisner, 2009 (also see The World Bank, 2011). Similarly, Williams *et al.* (2019) and Gran Castro & Ramos De Robles (2019) highlight how informal settlements, chronically underserved in terms of provision of basic services and characterized by poverty, face heightened risk of exposure to climate and non-climate related disasters in South Africa and Mexico respectively. While some marginalized groups have received significant attention in the literature and policy, for instance, women (Enarson & Morrow, 1998; Phillips & Morrow, 2008), children (Anderson, 2005; Peek, 2008), elderly (Ngo, 2001; Wells, 2005), people with disabilities (Alexander *et. al.*, 2012; Kailes & Enders, 2007), ethnic minorities (Bolin & Bolton, 1986; Perry & Mushkatel, 1986), lower castes (Ray-Bennett, 2009), others have not. Specifically, gender minorities and the homeless have been grossly ignored and inadequately differentiated within the disaster literature and the disaster management efforts (Wisner *et al.*, 2012). This is despite the fact that this group is particularly vulnerable as they lack the “very first line of defence” to disasters – housing (Auclair, 2020).

## 2.2. The Homeless and Their Experience of Disasters

Internationally, the UN statistical division (UNSD) has defined the state of homelessness. They identify two categories of homeless people – primary homelessness (or rooflessness) which includes “persons living in streets or without a shelter or living quarters” and, secondary homelessness which comprises of, “people with no place of usual residence who move frequently between various types of accommodation (including dwellings, shelters or other living quarters); and persons usually resident in long-term ‘transitional’ shelters or similar arrangements for the homeless. This category also includes persons living in private dwellings but reporting ‘no usual address’” (OHCHR, n.d.).

In India, there has historically been no universal definition for the state of homelessness due to the lack of a national homeless policy. The first official definition came in 2011 from the Census of India which defines homeless populations as those “*persons who are not living in census houses*”<sup>5</sup>. However, the definition that is broadly being adopted by states in their programme framework is a definition that was developed by the Commissioners of the Supreme Court of India, in response to orders issued in 2010 that direct all states and UTs in India to build and operate 24hr shelters. Homeless were defined as, “*persons who do not have a house, either self-owned or rented but instead:*

- i. live and sleep at pavements, parks, railway stations, bus stations and places of worship, outside shops and factories, at constructions sites, under bridges, in huge pipes and so on,*

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<sup>4</sup> The National Disaster Management Guidelines (2019 draft) are being formulated with a central attention to the Community Based Disaster Risk Reduction (CBDRR), which is “(A) process whereby a community systematically manages its disaster risk reduction measures towards becoming a safer and resilient community”.

<sup>5</sup> Census houses are referred to as a structure with a roof’. (SC Commissioners 10<sup>th</sup> status report)

- ii. *spend their nights at night shelters, transit homes, short stay homes, beggars' homes and children's homes and,*
- iii. *live in temporary structures without full walls and roof, such as under plastic sheets, tarpaulins or thatch roofs on pavements, parks, nallah beds and other common spaces."*

(Supreme Court Commissioners 2011: p. 4,5).

GCC has based its definition of homeless people on the above definition, in its Standard Operating Procedures (SOP) for institutionalising basic services for the urban homeless. This definition is as follows:

*"...homeless persons are those who do not have a house, either self-owned or rented, but instead live and sleep on pavements, at parks, railway stations, bus stations and places of worship, outside shops and factories, at constructions sites, under bridges, in hume pipes and other places under the open sky or places unfit for human habitation. This also includes people who live in temporary structures without walls, under plastic sheets or thatched roofs on pavements, parks or other common spaces."* (Corporation of Chennai, 2014)

In this study, we refer to homeless people as those living without a covered shelter in places like temporary night shelters, pavements, roadsides, or other open/public spaces, based on the definitions provided by the Commissioners of the Supreme Court of India and GCC.

While traditionally, the precarious state of the homeless or the urban poor has found little attention in disaster management scholarship, there are some exceptions in research featuring homeless individuals' disaster experiences. Some of these include: Phillips, 1996; Settembrino, 2016; Settembrino, 2017; Vickery, 2017, Walters and Gaillard, 2014.

Phillips (1996) highlights how social construction of public spaces often lead to further marginalization of the homeless people and not having to access these spaces makes it even more difficult for them to recover from disasters. Settembrino (2017) focuses on homeless men's experience of disasters in Florida and discuss the varied forms of social, human, and cultural capital they use to overcome disaster situations.

Vickery (2017) uses social vulnerability theory and a political economic approach to assess homeless community's disaster experience. He goes as far as to arguing that "...socio-cultural constructions of certain populations as "deserving" or "disposable" (shaped/reinforced by a neoliberal and market driven governance structure) directly affect homeless persons' vulnerability to disaster" (pg 17).

Walters & Gaillard (2014) illustrate the extent of suffering by homeless people in New Delhi as a result of their political and economic marginalisation and poor living conditions in disaster vulnerable locations. They argue that people (especially children) who sleep on the streets are at higher risk from cold-related deaths than those in shelters. This is because these children are typically malnourished and do not have the necessary calories to keep their bodies warm in winters. They also discuss how lack of access to basic services such as safe water and sanitation, especially for adolescent girls and women, has resulted in increased risk of water-borne diseases, dog attacks, and sexual abuse.

### 2.2.1. What makes the homeless vulnerable?

In the very first instance it is the lack of homes that puts the homeless in a particularly vulnerable position. Since they lack the very first line of defence to protect themselves from any disaster it reduces their ability to cope with such situations. However, their condition is worsened due to a range of other related factors that are shaped by their socio-economic context.

Disaster risk reduction praxis across the world has identified some of these key factors. According to Red Cross disaster resilience may be identified based on the following four domains (Every & Richardson, 2017): security (shelter, safety and wealth), knowledge (appropriate information on risk and responses), wellbeing (physical and psychological health and coping ability) and connection (social capital and connection to place). Presence of these factors improve a community's resilience to disasters, while absence leads to greater vulnerability. As such, the vulnerability of the homeless can be assessed/understood with respect to these domains. Following is a brief explanation of what these four domains entail.

#### A. Access to Material Resources

- *Limited or no access to housing:* the homeless by definition are ones who live without a permanent home. While some may access homeless shelters, many others live on the streets or in public spaces in some make-shift arrangement (using tins, plastics, woods etc). These structures are not only incapable of protecting the inhabitants from major disasters, but also expose them to elements of the extreme weather, whether its heat, cold, wind or rain. These structures cannot be temperature-controlled or structurally modified to ensure safety, increasing the vulnerability of those who do not have a choice of living in affordable and safe housing (Barnett et al., 2013; Jacobs & Williams, 2009; Ramin & Svoboda, 2009).
- *Limited or no access to appropriate and/or extra resources for reducing risks:* in addition to lack of shelter/housing, the homeless have limited access to all other resources – including the very basic resources such as food, water, sanitation, and healthcare. Their lack of access to modes of transportation further limits the ability to reach appropriate places for shelter, safety, and help. This is true on an every-day basis and is only aggravated during disaster events increasing the homeless community's vulnerability (Gaillard et al., 2019). In absence of access to basic requirements, the possibility of having access to extra resources, that can protect the homeless during disasters, such as protective gears, radios, extra food, water, clothing, etc remain very unlikely (Fothergill and Peak, 2004).
- *Land-use policies, laws and negative social attitudes:* In absence of homes, the homeless are dependent on public spaces for finding shelter and protection on a daily basis and in times of emergencies. However, strict and inhuman policies and laws often push people out of public areas and force them to move on to more isolated, undesirable, and hazard-prone spaces (Gin et al, 2016), including spaces at higher risks such as flood prone riverbanks or urban pockets with high heat radiance (Every and Richardson, 2017). The homeless who live in isolated areas or are moving regularly between liminal housing options are more difficult to reach by emergency service providers (Every and Richardson, 2017). Social attitude of general public also tends to



perceive the homeless as unwanted and criminals who are moved on instead of being offered shelter during extreme weather events (Edgington 2009; Lynch & Stagoll, 2002; Jewell, 2001; AHRC 2003). As such, social attitudes and policies further result in offering limited and often problematic options of finding shelter to the homeless.

#### *B. Knowledge: Appropriate Information on Risks and Responses*

- Having prior knowledge of potential risks, responses, rescue and recovery services is critical for everyone to take informed decision and act appropriately. However, low literacy and/or proficiency in local language amongst migrants limit the homeless communities' ability to access written information regarding potential risks, ways to prepare, and rescue/recovery efforts (Every, 2015). The more vulnerable amongst the homeless, especially those with mental illness and hearing disability, are further at risk as communicating information to these groups is particularly challenging even where a solid disaster preparedness campaign and early warning system exist. Studies also point out the limited access to mainstream communication devices such as phones as critical factors shaping vulnerability as it is a barrier to receiving emergency alerts and early warnings (although this is changing drastically) (Edgington, 2009). This is definitely another limitation with respect to sharing appropriate knowledge with the homeless.
- Sharing knowledge however needs to be thought about as a two-way process. While so far, we have discussed the need for government and non-government agencies to share their expert knowledge on risks and responses with the homeless, it is essential to incorporate the community knowledge into the disaster preparedness and response plans. Without a clear understanding of the needs and concerns of the homeless, the effectiveness of any emergency planning will be compromised. Therefore, there is a critical need and gradual recognition to include the vulnerable communities into the planning process at every stage.

#### *C. Wellbeing: Physical and Psychological Health*

Positive physical and mental health helps people to cope better with shocks and stresses (Richardson, 2014). However, it is common for the homeless to have pre-existing physical, mental and emotional conditions. Such conditions often make it difficult for the homeless individuals to understand and remember information, act appropriately and immediately, compromising safety and recovery from disasters (Edgington, 2009; Fothergill & Peak 2004; Settembrino, 2015). Although, drug abuse and mental illness are more relevant amongst homeless in developed cities/countries than in Indian cities. According to report commissioned by GCC in 2018, of the 524 homeless categorised as vulnerable, only 21% reported having mental health issues (Uravugal Social Welfare Trust, 2018). However irrespective of geography, homeless communities' general state of health is usually poor due to their lifestyle and during extreme weather events, people with chronic diseases remain at high risk of suffering from heat stroke, dehydration, cardiovascular and renal and respiratory events (Cusack et al, 2013). Substance use or in-access to prescribed medication during extreme weather events have also been identified as cause of death (Cusack et al, 2011).

#### *D. Connections: Social Capital*

Social capital i.e., connections with people and agencies who can help and support during emergency situations is critical for people's risk of vulnerability (Richardson, 2014). Given

that many of the homeless and the vulnerable remain largely socially excluded/isolated (Sanders and Brown, 2015), they may not have strong connections to a network of friends, family and may not be linked to community agencies and service providers in the area. This complicates their situation in times of extreme disaster events.

However, in many instances it is this social capital that proves to be the primary coping mechanism - While homeless people are often thought to be living a life of exclusion and isolation, there is also evidence to show that one of their greatest strength during disaster events is their social networks (Settembrino, 2015; Every and Richardson 2017). This is what we too found out during our interactions with Chennai's homeless.

Another aspect of social capital includes the homeless group's link to existing community-based organization providing a range of services for the homeless. These community based organisations (CBOs) play critical role in helping the vulnerable to cope with disaster situations. They are the ones commonly responsible for alerting people of oncoming weather, carrying out outreach to contact more isolated clients, stay open longer to provide shelter and extra resources for people. Therefore, those who remain connected to some such organization enjoy better chances to get help and protection during major disasters. Given the criticality of these CBOs or NGOs in shaping the homeless community's coping capacity, scholars have also acknowledged the importance of these organizations' resource availability to meet the needs of the vulnerable, especially during extreme events (Every and Richardson, 2017; Vickery, 2017)

#### *E. Theorizing Homeless Communities' Vulnerability to Disasters*

How do we make sense of all these varieties of factors that seem to shape homeless community's vulnerability? If we pay close attention, the factors mentioned above are a reflection of the "precarious lifeworld" of the homeless (Gaillard et al, 2019). In their study on the homeless' experience of disasters in two cities of New Zealand, Gaillard et al. found that "natural hazards (were) of marginal concern to homeless people in comparison to the everyday hazards that they experience and that make their everyday life a disaster in itself" (2019: 332). This study showed how the homeless were more concerned about non-natural hazards that are associated to everyday challenges, such as extreme cold during winter, fighting substance abuse, depression, and sleep deprivation. These concerns are closely linked to their socio-economic precarity that makes it challenging for them to access basic requirements for food, shelter, healthcare etc on a regular basis.

As such, this study resonates with Wisner et al.'s suggestion that for the homeless people everyday life reflects a disaster understood as a situation and a process (rather than just an event of great magnitude) that causes livelihood disruption, material damage, and/or casualties (2012). While traditionally and in popular thinking disaster has been placed outside of the everyday life which is considered to be 'normal' and 'stable,' as early as the 1980s, Geographer Kenneth Hewitt, pointed out that disasters do not represent abnormal events that disrupt social order, but are very much part of normal life (Hewitt 1983:16). Strengthening this argument more recent studies are acknowledging that the homeless are particularly vulnerable to the "disaster of everyday life" as they lack the power to shape and control their everyday lives and secure the needs of their everyday lives (Wisner

1998; Walters and Gaillard, 2014; Gaillard et al, 2019). This in its turn aggravates their inability to prepare for disaster situations or find a place in disaster risk reduction policy.

Gaillard et al (2019) therefore suggest that “vulnerability to natural hazards can therefore not be dissociated from the precarity of life that is deeply entrenched in the unequal distribution of power within society.” Hence, to make sense of the homeless’ experience of disasters it is critical that we are attentive to their everyday lives situated within the larger societal context and how the precarity of their everyday lives translates to limited resilience and greater vulnerability to disaster situations.

There are a couple of sociological theories that help understand the vulnerability of those who are marginalized – such as the Pressure and Release (PAR) Model and the Access Model (figure 2). We discuss the two briefly below and then explain how we draw from these theories to examine and understand the disaster experience of Chennai’s homeless in this study:

*PAR model* (Wisner et al, 2003): This model presents a theoretical approach to assess vulnerability as a process that highlights the root causes, dynamic pressures, and unsafe conditions which intersect with natural hazards to create disasters. This model allows to focus on the social production of vulnerability while interpreting the risk of disasters as a product of hazardous events and vulnerability.

According to Wisner et al (2003) root causes represent broader and often spatio-temporally specific political, economic, and ideological processes such as overall power distribution in the society that tends to marginalize certain groups of people while concentrating power in the hands of few. It is these often apparently distant causes/processes that create dynamic pressures which are “more contemporary or immediate, conjunctural manifestations of general underlying economic, social and political patterns” (Wisner et al, 2003:53). Rapid economic development, urbanization, and associated rural to urban migration may be thought of as such dynamic pressures. Finally, the root causes and dynamic pressures lead to development of unsafe conditions, such as settlements in disaster-prone areas or weak social safety net for the socio-economically marginalized.

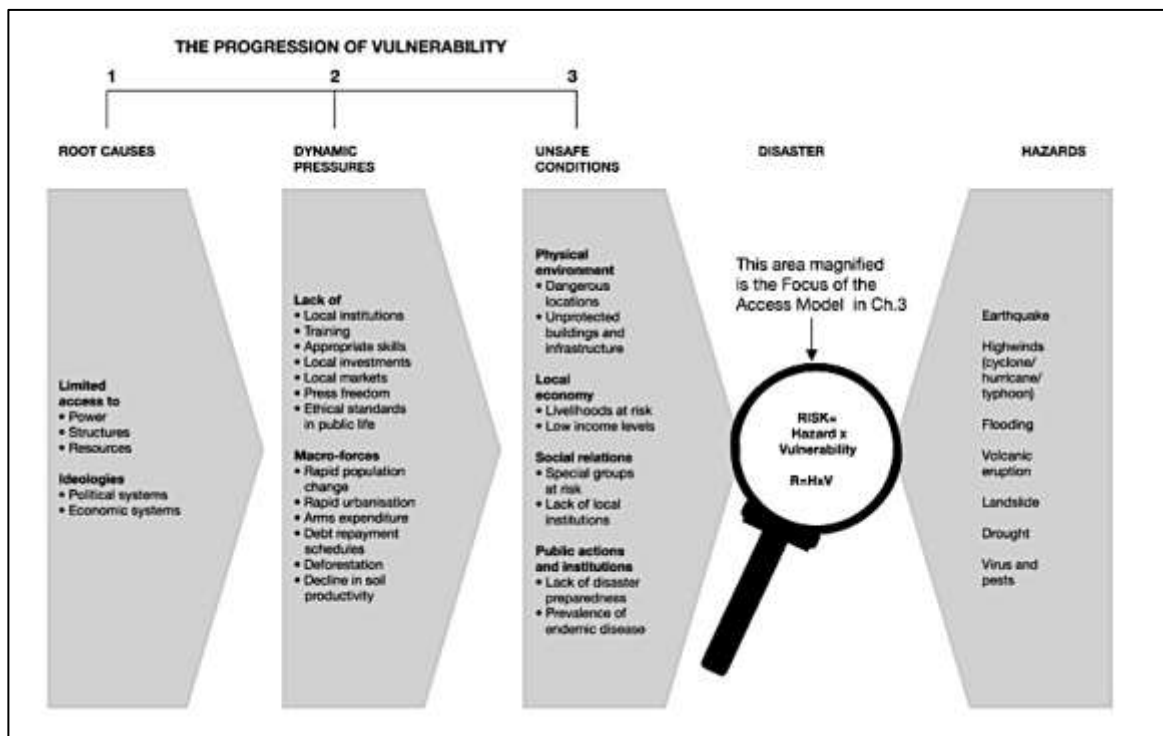


Figure 2: Pressure and Release Model | Source: Wisner et al, 2003

Furthermore, “(T)he ‘Release’ aspect arises from the realization that to release the pressure that causes disasters, the entire chain of causation needs to be addressed right back to the root causes, and not just the proximate causes or triggers of the hazard itself or the unsafe conditions of vulnerability” (87).

Vickery (2017) is an example in point that operationalizes the PAR model to discuss how neoliberal ideology, the root cause, produces dynamic pressures, such as an increase in camping bans and homeless criminalization legislation which in their turn create unsafe conditions for the homeless in Boulder County, Colorado. These unsafe conditions ranging from insecure livelihood opportunities to unsafe place of living, and weak social safety net, restrict the homeless’ capacity to cope with and recover from disaster situations. He goes to the extent of highlighting how the rolling back of welfare state and an increasingly market-driven policy arena “...have resulted in a growing reliance on community-based organizations to fulfil “safety net” services for a growing population in need” (Vickery, 2017:26; also see Kneebone, 2014; Williams, 2010).

The Access Model: While PAR is critiqued for compartmentalizing hazards and the social vulnerability, the access model focuses on the intersection of the two looking at the everyday decisions and we would add everyday situations. The magnifying glass in the above diagram represents the focal point of this model which tends to follow normal or everyday life and everyday decisions of households under specific unsafe conditions. Ultimately, these everyday decisions and situations shape how certain people respond to and recover from disasters (Vickery, 2017).

Wisner et al, 2003 highlight the link between PAR and the access model by suggesting that access to secured livelihood options and by extension tangible and intangible resources shaped by the broader social and political-economic context, also shape

individual's/community's decisions related to disasters increasing or decreasing their disaster risks. For instance, homeless households may continue to live on the streets accepting the yearly risk of facing extreme heat waves or floods and not move to homeless shelters in fear of unhealthy conditions or likelihood of abuse. Similarly, even after warnings for evacuation communities may choose not to leave their belongings/temporary shelters because that is all they have.

In the end, the access model allows us to think of a) how the everyday decisions and decisions people make during disaster events shape overall risk, and b) how a community's vulnerability is a reflection of their ability to cope with disaster situations with the resources available to them within the political and economic context in which they live. To this effect, Vickery suggests that this approach reflects how "...individuals and households respond and adapt to disaster within the constraints of the contexts in which they live. They draw upon resources to the extent that those resources are available and accessible both before and during time of disaster" (2017:24).

### 2.3. Our Theoretical Approach: A Sociological Take on Disasters

Development of sociological models like the ones presented above highlights the increasing recognition within disaster scholarship that disaster risk is much more than just about the risk of a natural hazard such as a flood or an earthquake. Together, the PAR and access models, offer important theoretical and analytical tools to make sense of disaster experience of any community in a holistic fashion situating natural or industrial hazards centrally within the broader social context.

We draw on these theories in this study to make sense of the experience that Chennai's homeless have during disaster situations while focusing on two key aspects of the social context of hazards as presented within these two models: a) the everyday access to resources that the homeless experience, which in its turn shape their ability to cope with specific disaster events and b) the broader social, economic, and political context that shapes the homeless community's access to resources in the first place.

Figure 3 presents a visual representation of the theoretical framework that guide this research. This may be thought of as a simpler and combined version of the two above models. This approach proved to be a useful way of making sense of the homeless' experience of disasters in Chennai which also resonated with the findings of Red Cross that highlight the four domains of factors influencing this group's disaster resilience discussed earlier (Every and Richardson, 2017).

The centre of attention is on everyday access to resources in our theoretical framework. Here we remain open to different dimensions of access, going beyond just physical/spatial access. Therefore, we conceptualize access to be shaped by availability, affordability, quality, safety, socio-cultural acceptance etc. along with physical access measured in terms of time and distance, as recommended by the UN for realising the Human Rights to Water and Sanitation (Albuquerque, 2014). We also pay attention to both tangible and intangible resources, with specific attention to basic resources and services such as food, water, sanitation, and health care all the while placing housing or the lack thereof as the key influence on access to these

other tangible resources. Amongst intangible resources, political or social capital, health conditions and access to knowledge are considered. The extent of access to these varied resources on an everyday basis finally translates to access to these resources in addition to access to disaster relief during disaster events. In the end, homeless community's disaster preparedness or ability to cope with disasters in an equitable way is determined by such factors of resource access.

However, to make sense of the state of resource access we must remain sensitive to the broader social, political, and economic context. Therefore, in the following figure while the central element is the issue of everyday access, it is situated within the social context recognizing the role played by the market-driven development and urban agenda, the resulting lack of affordable housing, appropriate jobs, and substantial social safety measures to protect the interests of the poor in defining the contours of such resource access.

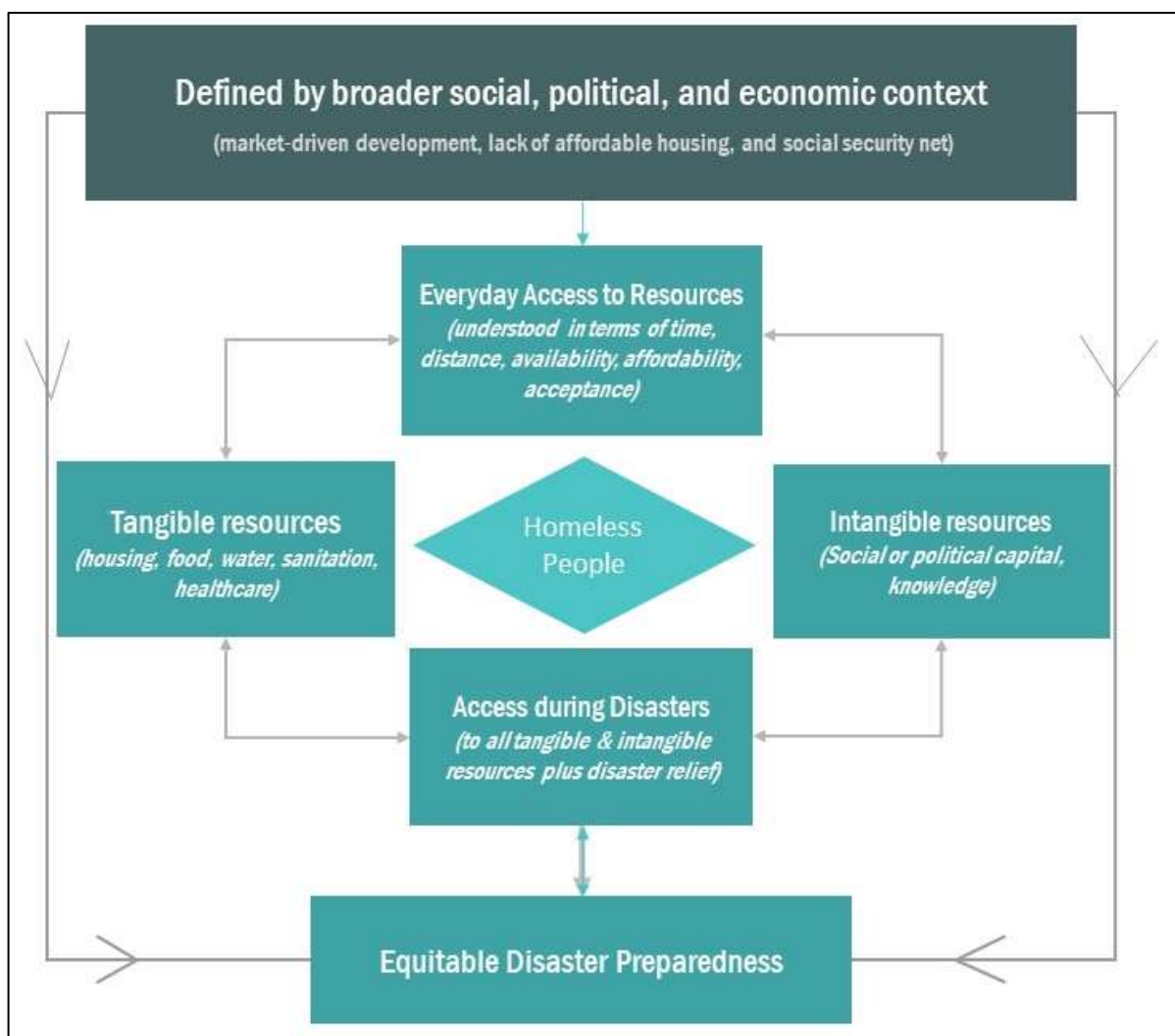


Figure 3: A Sociological theoretical approach to assess homeless community's vulnerability to disasters in Chennai

## CHAPTER 3: RESEARCH METHODOLOGY

This study uses a participatory and mixed methods approach for data collection and adopts a descriptive thematic analysis methodology. The specific research questions this project addresses include the following:

1. How do the homeless describe their vulnerability to disasters or extreme events? What are their needs and concerns on a daily basis and during such events? Do they have access to basic services (such as food, water, sanitation, emergency night shelters, and healthcare) especially during disaster events?
2. Are there sufficient supporting government/non-governmental schemes/ mechanisms in place to address the homeless people's need during disaster events or to help them prepare for such events? If so, do the homeless have access to or awareness about such schemes?
3. What are the broader socio-political, governance, and policy gaps that shape the homeless people's disaster experience?
4. What are community-based coping mechanism that the homeless use in times of need? Can such mechanisms be formalized or strengthened to build homeless communities' resilience to extreme events?
5. What can we learn from best practices across other Indian or international cities to better address the needs of Chennai's homeless and reduce their vulnerability to extreme events?

Since the purpose of the project is to incorporate the homeless groups' perceptions/concerns into the way we think and act to prepare for disasters and manage post-disaster responses in the city of Chennai, we recognized that a *participatory methodology* would be critical to accommodate the voices of this community. Therefore, emphasis was placed on directly interacting with the homeless community in their own settings through field observations, a survey, short interviews and focus group discussions. In addition, this project aimed at examining the role, perceptions, attitudes, and strengths and challenges of the multiple public and private agencies and the way they interact with the homeless community to ultimately shape the disaster management process. Therefore, in order to capture the voice of these multiple stakeholders (e.g., the government departments/officials, NGOs running shelters, social workers and health officers directly working with the homeless in the field) we conducted in-depth semi-structured interviews. The data collection process, consisted of both secondary and primary data collection and ranged from comprehensive literature and policy review of journal articles, research reports, project reports and local, national and state policies to expert interviews with government, and NGOs as well as direct interaction with homeless communities.

We also used GIS analytical tools to examine concentration of homeless groups in the city, and their vulnerability in terms of their access to basic resources. Their exposure to risk of flooding and extreme heat often aggravated by limited access to green spaces were also



examined using GIS. As such, this study uses multiple data sources and a mixed-methods approach. The data collection and analysis methods are discussed in some details below:

### 3.1. Data Collection

#### 3.1.1. Literature and policy review

A comprehensive literature review of articles, research reports and project reports pertaining to the study area, the larger state and national context was conducted. In addition, some international case studies were also explored to identify best practices that can inform a more equitable disaster management plan for Chennai's homeless. Recognising the cross-cutting nature of this research study, literature was reviewed across multiple themes such as, *disaster vulnerability* (with a focus on floods, droughts) and *adaptive capacity, disaster management and risk reduction, social-economic inclusion and service provision and multi-dimensional poverty*, and *best practices* on inclusion of homeless needs in disaster response planning.

During the project period the Covid-19 pandemic justified the need to expand the scope of this project to also look at literature on disease outbreak-related disasters and closely follow the developments in Covid-19 relief work by the government and nongovernment entities in Chennai targeting the homeless. This was largely done by archiving and studying newspaper articles and government announcements. Since part of the project team was also involved with Covid-19 relief efforts, some data on the state of this group during prolonged lockdown period and the relief efforts were also available and has been incorporated in this study.

In addition to the literature review, an analysis of existing city, state and national policies and programmes was also conducted to establish the policy / legal framework in which disaster vulnerability and issues of homelessness are situated. Some examples of policies and programmes reviewed include, the Shelter for Urban Homeless Programme (SUH) under the National Urban Livelihoods Mission (NULM), or Deendayal Antyodaya Yojana (DAY) – NULM, the Chennai City Disaster Management Plan and Tamil Nadu State Disaster Management Plan. We have also reviewed policies with focus on community-based adaptation (CBA) and disaster risk reduction (CBDRR) such as the National Disaster Management Guidelines (2019 draft).

#### 3.1.2. In-depth semi-structured expert interviews

Semi-structured in-depth interviews were conducted with key experts including GCC officials, staff of NGOs who run homeless shelters, the Indian Red Cross and policy experts working with and providing services to the homeless (table 1). The semi-structured nature of the interviews provided a set of guiding themes and questions to elucidate the relevant points from the respondents and keep the discussion focused while simultaneously offering enough flexibility for the respondents to freely add new or unanticipated themes into the discussion that they see fit (Holstein and Gubrium, 1995).

An illustrative sampling method (Valentine, 2001) was used to consciously recruit appropriate agencies and individuals who were most likely to have useful insight relevant to the research questions. This sampling method is commonly used when the main purpose is to conduct intensive interviews to enhance the depth and richness of a study rather than its statistical representativeness.



A variety of NGOs were contacted based on what type of shelters they run. Specifically, we spoke to NGOs who run shelters for women, boys, girls and differently-abled persons about services they provide in the shelters they run, their interactions with the government over the SUH programme and the impact of disasters on services provided.

Interviews were also conducted with officials from the Greater Chennai Corporation’s Department of Health which runs the ‘Shelter for Urban Homeless’ (SUH) programme. Specifically, GCC was asked about administration of the SUH programme, extent of disaster management within the programme and how the coronavirus pandemic has affected their work. While the initial plan was to interview 15 key informants, the COVID-19 pandemic and lockdown made it difficult to reach out to these agencies who remained particularly busy with relief work and managing day-to-day responsibilities. Despite difficulties we managed to speak to 13 stakeholders, some in-person before the pandemic and some virtually, after the pandemic broke out.

Some of these interviews were conducted prior to direct interaction with the homeless to understand field realities. These interviews revealed that the homeless accessing shelters consequently had some kind of access to resources such as food, shelter, water, sanitation and health care during disasters, while those on the streets did not. Discussions with the community representative of the State Level Monitoring Committee for the SUH programme and one of the collaborators in this study also revealed a similar story, that from a disaster perspective, it is those who live on the streets who are most vulnerable. Therefore, we decided to focus on the streets. However, we also visited a few GCC shelters to get a comprehensive understanding of vulnerability of the homeless living under varied conditions.

<b>Number of expert interviews conducted</b>	13
<b>Methodology</b>	Illustrative sampling and semi-structured interviews
<b>Profile of interviewees</b>	Government officials, NGOs running homeless shelters/ working with the homeless, disaster management experts, civil society organisations working on COVID-19 relief.
<b>Mode of interviews</b>	In-person / virtual / telephone
<b>Theme of questions</b>	The questions varied according to the expertise of the interviewees. Broad themes include: Evolution of the SUH programme and access to basic services, disaster management currently and in the past and COVID-19 relief and its governance.

Table 1: Summary of methodology for expert interviews

### 3.1.3. GIS mapping

GIS mapping has been used in the first phase of work to narrow down our area of study and also to get a sense of how vulnerable the homeless are to common disaster events in the city like drought and flooding. The study employs GIS tools such as Open Street Map, Google Maps and ArcGIS to map and analyse spatial data on the homeless population and basic resources they access. Among these tools, ArcGIS was primarily used for creating and analysing the data in a spatial format, while the other secondary tools - Open Street Maps and Google Maps were used for spatially referencing the data to enable analysis on ArcGIS

(Supriana, Iping. et. al. 2014; Choimeun.S, et. al. 2010). The addresses of the homeless shelters were used to obtain a spatial reference for them on Open Street and Google Maps.

We first mapped shelters identified by GCC across the city for the SUH programme (Fig.4). Not all homeless individuals and families access the shelters, rather they live on the streets staying in open spaces, pavements or roadsides for various reasons. Homeless living on the streets have not been comprehensively enumerated so far by GCC. However, there are few instances where NGOs have attempted to enumerate Chennai’s homeless population, the most recent being IRCUDUC’s work in 2018. We use this data to assess the city wise spread of homeless population (Fig.5).

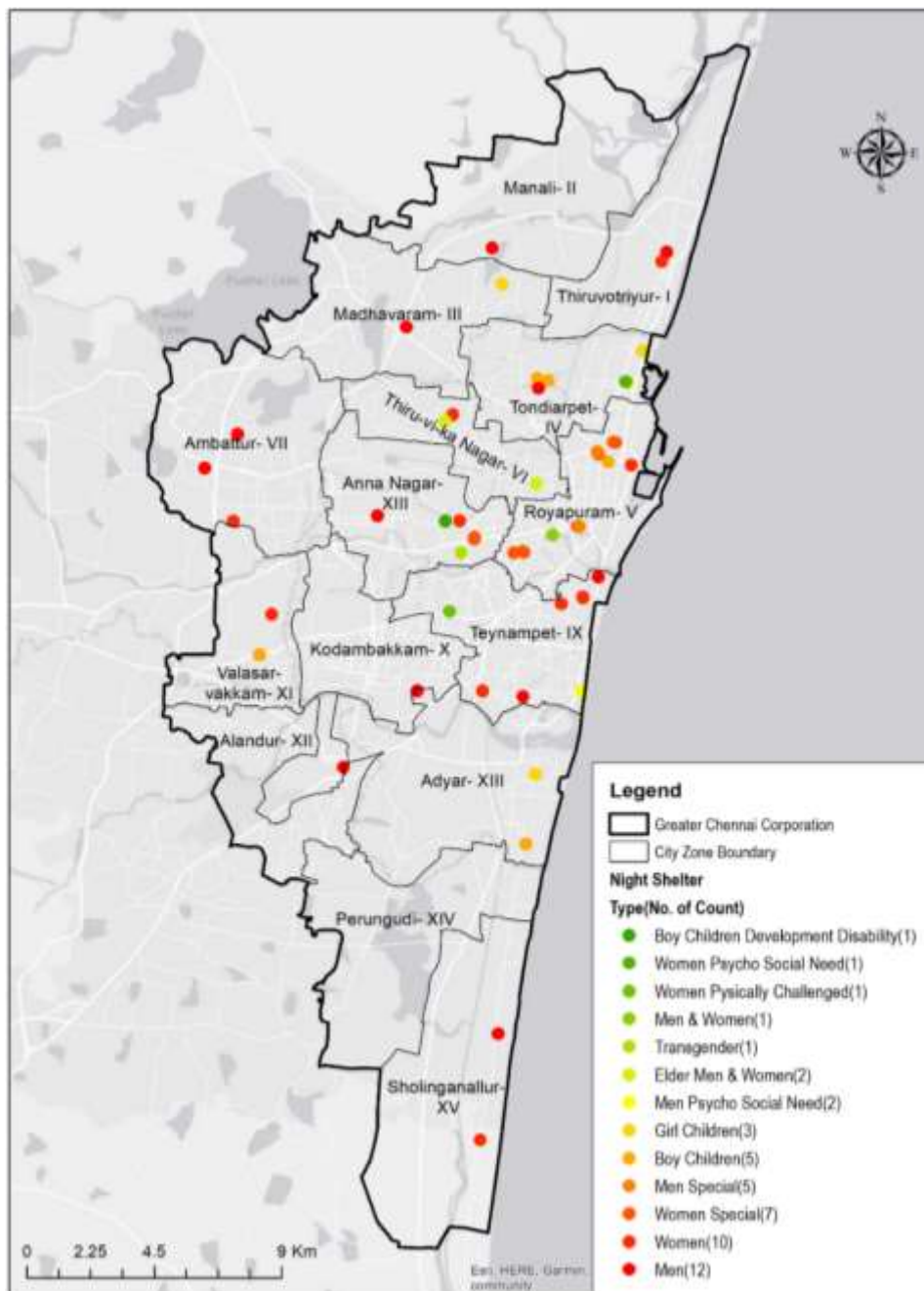


Figure 4: Map of Chennai city showing concentration of homeless shelters | Source: Public Health Dept., GCC 2020

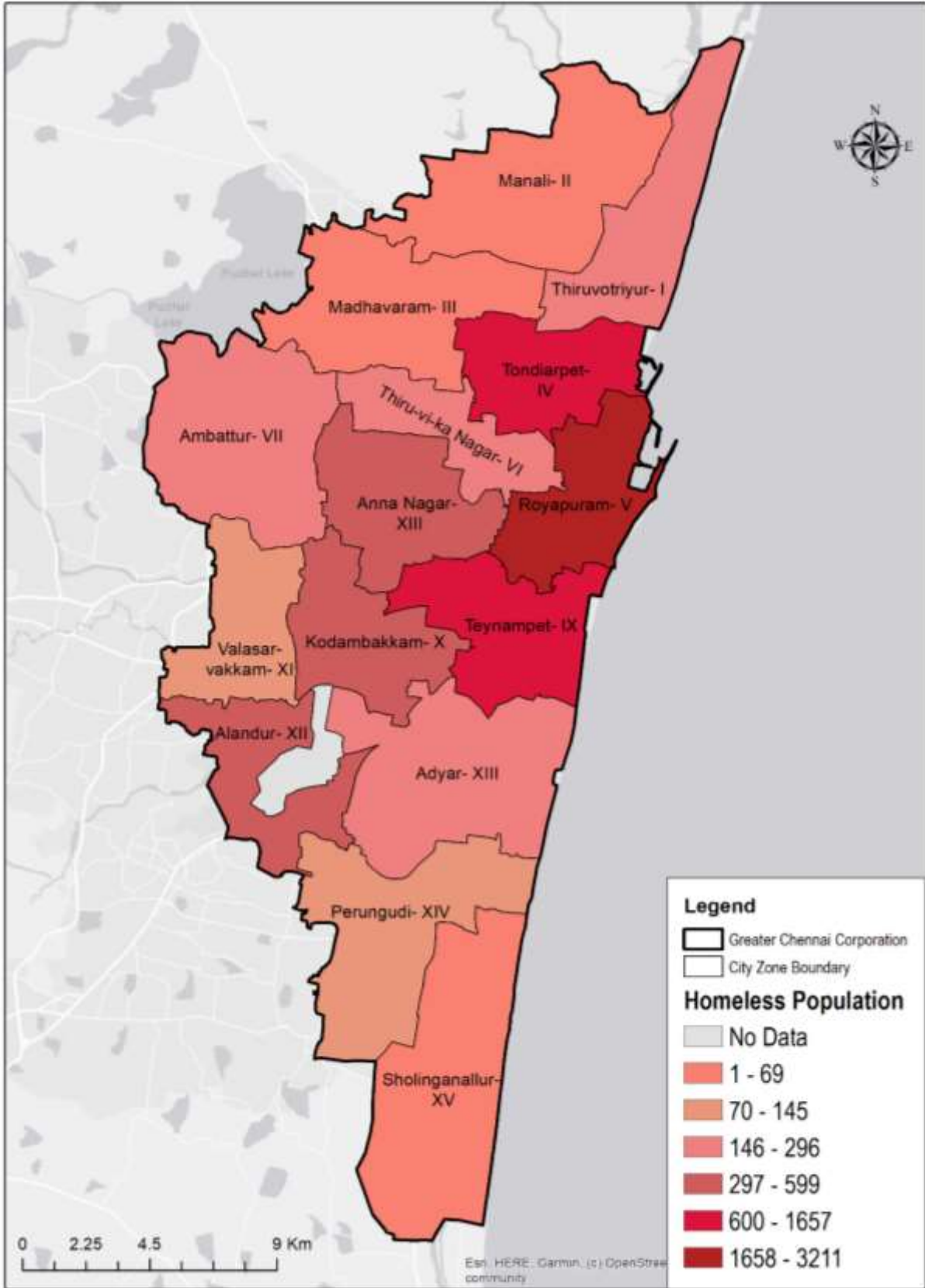


Figure 5: Map of Chennai city showing zone-wise concentration of homeless population living on the streets

Source: Uravugal Social Welfare 2018

Based on this mapping exercise it was evident that a larger concentration of homeless people lives in Zone 5 or Royapuram followed by in Zones 9 and 4 (Teynampet and Tondiarpet respectively). Therefore, we decided to focus on Zone 5 as the study area.

Further in order to narrow down on specific hotspots to carry out fieldwork, one pilot study was conducted in February before the Covid-19 situation worsened on NSC Bose Road where we had access to the homeless community through a gatekeeper<sup>6</sup>. We used a printed out copy of a Zone V map that marked all the major roads, streets, and landmarks and used it to engage with a group of homeless from this area. During this session, the participants eagerly helped us identify areas / streets with highest concentration of homeless populations within the Zone (see photos below).

We also used a basic resource map of zone V marking public toilets, Amma Unavagams (food)<sup>7</sup>, disaster relief centres, government hospitals and schools to initiate a discussion around access to such resources. This encouraged the participants to offer rich reflection on the issue of access to basic resources on a daily basis and also validate the base map prepared on the basis of official records. This sort of participatory mapping and research provided a bottom-up approach to gaining knowledge that is likely to better represent the community's concerns and the ground reality.

As scholars point out, such methods enable gaining access to data that is not available through standard methods and, is believed to be more useful in addressing the concerns of research participants (Green et al., 2016; Jason et al., 2004; Townley & Wright, 2009). While we had planned to use this strategy during all our following focussed group discussion (FGDs) sessions, unfortunately, Zone V was badly affected by the Covid-19 outbreak and certain areas within the zone were declared as containment areas. While we did manage to conduct three FGDs as planned, it had to be done under constrained conditions and the idea of validating the resource map through community participation had to be dropped.



Figure 6: Pictures from the community mapping exercise pre-Covid-19 pandemic

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<sup>6</sup> A gatekeeper is essentially a leader from the community who keeps them together and represents them in discussions with outsiders.

<sup>7</sup> Amma Unavagams refer to state government subsidised canteens set all across the city and state. They serve a fixed and limited menu for breakfast, lunch and dinner with a maximum of ₹5 for any dish.



### 3.1.4. Surveys and FGDs

One of the key aims of this study was to understand how the homeless community feel about disasters, their own disaster vulnerability, and disaster relief efforts carried out by local agencies and then incorporate this community-knowledge to offer a set of recommendations to develop a more equitable and sensitive city disaster preparedness plan.



Figure 7a: Community map showing concentration of homeless and location of basic services  
Source: Okapi Research & Advisory



### Concentration of Homeless People

#### Legend

● for <20 people

● for around 50 people

● for >100 people

Figure 8b: Streets in Zone V where much of the field work was conducted

To extract this community-knowledge we depended on a survey and FGDs conducted in the local language - *Tamil*. Based on the community developed map that was created during the pilot study (Fig. 7), we selected five streets where the survey and the FGDs would be conducted. These streets were in the area of George Town, namely Ratan Bazar, NSC Bose Road, Sembudoss Street, Stringer Street and Davidson Street.

Once the sites were chosen, a survey was first conducted, to develop a socio-economic profile of the respondents and assess their everyday access to resources (Table 2). To get as many responses as possible, the team recruited 25 college students, studying social work, from a local women’s college in the area. Before the actual surveying, the survey objectives were explained to the students and they were trained on how to ask their questions sensitively, so as to not antagonise the participants. The students were divided into groups of five, with each group managed by one researcher and assigned one of the five selected streets to conduct their surveys. The survey had 250 participants of which 85% were women.

<b>Sample size</b>	250
<b>Methodology</b>	Random sampling with structured questionnaire
<b>Profile of participants</b>	Homeless daily wage earners selling fruits/ vegetables/ other items on the pavement
<b>Mode of survey</b>	One – on – one
<b>Location</b>	Ratan Bazar, NSC Bose Road, Sembudoss Street, Stringer Street and Davidson Street in George Town area, Zone V.
<b>Questions</b>	Socio-economic details, everyday vulnerability, vulnerability during disasters

Table 2: Summary of methodology for surveys of homeless families

Following the survey, we conducted a series of FGDs with groups of homeless people residing on the streets. The emphasis of the FGDs were on disaster vulnerability and the extent of access to resources before, during and after disasters and all of them were conducted on the streets. One FGD (in Davidson Street) was conducted before lockdown restrictions were imposed and when life was still ‘normal’ in India. Another two were held during the ‘lockdown’ which has been in place since 24<sup>th</sup> March 2020 at various degrees of restriction. During these FGDs, we have also tried to understand the impact of this diseases outbreak on the homeless population (table 3). All the FGDs were conducted with a combination of women<sup>8</sup> and men who were brought together through a key contact within the community itself. Before each FGD, the research team explained the project to the participants and verbal consent was sought. The discussions were recorded, and pictures taken with the participants’ permission.

<b>Group size</b>	10 – 20
<b>Methodology</b>	Semi – structured with use of pictures, maps of local areas for FGD 1. The other FGDs were held during strict lockdown so these tools were not used.

<sup>8</sup> Although women were dominant because the FGDs were held during the day when the men typically are at work in other parts of the city. Some women respondents were also working (i.e. selling fruits/ vegetables) while participating in the FGDs.

<b>Profile of participants</b>	Women, senior citizens, men
<b>Mode of discussion</b>	In person
<b>Location</b>	Ratan Bazar, Stringer Street and Davidson Street
<b>Questions</b>	Socio-economic details, everyday vulnerability and access to basic services (including during lockdown), vulnerability during disasters (including COVID-19) and coping mechanisms, other risks, recommendations

Table 3: Summary of methodology for FGDs

The FGDs and survey revealed that many of the respondents living in Zone V belonged to homeless families and were not individuals, who have very diverse needs and constraints - this prompted us to target individuals (Figure 8). For the individuals, we realised that they typically tend to be wary of crowds and congregations so we could not hold FGDs, rather had to engage with them directly and separately. We tried to target homeless individuals in areas identified through the community maps, specifically Egmore, but did not get a positive response. Therefore, we took the opportunity to venture into other parts of the city with concentration of homeless individuals such as Mylapore (in Zone 9) and Perambur (Zone 6). This choice was partly driven by logistical reasons as our NGO partners were working with the homeless in these areas to distribute relief during the time that we were conducting fieldwork within the ongoing pandemic situation (table 4).

<b>Sample size</b>	50
<b>Methodology</b>	Random sampling with structured questionnaire
<b>Profile of participants</b>	Homeless men / senior citizens
<b>Mode of survey</b>	One – on – one survey
<b>Location</b>	Mylapore, Parrys, Sowcarpet, Perambur
<b>Questions</b>	Socio-economic details, everyday vulnerability, vulnerability during disasters including COVID-19.

Table 4: Summary of methodology for survey of homeless individuals



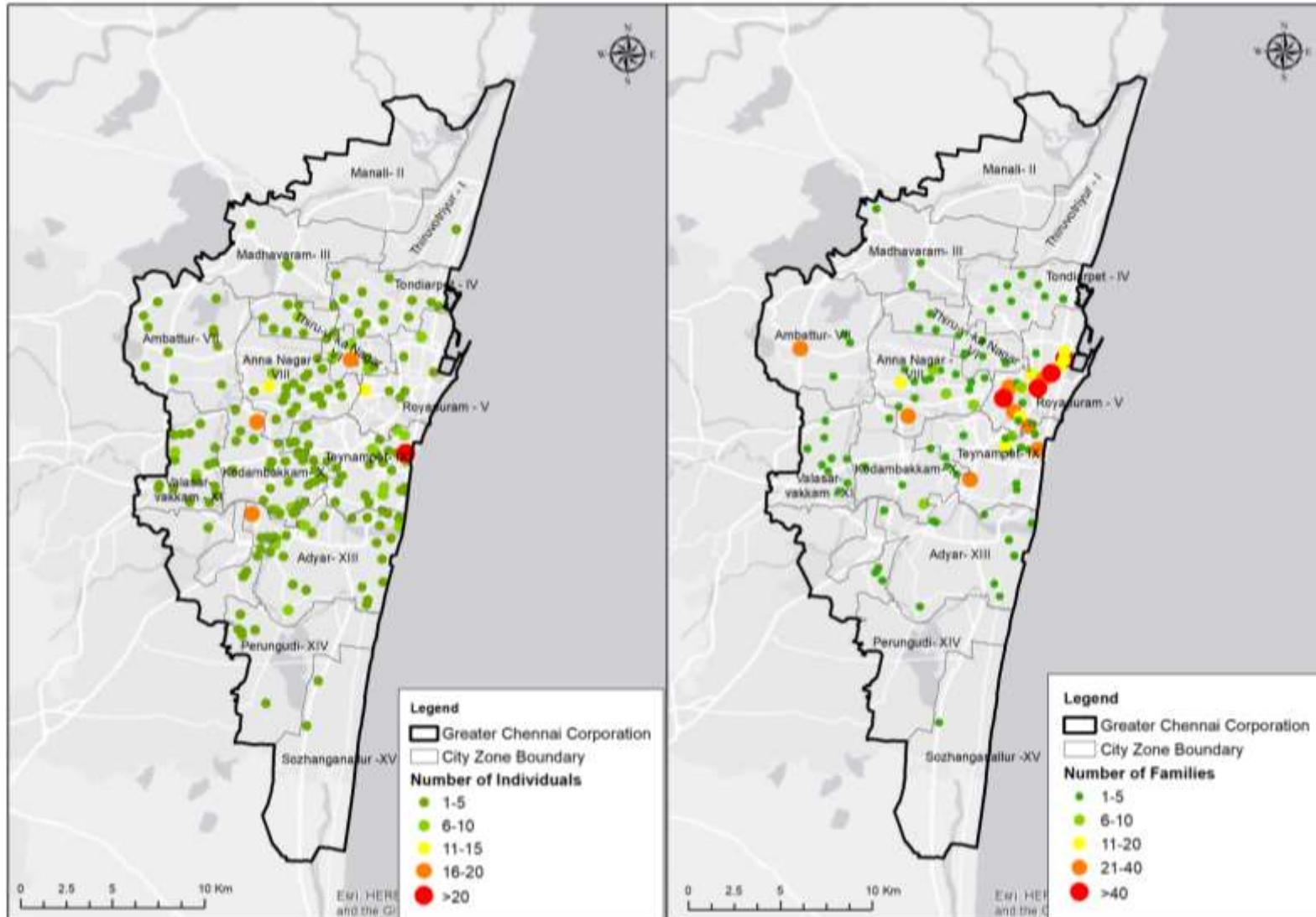


Figure 9: Maps comparing concentrations of homeless individuals (left) and families (right) | Source: Uravugal Social Welfare Trust (2018)

## 3.2. Data Analysis: Making Sense of Text through Thematic and GIS Analysis

### 3.2.1. Thematic analysis

Data collected from the various sources in this study have been thematically analysed. Thematic analysis entails the identification and analysis of patterns of meanings or themes and is particularly useful for examining experiences and perceptions (Herzog, 2019; Braun and Clarke, 2013). As in other qualitative research methodologies such as grounded theory, narrative analysis etc, coding forms the basic building block of thematic analysis. As Herzog et. al., explain “(A)t the heart of it lies a process called coding: the gradual development of labels and their application to segments of potentially relevant data” (2019:387) As such, we transcribed all interviews, FGD data and observations from the field and coded the text.

The coding process itself involves analysis (Cope, 2010) as it requires the researcher to identify relations, patterns, connections and gaps. This requires that we listen to what research participants are saying and make sense of it within the broader context. As such, we interpreted the information gathered from the homeless people and the people who work with them and those working within the disaster management space both deductively, i.e., guided by our reading of existing literature/theories, and inductively, i.e., based specifically on the reading of the transcribed text. Since we wanted to hear what the homeless community had to say about their experience of disasters and vulnerabilities, this bottom up inductive assessment was critical to our project and we kept our mind open to themes emerging from the data, specifically the FGD transcripts (Clarke and Braun, 2014).

During the coding process, our reading of literature and policies helped us define certain themes/codes which can be described as analytic codes (Cope, 2010). Analytic codes usually reflect the research questions or themes that researchers are interested in. These codes are more interpretive in nature and typically tries to reveal the deeper processes and context that influence what is being said in the text. However, themes were also identified based on a direct reading of the data – these are described as descriptive codes which represent themes or patterns that are obvious on the surface or are stated directly by research participants (in-vivo codes) (Cope, 2010).

### 3.2.2. GIS Analysis

We carried out some basic analysis using GIS to map out distances between homeless hotspots and basic services. This exercise provided some interesting reflections on the current state of access to such resources as hospitals, private clinics, toilets, food shops and public taps on an everyday basis.

We also used GIS to understand homeless community’s exposure to disaster risks by examining the relation between flood-prone streets and homeless concentration and, density, vegetation and zone-wise homeless distribution. Flood mapping is a critical resource for assessing and reducing risk of communities, but preparation of an accurate map that can influence decision making is a project of its own and is out of scope of this project. However, an attempt was made to assess the vulnerability of the homeless population with available data. The street inundation map of Zone V from the City Disaster Management Plan (CDMP) and data on the location of homeless persons, collected for Zone V during our community mapping exercise were used for this analysis. Using a GIS tool, streetwise inundation was

mapped spatially with categories of mild rain and moderate rain in accordance with the CDMP and, vulnerable locations have been identified. These vulnerable locations are areas that are prone to flooding and where residents typically need to be evacuated during heavy rainfall events.

Green cover in Chennai city was measured using the Normalized Difference Vegetation Index (NDVI)<sup>9</sup> technique. This is a simple approach which identifies areas of natural vegetation using satellite images. To measure the greenness, Sentinel-2A satellite images were chosen instead of Landsat images in order to use higher resolution images (Landsat-30m & Sentinel-2A-10m resolution). From NDVI, the green cover was extracted using the threshold of greenness (greater than NDVI of 0.45)<sup>10</sup> which ensures even tree cover, open grasslands, and shrubs etc. which are commonly found in Chennai, are captured (Mushtaq Ahmad Ganie et al, 2016 & Evangeline, JT et al, 2015). The threshold value was set based on the reference of the unsupervised classification of sentinel satellite images showing green cover classes. NDVI value greater than 0.45 shows true greenness whereas less than that shows other classes like buildings, water etc.

Ultimately, we used the descriptive and analytic codes and spatial maps to make sense of and interpret the data into a coherent story about Chennai’s homeless community’s experience and perceptions associated to disasters, in the context of the complex governance system around disaster management shaped by socio-economic and political norms and trends.

The following table (table 5) discusses which types of data has been used for analyses for the following chapters.

Chapter	Data Source
Chapter 4: Setting the context: Disaster management, the homeless and their vulnerabilities	Mostly secondary data and limited inclusion of data from expert interviews
Chapter 5: The experience of Chennai’s homeless – coping with everyday disasters	Mostly primary data from surveys and FGDs and limited secondary data
Chapter 6: Disaster governance - Chennai’s past and present experience	Mostly primary data from interviews and some secondary data
Chapter 7: Discussion – understanding disaster vulnerability of the homeless through a sociological lens.	Mostly primary data already presented in Chapters 5 & 6
Chapter 8: Best Practices	Secondary data

Table 5: Data source for each chapter

<sup>9</sup> Normalized Differential Vegetation Index (NDVI) is a standardized vegetation index which allows us to generate an image showing the relative biomass. The chlorophyll absorption in Red band and relatively high reflectance of vegetation in Near Infrared band (NIR) are used for calculating NDVI. (ESRI)

<sup>10</sup> NDVI was computed using the bands Near Infra-Red (NIR) and Red bands. NDVI is dimensionless indicator and ranges between -1 to 1. The value indicates the vigour of vegetation and is higher for dense healthy vegetation and lower for sparse vegetation.

## CHAPTER 4: SETTING THE CONTEXT: DISASTER MANAGEMENT, THE HOMELESS AND THEIR VULNERABILITIES

This chapter is divided into two sections. The first section sets the context for the project by providing an understanding of the state of disaster management in the country. While the second section presents a comprehensive analysis of the programme framework with respect to homeless people and the extent of integration of disaster management in this framework. For both these sections, a general understanding of the national context is presented followed by a more in-depth look at Tamil Nadu, and Chennai specifically. This chapter mostly draws on data from secondary sources, occasionally depending on data from expert interviews.

### 4.1. State of Disaster Management in India

A series of natural disasters during late 1990s and early 2000s (Gujarat cyclone in 1998, the Orissa super cyclone in 1999, the Bhuj earthquake in 2001, and the 2004 tsunami in South Indian states of Tamil Nadu and Kerala) brought about a paradigm shift in India’s disaster management regime which has traditionally been driven by a response and relief-oriented approach (Rajeev, 2012). This shift corresponds with a global transformation in disaster management led by the US Federal Emergency Management Agency (FEMA) and the declaration of the International Decade for Natural Disaster Reduction from 1990 – 1999 by the UN, to focus on disaster prevention rather than disaster mitigation (Collier et al. 2009). Since these events, the central government has recognised the importance of disaster preparedness and community-based adaptation which involves communities in developing a disaster preparedness, mitigation, and response plans.

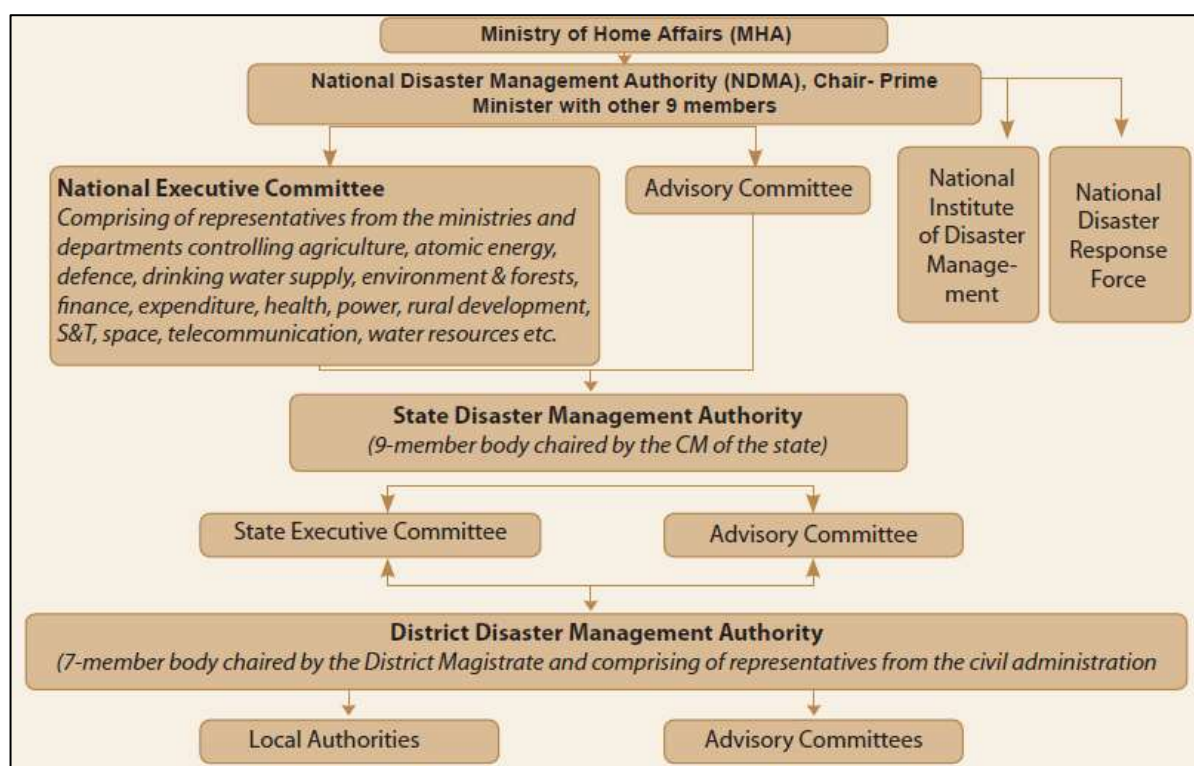


Figure 10: National Disaster Management Framework  
Source: Disaster Management in India (Ministry of Home Affairs, GoI 2011 pg. 60)

In 2002 the Government of India (GOI) with the support of United Nations Development Program (UNDP) developed a new national Disaster Risk Management Programme (DRM), an initiative working in 17 states of India, including Gujarat but not including Tamil Nadu. This DRM program, which ended in 2009, followed a holistic approach – going beyond the ‘need-of-the-hour’ response – to focus on disaster specific preparedness and mitigation and preventive measures at various levels, specifically at the community level, as they are the first responders to disasters (*Ibid.*). The primary aim of this programme was to support the national government to meet its social and economic development goals by enabling select multi-hazard states to reduce their vulnerability and minimize losses from development gains due to disasters. The DRM program was driven towards institutionalizing sustainable disaster risk management in India. Some of the key interventions under the program include the following:

- Building capacity of Disaster Management Teams (DMTs) in specialized functions (first-aid, search and rescue, early warning dissemination etc) at various levels of the states, villages/cities, communities. Capacity building to institutionalize DRM in the government and awareness and educational programs for public to reduce vulnerability;
- Preparing preparedness and mitigation plans for states, districts, taluka, block, village, ward and city scale;
- Preparing training manuals in English and local languages for contingency plans on various hazards/preparing Standard Operational Procedures (SOP);
- Helping access equipment and personnel support;
- Bringing a gender equity component in the disaster management plan;
- Supporting the creation of the Indian Disaster Resource Network and State Disaster Resource Networks - online platforms that collect, collate, store information on critical infrastructure, vulnerable areas/people; available resources etc.

This Programme was followed by another GOI-UNDP programme from 2009 – 2012 in 56 cities including Gangtok, Nainital, Madurai, Trichi and Lucknow. This programme aimed to strengthen institutional capacities to manage disaster risks better (UNDP n.d.). Apart from the GOI-UNDP programmes, national level policies have also recognised the vitality of community involvement in disaster management; The Disaster Management Act 2005 emphasized the importance of non-governmental organizations and voluntary social-welfare associations not only in disaster relief, but also in mitigation and preparedness efforts, especially in the context of State Disaster Management Plans (SDMPs) and District Disaster Management Plans (DDMPs) (NDMA 2019). The National Policy on Disaster Management 2009 also recognizes communities as the bedrock of the process of disaster response (NDMA 2009).

The National Disaster Management Guidelines (2019 draft) are being formulated with a central attention to the Community Based Disaster Risk Reduction (CBDRR), which is “(A) process whereby a community systematically manages its disaster risk reduction (DRR) measures towards becoming a safer and resilient community” (NDMA 2019). The CBDRR process highlight the need to include the marginalized and the vulnerable at the centre of planning and implementation of DRR efforts to ensure equity. The paradigm of CBDRR is very much aligned with the constitutional recognition of the importance of decentralization and

devolution of powers (73<sup>rd</sup> and 74<sup>th</sup> Amendments) and intends to extend it to the realm of disaster management. It reinforces the need for enhancing the capacity of communities, since they are the first responders, through awareness building, sensitization, orientation and skill development of communities and community leaders (NDMA 2019a). It also acknowledges that, while disasters impact entire communities, persons with disability, women and children, under-privileged, older persons and pregnant women need special attention at the implementation level. This indicates a general trend towards recognizing the special needs of the vulnerable.

#### 4.1.1. State of disaster management in Tamil Nadu and Chennai

Tamil Nadu has had its fair share of natural disasters and is prone to storm surge, cyclones, flooding, and droughts (TNSDMA 2018). The entire coast of Tamil Nadu is divided into 3 hazard zones for wind and cyclone risk (Table 6) with the northern coast (includes Chennai) situated in a very high-risk category. The northern coast also falls under Zone III (moderate risk) of the seismic risk zones of India and was severely impacted during the 2004 tsunami.

Area	Districts covered	Category
Northern coast	Thiruvallur, Chennai, Kancheepuram, Villupuram, Cuddalore	Very high damage risk
Central coast	Nagapattinam, Thiruvarur, Tanjavur, Pudukottai	High damage risk
Southern coast	Ramanathapuram, Thoothukudi, Thirunalveli, Kanyakumari	Moderate damage risk zone

Table 6: Cyclone risk zones in Tamil Nadu | Source: TNSDMA 2018

Over the last few decades however, the frequency of floods, cyclones and droughts has been increasing in the state. In Chennai, floods, cyclones, depressions and storms are becoming an annual occurrence during the North East Monsoon (NEM) Season<sup>11</sup>. Indeed, Chennai region is no stranger to cyclones and has experienced several cyclones of varying degrees over the past few decades (e.g., Cyclone Vardah 2016, Cyclone Thane 2011, Cyclone Nisha 2008). In 2020, the region experienced a 'Very Severe Cyclonic Storm' - Nivar which made landfall in on the Pondicherry - TN coast in November followed by a 'Weak Tropical Cyclone' Burevi which made landfall in Northern Sri Lanka and Southern Tamil Nadu. Both, and especially the former resulted in incessant rain and strong winds for several days. Chennai experienced flooding in all the low-lying areas and in some parts of the city it took more than 10 days to clear the flood water (TimesNowNews, 2020, The New Indian Express, 2020).

As such, Chennai's Resilience Strategy 2019 discusses the city experience with disasters over the past two decades, stating that it has frequently shifted between cycles of too little water and too much water but is more prone to droughts (Resilient Chennai, 2019). The strategy also presents future climate projections which predict more frequent extreme precipitation events, increase in mean sea levels and surface air temperatures, suggesting that Chennai must prepare itself to tackle more frequently occurring disasters and safeguard its most vulnerable communities. Less recognised is the region's heat challenge. Climate projections for Tamil Nadu suggest that the state will likely experience increased surface air temperatures

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<sup>11</sup> North East Monsoon Season: It is commonly known as winter monsoon and the wind blows from land to sea during October to December. Due to these the monsoon brings most of the rainfall during a year for the city of Chennai.



to 1.6°C to 2.1°C (MoEF, 2010; DoE, 2015), having severe impact on the most vulnerable sections of society – and those living on the streets.

The Tamil Nadu government launched the Tamil Nadu State Disaster Management Perspective Plan (SDMPP) in 2018 as a step forward to prepare against future shocks. The plan seeks to employ a ‘systems approach’ to DRR which recognises the inter-connectedness between ecosystems across administrative boundaries and the need for holistic solutions that address environmental physical, social, economic and cultural issues simultaneously. In line with the National Disaster Management Act 2005, India’s commitment to the Paris Agreement and the PM’s 10-point agenda on climate change, the SDMPP is all about early detection of risks, disaster prevention and mitigation and enhancing disaster preparedness among communities.

With respect to vulnerable communities, the plan highlights that it will integrate disaster risk assessments into land use policy, including housing for the poor. SDMP also states that it will leverage its existing vast social support programmes (including skills development, access to basic health care, maternal and child health, food security and nutrition programme, housing and education programmes) “to empower and assist people who are disproportionately affected by disasters to be resistant to risks” (TNSDMA, 2018, pg:123). While this is a rather broad statement, it suggests that the government is thinking about DRR in a more holistic manner.

The plan also includes some detail, although limited, on how it plans to involve communities in disaster preparedness. It states that it will involve women in planning, preparedness and response and in relief efforts related to DRR. It also states that, local governments should recruit able bodied members of the community as first responders. However, there is limited to no commitment with respect to including the poor in DRR efforts. The government is considering investing in ‘livelihood support with special focus on the poor in vulnerable communities’ and in providing multi-hazard disaster resistant housing (green housing) for the poor as a measure to ‘build back better’ (TNSDMA, 2018, p: 161) however it has not yet translated policy into action.

In accordance with the Disaster Management Act 2005 which calls for all cities to come up with their own disaster management plan, Chennai city has released its disaster management plan, prepared by GCC. The preparation of the plan followed consecutive years of excessive flooding in 2015 and a major cyclone (Vardha) in 2016. GCC’s CDMP, released in 2017 (and updated in 2018) seeks to “maximise the ability of the city to cope with disasters, significantly reduce damage and vulnerability to disasters” (GCC, 2018, pg vi). The plan targets cyclones, floods, earthquakes and tsunamis. It focuses on establishing early warning systems to detect severe weather and tsunamis, establishing disaster risk communication systems and relief centres, setting up control centres that can coordinate disaster relief and rescue operations and setting out the roles of different departments in the event of a disaster. Additionally, the plan also provides maps of streets and areas at high risk from flooding, based on impact from the 2015 floods. As such, the plan is more focused on disaster response rather than preparedness.

Where the plan falls short is in involvement of communities in disaster management and in its treatment of vulnerable communities: It does not seem to include communities in any aspect of disaster management nor does it explicitly recognise that disasters affect vulnerable communities disproportionately. In fact, there is hardly any mention of vulnerable communities in the plan.

Apart from policy documents, there have also been several programmes funded by International Financial Institutions such as the World Bank which aim to reduce disaster risk of vulnerable communities living along the coast such as fishermen. One such project is the Tamil Nadu and Puducherry Coastal Disaster Risk Reduction Project (2013 – 2020). The Tamil Nadu Infrastructure Finance Fund Management Corporation (TNIFMC) is also working closely with the World Bank to integrate disaster risks in affordable housing projects in Tamil Nadu.

#### *A. Assessing Disaster Vulnerabilities for Chennai's Homeless*

Chennai has always been vulnerable to floods during times of heavy rainfall and the city is exposed to higher flooding risk from both coastal and inland waterways due to climate change resulting in extreme weather patterns. The most severe flooding experienced by the region was in Dec 2015. It was believed to be rare and with a return period of close to 100 years (Narasimhan et. al, 2016). After this event, the city invested in a flood warning system to obtain area-wise inundation details during the monsoon which are illustrated in the CDMP, released in 2017, and updated in 2018. In the plan, GCC provides streetwise inundation information for all the zones based on experience of past flooding events. While it is unclear whether the plan proved as a guiding document for better preparedness measures in flood prone streets, it must be noted that certain vulnerable populations such as homeless individuals and families were evacuated to relief camps / shelters ahead of Cyclones Nivar and Burevi in 2020, largely escaping severe impact. However, a section of homeless population - homeless families - chose to stay on the streets, due to fear of losing their personal belongings, loss of livelihood and large-scale evictions after the cyclone (personal conversation with IRCDUC, The New Indian Express, 2020).

The maps, however were used as a basis for constructing about 1000km of storm water drains in the city to reduce flooding (The Wire, 2020). This investment on large scale infrastructure did not recognize homeless people already living on the street with or without shelters looking for a permanent solution. There is no data on the flood risk / hazard in the event of heavy precipitation events which can inform development and planning activities. In fact, in 2008, researchers at Anna University developed flood and hazard maps for the city using the 'airborne laser terrain mapper' technology, which was the first of its kind in the country. However, these maps are not available in the public domain and it unclear whether they were used by government in flood management (Geospatial Word, 2008).

Our analysis of streets prone to flood inundation in Zone 5 reveals that several streets are at risk from flooding even during moderate rain. These streets are spread across the zone. Further, there a significant number of vulnerable locations i.e., areas which are prone to flooding and where residents need to be evacuated during heavy rainfall events (see Fig.10).



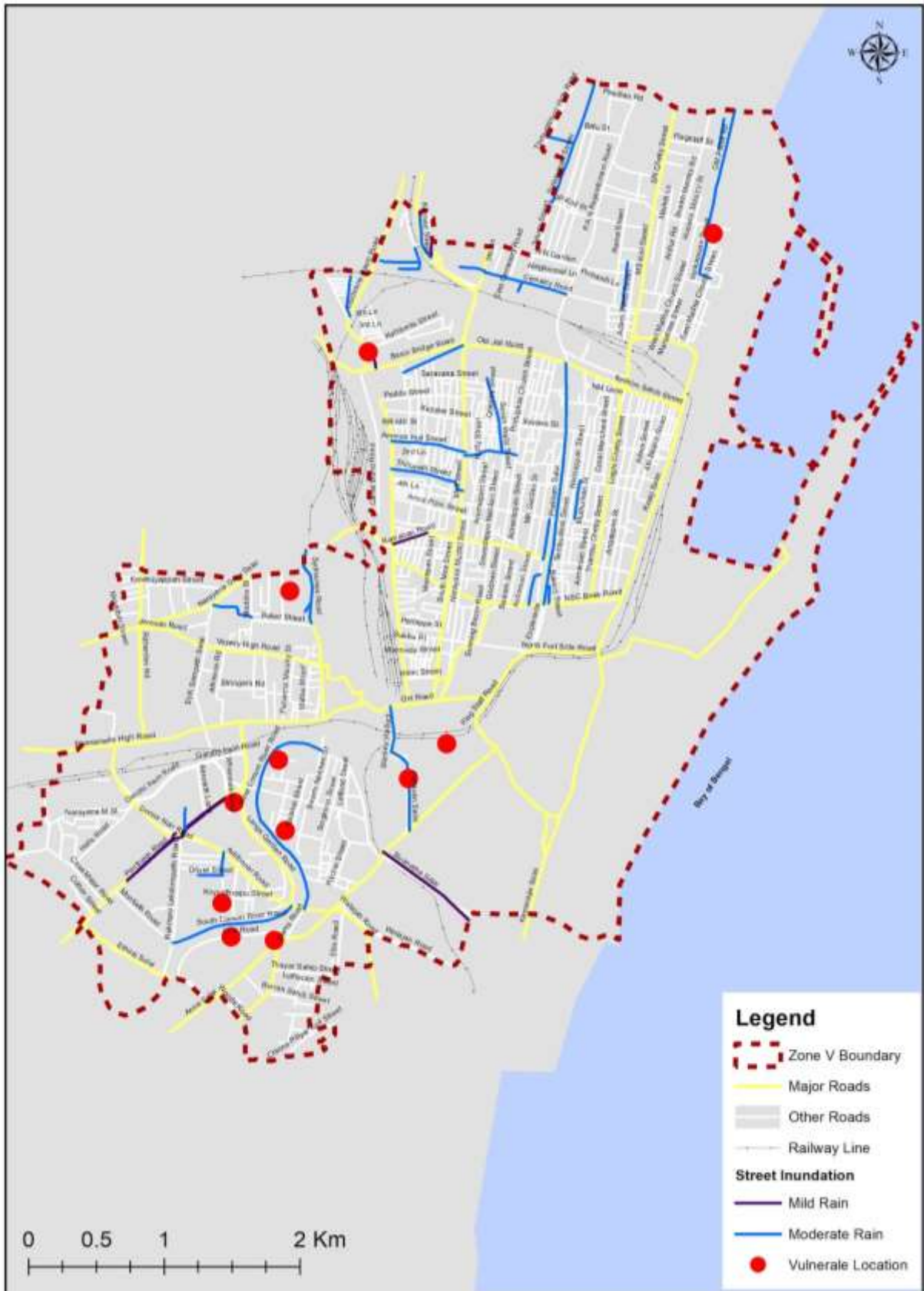


Figure 11: Map of Zone V showing streets and vulnerable locations at risk from inundation | Source: Author's own

To get a clearer picture of the impact on rain and flooding on homeless people, we investigated homeless concentrations and shelters with streets at risk from inundation in Zone 5 (see Fig.11). These maps reveal quite a number of overlapping streets and vulnerable locations which are at risk from moderate and heavy rain fall and where concentration of homeless is high, such as Prakasam Salai, Pantheon Road and Umpherson Street.

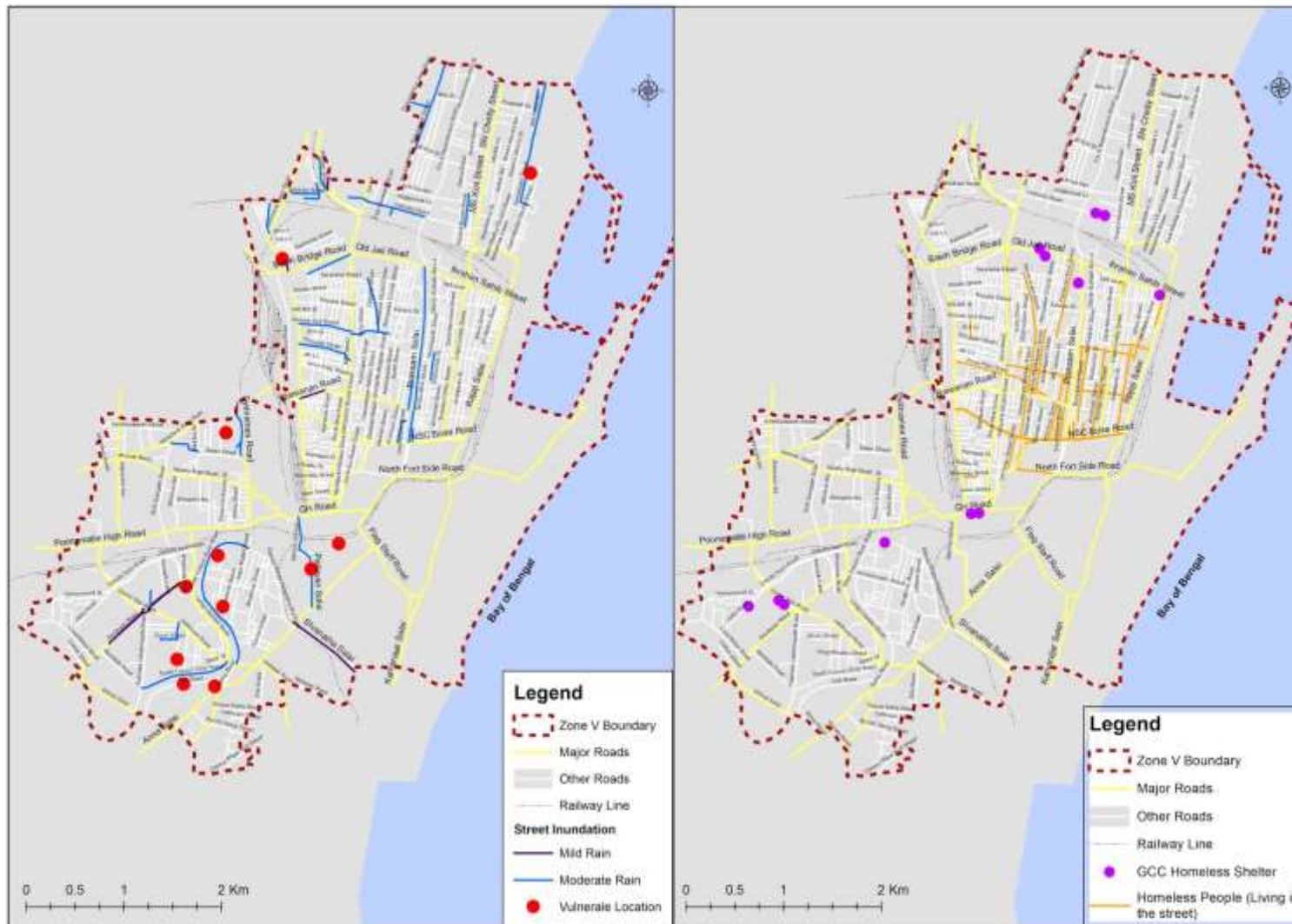


Figure 12: Maps showing streets at risk from inundation on the left and homeless concentrations on the right | Source: Author's own

Table. 7, shows that around 370 homeless families live in the identified streets which are prone to inundation.

Street name	Street Inundation Risk	Homeless People (families)
Stringer Street	Moderate Rain	180
Seven Wells Street	Moderate Rain	50
Bakers Street	Moderate Rain	20
Davidson Street	Moderate Rain	120
<b>Total</b>		<b>370</b>

Table 7: Number of homeless people at risk from flooding | Source: Author’s own

While GCC disaster maps identify the streets, which are prone to inundation, homeless communities, from their experience of living on the streets for several generations, have pointed out numerous other inner roads to be equally vulnerable, even in times of mild rainfall. The following pictures highlight the typical challenges faced by homeless communities during a rainfall event (figure 12).



Figure 13: Homeless families on the streets struggling to protect themselves and their belongings (left) while a shelter is flooded on the right

Source: IRCDUC and Aditi 2020

As discussed earlier, the above analysis was carried out only for Zone V due to lack of data for other zones. Yet it is clear that homeless communities are at high risk not just-during heavy rainfall events but during any rainfall event, however mild. Their vulnerabilities need to be recognized in disaster management plans and the need for this inclusion has been acknowledged by policy experts working in the sector (The New Indian Express, 2020). Temporary arrangements made by GCC with the support of NGOs and other community-based groups for relocating homeless people to relief shelters or camps during flooding has helped in the short term. However, for any long-term impact that systematically reduces exposure to disaster events, the city needs good quality and accurate data on homeless communities, which includes their every-day vulnerabilities.

*Impact of heat:* As much as flood risk, homeless populations are also at high risk from heat and related events such as droughts. While it is clear from the section above that the entire state is projected to experience increasing surface temperatures to minimum of 1.6°C or higher, urban areas including Chennai will likely be much hotter due to the urban heat island (UHI) effect. And, communities living on the streets will feel the direct impact of this change.



Over the past few decades, Chennai has urbanised rapidly and rampantly with little regard for its ecological resources (Kennedy et al., 2014; Arabindoo, 2016; Roy et al., 2018; Resilient Chennai, 2019; Jeganathan et al., 2016). The increase in built-up area has been quite significant – from 7.55% of total land use in 1988 to 31.45% in 2014 (Roy et al., 2018), revealing a lack of recognition for the services ecosystems perform especially in mitigating disaster risks (Resilient Chennai, 2019). Recent studies on UHI in India reveal that major cities in the country including Chennai, which are urbanising, already experience increased day time temperatures of up to 2°C more than rural areas (Balasubramaian, 2020). This is because materials used to build up spaces, such as concrete, tar are bricks have higher heat capacity and thermal conductivity than open spaces with soil, trees, grass – more widely found in rural areas (*Ibid.*).

Similar results are illustrated by Jeganathan et al., (2016) who studied the spatial distribution of heat intensity and the influence of land use and green cover in the Chennai Metropolitan Area (CMA) over a period of time. The authors find that, a) the CMA is divided into heat and cool pockets with areas that are heavily built-up and congested having heat pockets (figure 13). The temperature differences between fringes and central parts of hot pockets were between 3-4.5°C. They also find that they maximum intensity of temperature was noticed in the central and northern parts of the city which includes Zone 5.

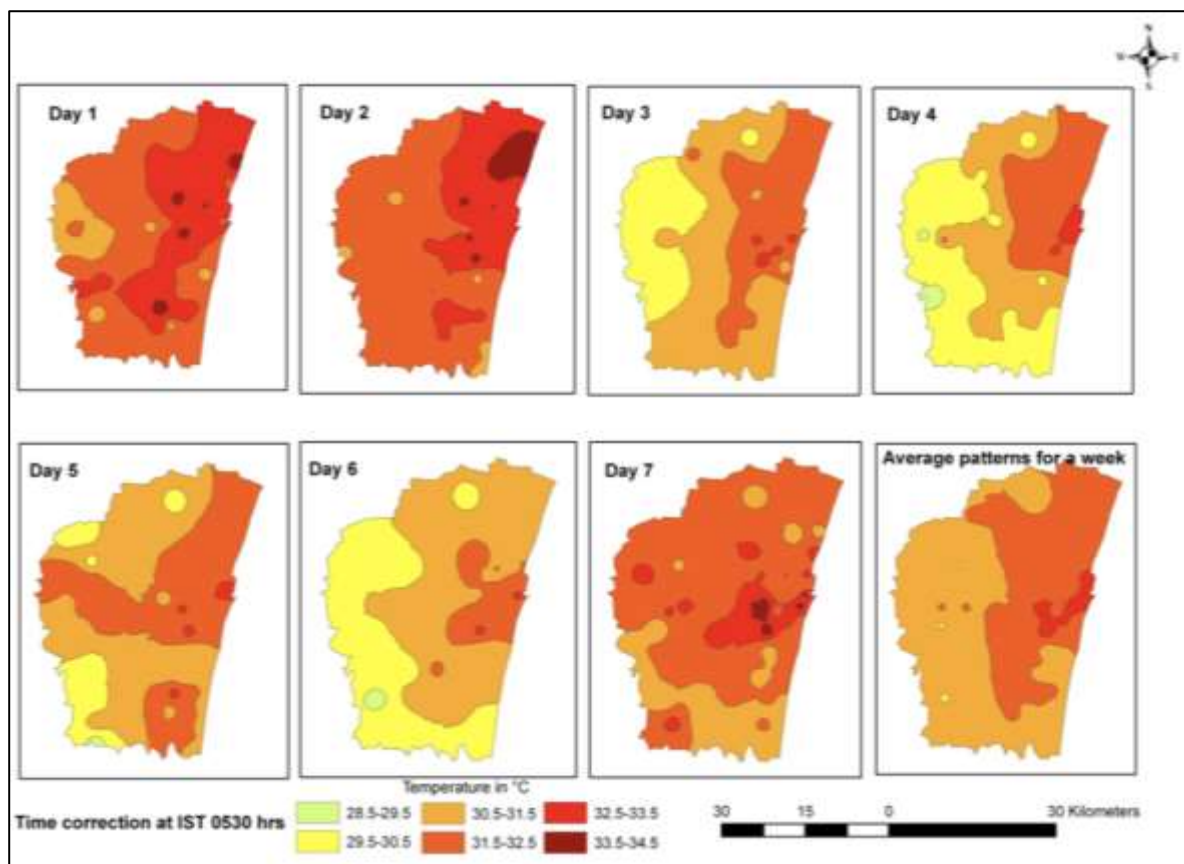


Figure 14: Spatial distribution of temperature in the CMA at 0530 hrs during the study period  
 Source: Jeganathan et al., (2016)

The study also observes cool pockets adjoining areas of green cover such as the Raj-Bhavan, Guindy National Park, IIT Madras cluster in Zone XIII and Tambaram Air Force Station. Finally,

the authors highlight a strong correlation between vegetation cover and temperature distributions in the city and consequently the importance of vegetation cover in mitigating UHI.

We analysed green cover in Chennai city (426 sq. km.) using the NDVI (see chapter on research methods for more details). An NDVI value greater than 0.45 shows true greenness whereas less than that shows other classes like buildings, water etc. Our analysis reveals that the extent of green cover is only 65.12 sq. km. which is approximately 15% of the total 426 sq. km. GCC area (Figure 14). Among the zones, the zones in the central, northern and western parts of the city i.e. I – Thiruvotriyur, IV - Tondiarpet, V – Royapuram and VI – Thiru-Vi-Ka Nagar have much less green cover than those in the southern parts of the city such as Zones 12 (Alandur), 13 (Adyar), 14 (Perungudi) and 15 (Sholinganallur).

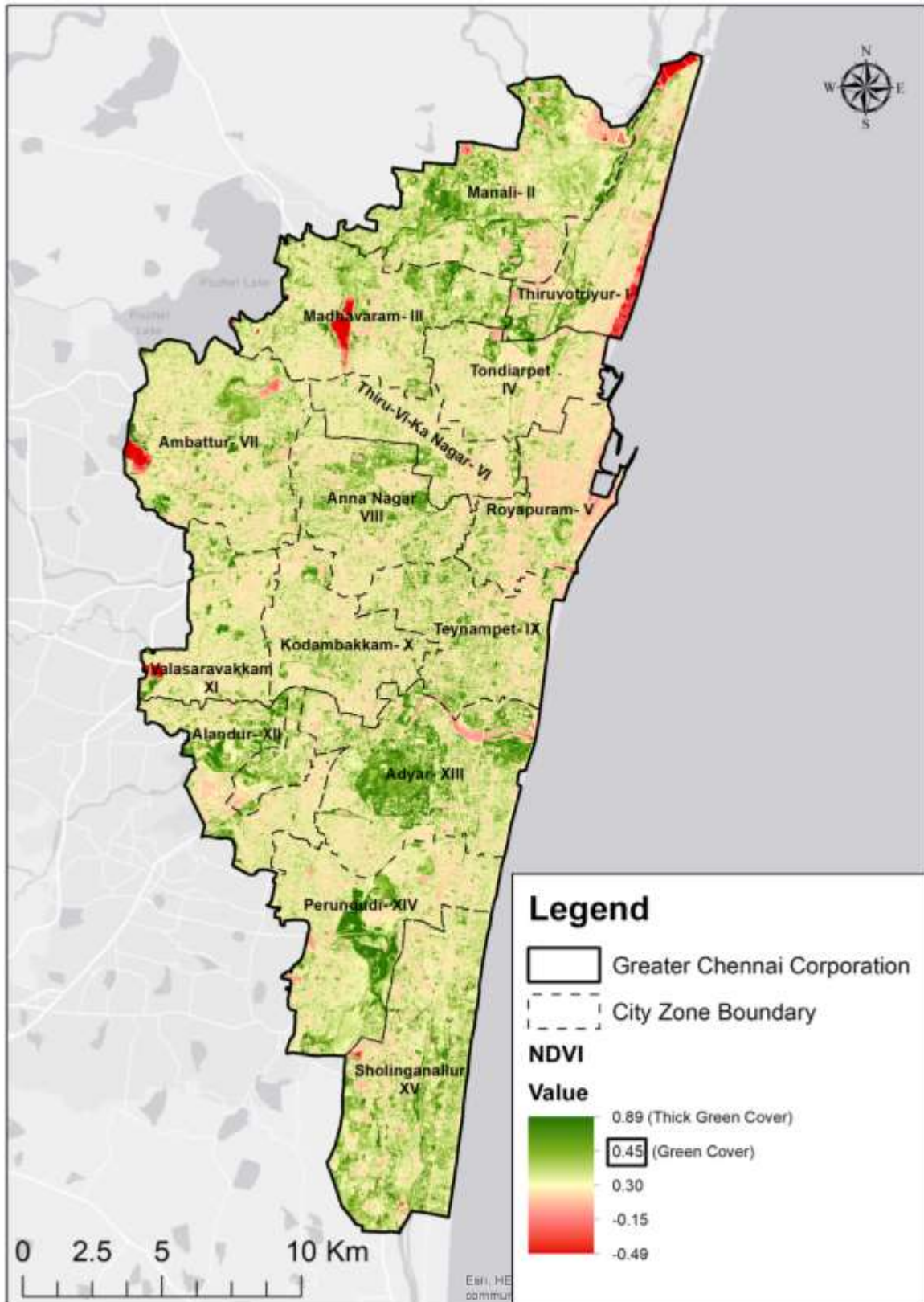


Figure 15: Extent of green cover in Chennai | Source: Author's own

In fact, Chennai city as a whole has a lesser percentage of green cover than other Indian metro cities like Kolkata, Delhi, Bengaluru and Hyderabad (Chaudhry et al, 2011 & Gandhiok, 2019 & Devulapalli et al, 2019). Earlier, Indian cities followed the Urban Development Plans Formulation and Implementation (UDPMI) Guidelines 1996 to provide recreational space

including parks, botanical gardens and open spaces. The standard states that recreational areas should comprise 20-25% of the total developed area in metropolitan (million plus population) cities like Chennai. However, more recently the Urban Greening Guidelines 2014 has put forth the goal of 20.sqm park space per capita which is in line with other developed cities (Town and Country Planning Organisation, 2014).

Currently, in Chennai city, the estimated green cover per capita adjusting 2020 population is 8.5 sq. m per person! It has almost achieved the standards put forth by WHO<sup>12</sup>. However, if compared with other developed countries, Chennai has been able to achieve only 40% of the 20 sq. m. recommended by the MoUD. In India, among the top six metro cities Chennai stands fifth in the green cover per capita, well-behind Delhi which leads with 41 sq. m. but ahead of Mumbai which has only 4 sq. m per capita (Gandhiok, 2019). This city-wise metric, however, is not reflective of the status in every zone as green cover is unequally spread across the Zones and Wards with some have significantly more green cover than others. To compare the zones, a zone wise analysis of green cover was attempted but due to lack of data on the current year's zonal population, only a total zone wise green cover analysis was carried out (Table 8).

Zone no.	Zone Name	Area of Green Cover (sq.km)	Zone Boundary Area (sq.km)	Percentage of Green Cover (in each Zone)
1	Thiruvotriyur	3.21	25.71	12.49
2	Manali	7.97	39.98	19.95
3	Madhavaram	5.00	33.35	14.99
4	Tondiarpet	1.63	21.03	7.77
5	Royapuram	1.73	22.03	7.87
6	Thiru-vi-ka Nagar	1.43	16.95	8.43
7	Ambattur	4.58	38.37	11.93
8	Anna Nagar	4.06	25.22	16.08
9	Teynampet	3.80	25.21	15.07
10	Kodambakkam	2.30	22.42	10.28
11	Valasaravakkam	1.83	20.42	8.97
12	Alandur	3.18	20.26	15.72
13	Adyar	10.99	39.22	28.03
14	Perungudi	5.68	33.81	16.80
15	Sholinganallur	7.72	42.12	18.32
	<b>Total</b>	<b>65.12</b>	<b>426.10</b>	

Table 8: Extent of Green Cover in the Zones | Source: Ibid.

The zone wise comparison indicates that Adyar Zone with 10.99 sq.km or 28% of the total out of 39.22 sq.km., has the highest extent of urban green space compared to the other zones. This could be attributed to the presence of a national park, the Theosophical Society and IIT Madras campus in this zone. However, zones in the Northern and Western parts of the city such as Tondairpet, Royapuram, Thiru-vi-ka nagar and Valasaravakkam have less than 2 sq.km of urban green space and its percentage of green space for its zone boundary is also

<sup>12</sup> WHO recommends that cities should provide 9 sq. m of undeveloped (unpaved) open space for every inhabitant (Ministry of Urban Development, 2014).



less than 10%. The Zone V - Royapuram, selected for our study, has only 1.73 sq.km of green space of 22.03 sq.km which is less than 10% of the total green cover.

### *B. The Coronavirus pandemic*

The Coronavirus pandemic has brought the world to a standstill. It has particularly affected large and densely populated urban centres around the world (notably New York city and Rio de Janeiro) and India is no exception. Within these cities, the virus has only exacerbated issues of inequality, exposing the depth and complexity of the homelessness quandary. With lockdown orders issued abruptly, approximately 9000 persons living on the streets of Chennai had nowhere to go and their well-being became intrinsically linked to the well-being of everybody else in the city. According to official data released by GCC on their social media pages, Zone 5, home to the largest concentration of homeless in Chennai and this project's study area, began registering the maximum number of cases at the end of March and would occupy that top position for several months.

While socio-economically disaggregated data linked to the virus and its spread is not available for Chennai, a review of news and media reports and reports from NGOs providing relief and response suggests the homeless have been particularly hard hit from the loss of livelihoods due to the state-imposed lockdowns. As they predominantly work in the unorganised sector as *coolies*, street vendors, domestic help and so on, the continued lockdown has restricted their ability to feed themselves, their dependents and meet personal hygiene needs. Similarly, the lockdown has also impacted a large percentage of other workers in the unorganised sector, such as migrants (Kanthimathi, 2020; Jayaraman, 2020), who have been left without a job overnight. As a result, the homeless shelters in the city have been overwhelmed by the sheer number of people accessing them and requirements of maintaining physical distancing (Narayanan 2020; The Hindu, 2020).

The government's response and general reaction from NGOs, civil society-based groups towards meeting the needs of the urban poor, including the homeless has been constantly evolving over time. From driving around the city to rescue homeless and stranded persons to setting up make-shift cooking facilities to cook and pack meals and coordinating with existing shelters on how to accept new persons and follow disinfection protocols (Narayanan, 2020), the government's response has become more streamlined. For instance, more relief shelters have come up in schools and community halls and, NGOs and the general public wanting to help out with relief efforts have to first register with GCC before going out, in order to ensure more equitable spread of resources (*ibid*). The state government has also announced schemes to provide monetary support to the poor apart from already existing programmes that waive medical costs for tests, hospitalizations and check-ups.

As this pandemic situation is very different from any other and more common disasters (e.g. floods, cyclones, droughts) experienced in the city, the government, NGOs and those engaged in relief and response are constantly learning and improving on the job. However, several gaps in the management of the virus with respect to the poor have emerged and have been discussed in detail in the next chapter.

## 4.2. Homeless in Chennai

Several studies (Suresh, 2018; Uravugal Social Welfare Trust, 2018; Census, 2011) have tried to enumerate the number of homeless people in Chennai. However, these are not comprehensive because homeless people are not confined to a single location. Rather there is constant movement of people based mostly on their place of work (personal conversation with IRCDUC), making enumeration a challenge. Therefore, over the years there have been several enumeration surveys undertaken by the government which give varying numbers of homeless people in the city (table 9).

Organisation	Year	Number
Chennai Metropolitan Development Authority (CMDA)	1989 – 1990	40,763
Census of India	2001	27,329
Census of India	2011	16,682
Greater Chennai Corporation (GCC)	2011	11,116
Greater Chennai Corporation (GCC)	2014	8266
Greater Chennai Corporation (GCC)	2017	3500
Greater Chennai Corporation (GCC)	2018	9087

Table 9: Homeless data | Sources: CMDA, 2008; Census, 2009 & 2011; Uravugal Social Welfare Trust, 2018

The latest survey by Uravugal Social Welfare Trust for GCC conducted in 2018 reveals that the homeless are concentrated in 5 zones (5, 9, 10, 12 and 13) among GCC's 13 zones of which Zone 5 (Royapuram) is home to the maximum number of homeless people.

While the actual number of homeless people in the city varies considerably, there is similarity in their general state of being and access to everyday resources such as food, shelter, water, sanitation and, primary healthcare. GCC conducted a survey of 3742 homeless families (living on the streets) in 2018 and found the following (Uravugal Social Welfare Trust, 2018):

- 84% of homeless people surveyed availed health care services from Government Hospitals;
- In terms of access to food, there was a variation with 37% of respondents buying their food local vendors while 36% cooked their own food;
- For sanitation, 79% use public toilets while 20% defecate in the open. While it is good that 79% are using public toilets, each time the homeless use the toilets, they have to pay Rs. 5 & Rs. 7 – Rs. 10 for bathing. This puts a severe strain on their resources, making access unaffordable;
- For water, 85% have access to potable water through the public taps<sup>13</sup>;
- With respect to access to entitlements, around 48% of homeless did not have ration cards, 42% did not have voter IDs, while more than 89% did not have medical insurance.

While the GCC survey is the most comprehensive and recent, other surveys conducted with factions of homeless people also reveal similar findings: one report analyses the socio-economic condition of the homeless across Coimbatore, Madurai and Chennai, to find that 86% had access to health care facilities, while 84% did not have ration cards or voter IDs in Chennai (IRCDUC et al., 2019). While another survey, conducted in 2015 in 6 zones of GCC,

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<sup>13</sup> However, through our field work, we find that homeless on the streets accessed water differently – water was bought or people depended on shops / restaurants to give them water. See Chapter 5 for more details.

finds that 66% of 8325 homeless people surveyed access drinking water from public taps; around 90% use public toilets but have to pay anywhere between Rs 3 – Rs 5 per use for the toilets and Rs 5 – Rs 7 per use for washing clothes. Access to documents also reveals similar numbers with around 40% not having ration cards (IRCDUC, 2015).

Access to these basic services and entitlements however are dependent on other physiological, socio-economic and cultural factors (Urvaugal Social Welfare Trust, 2018) and the homeless population in Chennai are not a homogeneous group. Rather, GCC's 2018 survey states that they are heterogeneous, comprising of individuals who could be persons with physical and/or mental disabilities, women, street children, elderly or they could be families. Our research corresponds with these findings and also suggests that there are various levels of vulnerabilities and needs which influence how disasters are experienced. For instance, the vulnerabilities and needs of homeless families, for instance are very different from homeless individuals – the most urgent want of homeless families is housing while individuals (who typically tend to have access to shelters) have varied needs – the most common being a job. Within this categorisation – physiological and socio-economic factors influence needs. For instance, the needs of children will vary from women, differently abled persons etc. Therefore, any homeless programme or policy must be cognitive of this diversity.

#### 4.2.1. Homeless programme review – Chennai

For decades, the needs of the urban homeless in India are being addressed through various Government of India (GoI) programmes / schemes (Box 1). Currently, the Government of Tamil Nadu is trying to improve the lives of the homeless through the DAY-NULM programme, a GoI scheme (BOX 2).

##### *Box 1: Government of India schemes for the homeless*

*While specific objectives of these schemes may vary, generally they seem to focus on provision of shelters. In a press release dated 6<sup>th</sup> April 2011, the Government of India (GOI) states that it has been providing financial support to states (through the Ministry of Housing and Poverty Alleviation) since 1989-89 to create shelters<sup>1</sup>. The objective of one of the earliest GOI schemes - the 'Shelter and Sanitation Facilities for the Footpath Dwellers in Urban Area', launched in 1992 was to "ameliorate the living conditions and shelter problems of the absolutely shelter-less households..." (Supreme Court Commissioners, 2011). This scheme was modified into the 'Night shelter for urban shelterless' in 2002, with the objective of providing a shelter to "urban shelterless population including street children and destitute women" (MoHUPA, 2002). Since 2011, the Shelter for Urban Homeless (SUH) scheme within the National Urban Livelihoods Programme (NULM), rechristened DAY-NULM (Deendayal Antyodaya Yojana -NULM) is being implemented to address homeless' needs. The objective of the SUH scheme is to "provide shelter and other essential services to the poorest of the poor segments" (MoHUA, 2018: p. 23).*

*It is unclear how much impact the early homeless programmes (before NULM) had on beneficiaries due to the non-availability of review / monitoring and evaluation documents (if any) in the public domain. However, the Supreme Court Commissioners in their 10<sup>th</sup> status report, 2011, reveal that the Night shelter for urban shelterless' scheme implemented in 2002 was withdrawn in 2005 because most states did not utilize the limited funds allocated for them properly. Our own investigation of the guidelines reveals that shelters were to be constructed with toilets and baths and could include a pay per use model for the toilets, suggesting that the scheme did not consider the economic conditions of the homeless.*

### Box 2: DAY-NULM and the SUH scheme

The mission of DAY-NULM is to reduce poverty and vulnerability of urban poor by enabling them to access self-employment and skilled-wage employment opportunities to affect meaningful change in their livelihoods in a long-term manner.

DAY-NULM recognises that the urban homeless are the most vulnerable among different sections of society with no access to shelter, social protection or basic services yet, are the backbone the economy of cities, through their services as informal labour. It, therefore aims at providing permanent shelter equipped with essential services to the urban homeless in a phased manner under the Scheme of Shelters for Urban Homeless (SUH). Specific objectives include, ensuring homeless populations have access to permanent shelters with basic services like water supply, sanitation, safety and security; catering to the needs of the vulnerable within the homeless such as dependent children, disabled, elderly by creating specific shelters or exclusive sections in existing shelters; providing access to entitlements such as PDS, ICDS, identity etc. and, formulating good management and monitoring and evaluation structures for the shelters by including state and civil society representatives.

The guidelines provide details on the design and location of shelters, what facilities they should offer, the desirable occupancy rate and role of government and non-governmental organisations. The funding arrangement is a 60:40 ratio between the centre and state. The guidelines also allow states to decide if they want to charge a “modestly priced” user fee from the residents to improve “their participation in the operations of the shelter”. This provision, even if not mandatory, is rather insensitive and inappropriate considering that the primary target group are homeless people who cannot afford to pay for accommodation. The Tamil Nadu Government has decided not to charge a user fee and therefore, shelters being run by the GCC in Chennai are free and open to all.

This scheme is being implemented by urban local bodies and overseen by the Commissionerate of Municipal Administration. The Greater Chennai Corporation (GCC) is tasked with programme implementation, monitoring and review in Chennai. Since 2014, the GCC has set up 51 homeless shelters across the city within the framework of the SUH scheme under NULM. Of these, 38 are general shelters that cater to different population groups and 13 are special shelters in hospitals especially for attendees of in-patients (table 10).

Type of Shelter		Number of Shelters
General Shelters	Children’s shelter (girl)	3
	Children’s shelter (boys)	5
	Developmental disability - Children’s shelter (for boys)	1
	Women’s shelter	9
	Men’s shelter	12
	Women and men shelter	1
	Elderly Men and Women shelter	2
	People with psycho social needs (women)	1

Type of Shelter		Number of Shelters
	People with psyche social needs (men)	2
	Physically challenged women	1
	Transgender	1
	<b>Sub-Total</b>	<b>38</b>
<b>Shelters in Government Hospital</b>	<b>Rajiv Gandhi Govt. Hospital</b> Poonamallee High Road, Park Town (near Central Station)	2
	<b>Kilpauk Hospital</b> Poonamallee high road, Kilpauk, near Chetpet Lake	2
	<b>Institute of Obstetrics and Gynaecology</b> Egmore, behind Egmore Station, near Institute of Child Health & Govt. maternity hospital	2
	<b>Institute of Child Health</b> Egmore, behind Egmore Station, Govt. maternity hospital & museum	1
	<b>RSRM hospital</b> Old Washermanpet, near Stanley medical	2
	<b>Stanley Hospital</b> Old Washermanpet, very near RSRM Hospital	2
	<b>Govt. Kasturba Gandhi Hospital for Women and Children</b> Chepauk, Triplicane, near stadium	2
	<b>Sub-Total</b>	<b>13</b>
<b>Total</b>	<b>51</b>	

Table 10: Break up of 51 homeless shelters managed by GCC | Source: Public Health Department, GCC

As such, the SUH scheme in the city is governed by a set of ‘standard operating procedures’ for institutionalising basic services for the urban homeless, released by GCC in 2014. GCC is one of the few ULBs in the country to release such kind of a document to ensure efficient functioning of their shelters. In this guiding document, GCC provides detailed specifications on the services to be provided in shelters such as food, water, sanitation, access to entitlements (table 11) and identity.

Entitlements
Birth Certificate / age proof
Old age, windows, and disability pension
BPL identification/ PDS ration cards/ Electoral card
Bank or post office accounts
Access to Anganwadi services/ Admission to government schools
Linkage with Tamil Nadu Urban Livelihood Mission (TNULM) / NULM
Linkage to National Urban Health Mission (NUHM)

Entitlements
Admission to all public hospitals with free medicines and treatment
Linkage to RAY
Free legal aid

Table 11: List of entitlements that shelters should provide

GCC also details the administrative arrangements for managing the shelters, roles and responsibilities of the government and other non-government organisations and the monitoring mechanism. NGOs are appointed to run shelters as per the requirement. The NGOs are required to first submit an expression of interest (EOI), following which GCC conducts a thorough appraisal by checking the credentials of the NGO to determine their ability to run the shelters. NGOs are also required to submit certification for fire safety, structural integrity of the proposed building, sanitation and police verification. For children’s shelters, the NGOs also need to align their shelter services to the Juvenile Justice (Care and Protection of Children) Act 2015. The appraisal process also involves a representative of the civil society, selected previously by GCC. Based on if they meet criteria, an MOU is signed between the NGO and GCC and the latter issues a license to operate.

GCC’s monitoring and evaluation process for the shelters is also quite comprehensive, involving NGOs and non-governmental experts and is conducted periodically every year. Shelter representatives that were interviewed all agreed that social audits are diligently conducted as per the procedure, recorded and shared with the shelters quickly. These social audits usually include representatives from Shelter Monitoring Committee, the zonal officers in the SUH programme, police, line departments, shelter residents and some parents (in the case of children’s shelters). During these audits, a thorough check of the state of affairs in the shelter is noted, updates provided and challenges discussed. Apart from these yearly social audits, GCC’s zonal officers conduct surprise visits several times a week throughout the year.

*“GCC also conducts shelter coordinator’s workshop every year where the coordinators share their experiences and they provide training on how to counsel residents. It was conducted in January, this year. But the training last year and this year was the same.”*  
*(Representative of a women’s shelter in Royapuram, 2019)*

*“GCC conducts audits every month. These are done properly as per procedure and are quite good. They come at the right time for their weekly checks – always in the nights when the kids are there and they also give a lot of awareness to the kids in terms of hygiene, safe solid waste disposal etc. whenever they come”*  
*(Representative of a boy’s shelter in George Town, 2019)*

### 4.3. Gaps in the SUH Scheme and Integration of DRR

GCC’s SUH programme has been generally hailed as quite successful. However, there are several inherent issues that need to be recognised and addressed to make the programme more effective. The most serious, and possibly unintentional, impact of the programme is that it does not address the needs of homeless families. There are no family shelters set up under the programme despite the presence of approximately 3742 families on the streets (Uravugal Welfare Trust, 2018), who naturally do not want to split up just to access the shelters. The city-level coordinator for the SUH programme, a government official from GCC reveals that the reason for not having family shelters is because families don’t want to leave, rather they end up utilising the space as a permanent arrangement. The civil society



representative of the Shelter Monitoring Committee, states that the GCC had opened two family shelters, both of which had to be abandoned because families considered them as permanent accommodation (*personal communication*).

This raises an important question regarding the ineffectiveness of linking beneficiaries of the SUH scheme to permanent housing programmes such as the PM's Housing for All programme and other welfare schemes operated by the state and central governments, which is critical for reducing long term socio-economic vulnerability. Perhaps, the underlying reason for this broken link lies in poor inter-departmental coordination between the government. For instance, GCC runs and manages the SUH programme while affordable housing schemes are implemented by the Tamil Nadu Slum Clearance Board (TNSCB). The focus of TNSCB is to provide people living in notified and un-notified slums, permanent housing and addressing the shelter needs of the homeless do not fit into this framework. It also raises questions on the ineffectiveness of linking beneficiaries to livelihood opportunities. According to one women's shelter representative, they provide skills training like candle making and tailoring but it is uncertain how much impact this has on enabling the women to be financially independent. However, there are shelters which have taken provision of livelihood support more seriously. A disabled women's shelter is helping women who come to them, to find jobs and provide them with access to short certificate courses, vocational training and skills training on sewing, quilting, jewellery making, etc. They have also increasingly found that training in sports allows the women to find jobs more easily and have begun to provide sports training as well. Several women who have accessed this shelter have gone on to find good jobs and become budding entrepreneurs.

Another major gap in the DAY-NULM programme (and consequently the SUH) scheme is the lack of integration with disaster management policies and programmes. Indeed, there is a general gap in mainstreaming disaster management efforts in social protection schemes in the country and the DAY-NULM is not an exception. Yet the lack of integration is significant because of it being a programme focused on improving the lives of the urban poor. Despite the absence of DRR mainstreaming, the homeless who access shelters may be argued to be more protected than those on the streets in the event of disasters. This is because at the shelters they have access to basic resources such as food, water, sanitation, health care and a roof on their head. Even during the multi-year drought from 2017 – 2019, when the taps almost ran dry, the shelters had access to free water (sometimes delayed) supplied by the city's water utility – Chennai Metro Water through water tankers. While access to basic infrastructure was generally not thought of as a problem by shelter managers, the current structure for shelter management and design does not seem to recognise the diversity within the homeless community:

*“We faced issues with the girls who has speech and hearing impairments. While we were getting prepared with candles, food etc. on the Sunday before Cyclone Vardha (2016), they did not realise or understand the enormity of the situation. Two of them got up early as usual, emptied the overhead tank by washing their clothes and having bath and left to work on Monday morning. Then we faced a really tough time getting them back home. The cyclone was passing on Monday morning and winds were pretty rough. We later understood that we needed proper people who are trained with communicating with these types of women to communicate important information.”*

*(Representative of a disabled women's shelter in Nungambakkam, 2019)*

From this description, it is evident the homeless comprise of people with different health and social conditions and therefore have different requirements, especially during disaster events. For instance, at the very least, shelters for persons with disabilities need to be designed to cater to people with hearing, visual and other impairments. Similarly shelters for the elderly need to cater to the needs of older people, for instance by ensuring good lighting, providing railings at convenient places including in the toilets. As much as physical design, it is equally important to invest in “soft infrastructure” such as capacity building and psychological support and in resources that would enable effective communication with residents about extreme events, the likely impacts and best practices before, during and after such events. Currently, the shelters are more focused towards disaster response, specifically making sure that shelters have enough stock of provisions, water and other requirements such as candles, emergency medical kits etc. before a disaster. According to a representative of a men’s shelter in Alandur (2020), “Before Cyclone Nivar, the city-level coordinator called the shelters to check if they have necessary stock of provisions, food, water and so on.” However, this current system is quite ad-hoc. Even including a brief presentation in the monthly shelter monitoring meetings will help create awareness and build capacity on disaster response. These provisions need to be included within the SUH programme architecture.

As such the manner in which the SUH is conceived and managed on the ground is also problematic, primarily because it is dependent on the NGOs running the shelters for success. It is up to the NGOs to decide how much and what kinds of supporting services and activities (apart from basic services and entitlements) they provide their beneficiaries. For instance, some kids shelters take the kids that come to them, on field visits to parks and the beach and, organise activities like arts and craft to help overall development of the kids. However, this is not prevalent across all the kids shelters. In fact, even provision of psychological support from trained counsellors is not mandatory as per the programme, yet this is essential for all shelters irrespective who they cater to. Providing this additional support requires adequate financial resources which, the NGOs are not endowed with and often provision of support activities seem to be exception rather than the norm. Disbursements and support from the government for the SUH programme is typically delayed and is inadequate. This was explained by a number of representatives running shelters:

*“the biggest issue is getting the financial support from GCC. We haven’t been paid since April 2019. So we have to organise funding from other avenues and it is quite a big strain on us.” (Representative of a women’s shelter in Royapuram, 2019)*

*“fund disbursement from GCC is quite late – they are never prompt in sending the amount to the shelter so we always have to scramble for funds from other donors. Internally, it is a challenge when the infrastructure like piping breaks down. In such cases our staff need to actively push GCC / Metro Water to get their work done and this is an additional burden to the already tough task of running the shelter. We as an organisation don’t want our staff – who are very well qualified - to face these difficulties.” (Representative of boy’s shelter in Zone V, 2019)*

Also, GCC’s engagement with the shelters appears to be regimented with no scope for encouraging innovative and creative solutions to short term or long-term problems. A shelter representative noted,

*“GCC’s NULM team needs a visionary leader who understands the big picture. Right now, they are working by a checklist procedure with a narrow view. That’s not how shelters are run. They are like the strict headmaster with children (the NGOs). The NGOs don’t have the space to voice their opinions or criticise the GCC because they get penalised. Even the GCC staff, while they are a huge team, they don’t have the understanding or right expertise to run shelters. As a result, they don’t leverage the strength of the NGOs to encourage them to improve their shelters. They want all the shelters to be the same but each NGO has their own USP. For example, some maybe good at advocacy, others at counselling, others at rallying volunteers etc. these need to be encouraged and GCC should be able to recognise the strengths and weaknesses of the NGOs and provide support accordingly.”*

*(Representative of a disabled women’s shelter in Nungambakkam, 2019)*

Finally, the fact that engagement with the homeless is happening through a programme and not a policy makes the entire arrangement uncertain because the programme can be modified/ terminated anytime. The scope of programmes in general are much narrower with specific objectives and targets that are aligned with policies, which are more overarching, concept documents on a specific sector that outlines the vision, goals, target groups, strategies and intentions of the government, for the development of a sector (Annamalai et al., 2017).

#### **Key Findings from Chapter 4**

- 1. While national and state disaster management policies and programmes recognise the need to provide special attention to, and engage with, certain vulnerable groups like women, children and the differently abled, they do not explicitly recognise the homeless. City level disaster management policies also need to be more explicit in engaging with vulnerable communities including the homeless in disaster mitigation.*
- 2. Disaster management / risk reduction concepts currently not integrated in the SUH programme (which is the only programme for the homeless) through a formal framework while ad-hoc measure to reduce disaster impact and increase preparedness exists.*
- 3. Shelter for Urban Homeless (SUH) Programme also currently does not link to other welfare schemes especially those which provide access to housing for the urban poor which is critical for reducing vulnerability.*
- 4. Among the homeless, families living on streets are more vulnerable to flooding and intense heat than those who can access shelters, specifically in Zone V. This is because a significant number of streets, with large concentrations of the homeless, are prone to flooding and the extent of green cover in Zone V is the lowest compared to other zones. Maximum intensity of temperatures is also observed in this zone and the larger region in which this Zone is located.*

## CHAPTER 5: THE EXPERIENCE OF CHENNAI'S HOMELESS – COPING WITH EVERYDAY DISASTERS

Chapter 5 presents findings from primary data collected through surveys and FGDs. It is divided into five sections. The first four sections provide a description of the socio-economic background of the homeless and elucidate their everyday and disaster vulnerabilities, while the fifth section focuses on the COVID-19 pandemic and its impact on the homeless. Apart from primary data, this section also draws on secondary data from the literature review.

### 5.1. Socio-Demographic Profiling of the Homeless in Zone V

We conducted a survey to get a sense of the social-demographic profile of the homeless community living around/along certain roads or landmarks which may be described as hotspots within zone V. This profiling exercise provides a basic understanding of who the homeless people are, what they do, how long they have been living on the streets etc.

In total we surveyed, 249 individuals amongst whom majority (85%) were women and relatively larger proportion were from the age group 30-59 (nearly 60%). Majority (88%) reported that they were married and lived with their families. In fact, during FGDs the participants explained that wherever families have been living for generations, they remain vigilant and do not allow individual homeless people to encroach. This is largely due to safety concerns for their own children and families. Therefore, individual homeless, often migrant workers from other parts of the state and country tend to find different spots to live in such as under flyovers, on pavements, near transport hubs i.e., railway stations, bus stands

The education level and the kind of jobs the 249 respondents are engaged in suggests that they experience insecure livelihood which puts them in a particularly vulnerable position with respect to accessing basic resources. Figure 15 highlights that majority (57%) of the 249 people surveyed are illiterate while only 14% reported to have studied up to 12<sup>th</sup> standard and another 70 (29%) reporting to have attended school up to 5<sup>th</sup> standard.

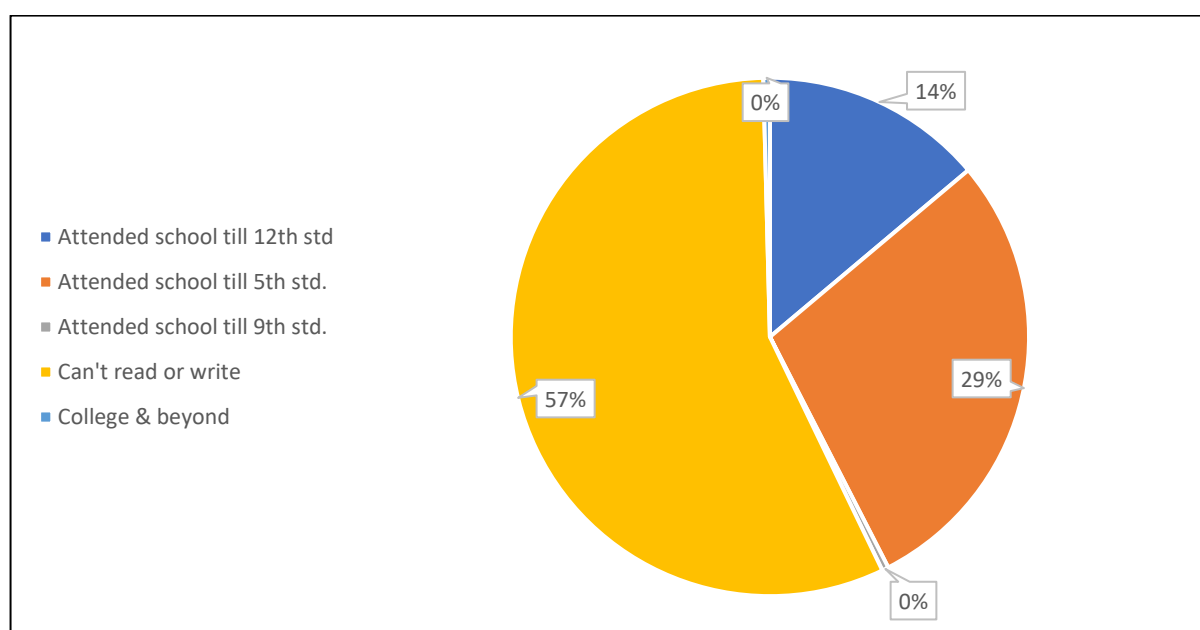


Figure 16: Education level of homeless in Zone 5

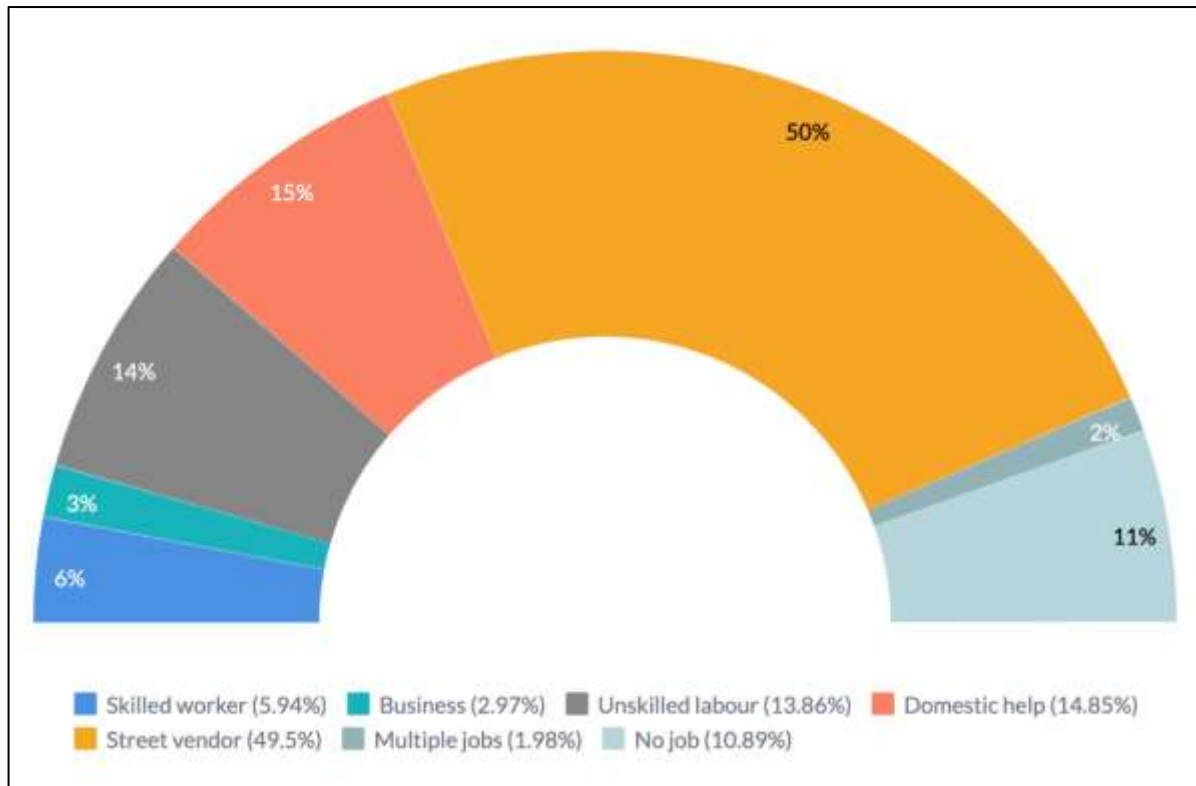


Figure 17: Job type

Street vending seems to be the most common type of work that the surveyed individuals are engaged in (50%)<sup>14</sup> (figure 16). As street vendors, the respondents are engaged in selling fruits, vegetables, flowers and fish on pavements. Street vendors who are registered with the government, are in fact, supported by the National Government through the NULM programme in the form of access to skills training offered through the same programme, access to credit facilities and basic banking services. Additionally, street vendors who are women and/or from SC/ST communities have access to various national and state level social security schemes. Amongst the respondents interviewed, however, only 54% have registered with the government.

Many, mostly women, also worked as domestic help in the nearby households. While amongst those surveyed only 15% reported to be working as domestic help, during FGD interactions it became clear that a much larger number of homeless women work at other people’s homes cleaning, washing, cooking for them. However, very few seem to know about the domestic workers’ welfare board etc. to reflect on the level of stability and security from livelihood perspective. On registration with the board, works are eligible for assistance for education, marriage, maternity, spectacles, death benefits and pension for unorganised sector workers. Some men also work as coolies loading/unloading stuff for nearby shops (e.g. in Stringer Street. & Anderson Street.)

The profile of the individual homeless people we interviewed in other areas of the city was quite different. Almost 72% of the 50 homeless we interviewed were male and 78% of them have been living as homeless for more than 1 year. Of this 78%, 46% have been living as

<sup>14</sup> This is partly because during the daytime when the survey was done out on the streets, those who work as domestic help or the other skilled and unskilled workers were likely at their jobs.



homeless in the city for more than 10 years. Unlike the previous group (homeless living with families), many of these individuals reported to have come into this situation due to the death of a close family member like spouse or child and expressed their feelings of loneliness and frustration with life. Field observation also indicated that nearly all of the 50 respondents suffer from some mental health or physical health issue. This generic difference in socio-demographic profile is indicative of the fact that the needs of those living on the streets individually or as families are likely to be different.

## 5.2. Everyday Access to Basic Needs

The very lack of access to homes added with the precarity and uncertainty of their livelihood suggests that these homeless families are likely to have limited access to some of the basic needs, such as food, water, sanitation facilities and healthcare. Interestingly, many of the surveyed individuals said that they were able to access food on a daily basis either by cooking their own food (68%) or buying from local hotels/ pushcart vendors (28%). During the FGDs, this was further corroborated as participants explained that they usually did not have trouble feeding their families as most of them are into some kind of job. In fact, the group of homeless families living in and around NSC Bose Rd in George Town reported that they usually buy their meals from individuals who cook and distribute food in pushcarts or bikes at a cost (approximately Rs. 60 for a plate of biriyani), while others buy from local hotels. The key issue was that during rainy season, cooking in the open became a challenge for these homeless households (figure 17).



Figure 18: A homeless family taking shelter from the rains | Source: IRCDUC



Similarly, most people responding to the survey (74%) also said that they access water through the Metrowater Tankers and a fewer people said that they get water from public taps. During FGDs, it was clarified that Metrowater tankers come every second day and supply water for a cost (about Rs 1 for one pot as reported by residents of Davidson Street) to the homeless families whenever needed. In NSC Bose Rd. for instance, the local gatekeeper, maintained a good rapport with the local Metrowater engineers and called for tankers when needed and informed all the families so they can come and collect water when supply arrives. While these groups depend on Metrowater tanker supply for most usage, for drinking water they often buy bubbletop cans at Rs. 30 once in two days or so.

As for the homeless individuals interviewed, most (54% of the 50 respondents) reported begging for food or money with which they buy food. Some of them also depend heavily on temples to give them food (56% of the 50 respondents), especially many homeless living in Mylapore, seem to depend on the Saibaba Temple for food and water. Few also mentioned begging for water from nearby hotels.

Access to toilets however seemed to be a greater challenge for the homeless, both individual and those living with families. 94% of the individual homeless respondents said they access public toilets (such as toilets in railway station i.e., MRTS stations). Since this group do not have a “permanent place” on the street they may use public toilets for washing clothes, bathing etc away from where they may be living at the time.

In contrast, 95% of the surveyed (most of whom live with families) said that they use public toilets in the vicinity of their place of living. They usually have to pay a price for toilet usage (Rs. 5 per visit). Our GIS mapping of public toilets in the area suggest that there are only 2 public toilet facilities (each with 3 cubicles) available. During FGDs, concerns of adequacy and cleanliness of toilets stood out as major concerns. For instance, during our interaction with the residents of Davidson Street, the participants pointed out that there was only one toilet with three cubicles at the intersection of Davidson Street and Jones Square that served the whole area. This was not well maintained and remained unclean most of the times. These residents explained their dilemma by pointing out the expenses they have to incur for such a basic human need:

*“We use the toilets at least once a day but if people are sick then we have to use it more, so pay more. Even for the kids we have to pay Rs 5.”*

**(FGD participant, Davidson Street, 2020)**

Another Davidson St. resident highlighted how the homeless people’s vulnerability is reinforced because they cannot afford to satisfy the central issue of access to a home as they continue to struggle to access more immediate needs:

*“In general people say, you are earning so much, why are you still living on the streets, but all our earnings go in these kinds of things – like paying for the toilets, water, buying food. We don’t save anything.”*

**(FGD participant, Davidson Street, 2020)**

Given that the homeless live and often also work, out on the streets irrespective of the extreme heat of Chennai summers and the rain during the Northeast monsoon months of November and December, they remain vulnerable to some common ailments such as fever and stomach related illness. These are triggered by long hours of exposure to heat and rain,

inability to store food and water in clean environment, maintaining personal hygiene etc. A substantial part of the surveyed homeless (69%) reported visiting government hospitals either every few months or on a monthly basis. Interestingly, they also reflected that most hospital or Corporation Urban Primary Health Centre (UPHC) visits happened during the rains (between September to December), or during winter (January to March) (figure 18). This could be because 60% of those visiting a health care centre do so for fever and flu related illnesses which are more frequent during the monsoon months and winter (Jan- March).

In contrast to families, a large section of the individual homeless (22% of the 50 interviewed) seem to largely avoid going for healthcare centres, public or private. This is likely because they do not care so much about their health. Others (nearly 60%) reported visiting government run hospitals including local UPHC when required.

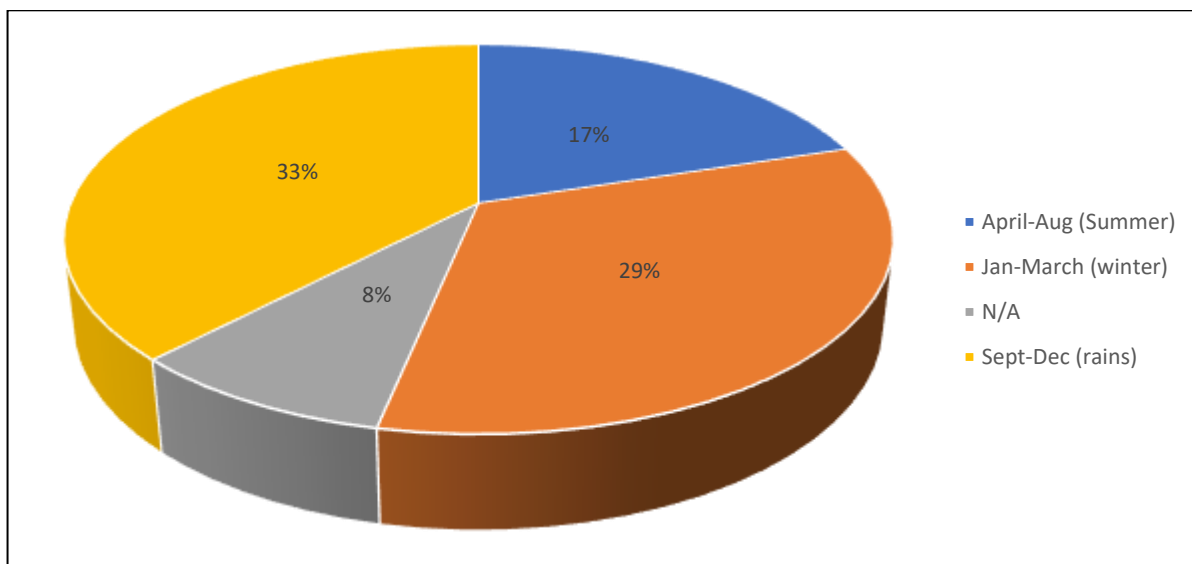


Figure 19: Season of hospital visit

As such, while the community’s access to certain basic needs such as food or water may seem unproblematic in the first instance, if we think of the nuances of access in terms of the quality, quantity, and the price of these resources for the homeless, the everyday struggle of the homeless become evident. Therefore, many of them raise concerns not about availability of the basic services, such as food or water, but about in-accessibility of the services and other like having storage space to safeguard items during rains, due to affordability and quality issues. The issue of sanitation is equally, if not more severe in terms of lack of adequate resource, price attached, as well as the quality/cleanliness of the existing facilities which has direct implications for the health of the homeless community.

### 5.3. Community reflection on disasters: Everyday is a disaster!

When asked about the key reasons for their vulnerability, our respondents rarely talked about disasters like cyclones, or floods until the point they were explicitly prompted to. Instead, the homeless families spoke readily about how vulnerable they feel to risks of eviction, criminalization, and stigmatization. Residents of Davidson Street spoke emotionally about a relatively recent event:

*“In 2018, in April, the government came and with so many cops as though they were trying to catch criminals and damaged everything and all our belongings to make us vacate. All the ladies were arrested including us. The corporation have become silent. Local shopkeepers, companies complain that the drunkards are creating trouble so through the high court they send police to harass. This is very common and keeps happening.”*

(FGD participant, Davidson Street, 2020)

About the treatment of the police in one of hotspot areas where we interacted with the homeless residents, one person explained:

*“They generally harass us and say we can’t eat / live by roadside. They make us vacate. They don’t allow the men in our families to be here. Some of them abuse our women especially old women by saying “why are you sitting on the vehicle (meenbadi)<sup>15</sup> being a woman. Get up and sit down. Are you such a big person... They file false cases especially against our children. If they make any small mistake, they file a case and make it a big issue.”*

(FGD participant, Davidson Street, 2020)

Another aspect of criminalization of the homeless was apparent when they reflected on the garbage collection trucks as some kind of miscreants intermittently disrupting their lives.

*“The ‘kuppai lorry<sup>16</sup>’ or ‘kola lorry<sup>17</sup>’ sweeps up all our belongings and takes it indiscriminately like its garbage. The kola lorry comes once a month with the police. This is a huge problem. Once it took our certificates.”*

(FGD participant, Davidson Street, February 2020)

Hence, the homeless felt criminalized and often harassed by both local authorities, specifically the police, and sometimes also by the local people, shop owners, and institutions many of whom refuse to lend a helping hand and lack empathy for this vulnerable group. This was evident when we were denied access to the premises of a local church when we gathered there to conduct a FGD with a group of homeless people. While we tried to explain that we will not go inside the church, rather use the public open space around the church to sit and have a discussion which should be over in 45 mints to an hour. Seeing a cluster of homeless individuals, the church guard refused to let us use the space. Eventually, we conducted the FGD in the car park of a local company where one of the participant’s friend worked as cleaning staff. Similar reflections were presented by others about how often local residents and shop-owners complained about the homeless people going about their daily chores including cooking on the streets or refused to give shelter to those trying to protect themselves from rain.

However, exceptions were also mentioned where in one of the sites where we conducted a FGD, the homeless participants suggested the supportive attitude of the local Police and the role played by Local Sub-Inspector to raise awareness on maintaining social distancing and wearing masks. Similarly, in one other location, respondents spoke of the helpful nature of the local North Indian residents, who seem to happily lend a helping hand even during normal times. The individual homeless interviewed in other parts of the city also acknowledged getting food and water regularly from temples, even during the COVID-19 lockdown period

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<sup>15</sup> A ‘meenbadi’ refers to three-wheel vehicle or contraption (which is illegal) that consists of a motor, a handle bar and one seat for the driver with a large wooden plank at the back.

<sup>16</sup> ‘kuppai lorry’ translates to garbage truck.

<sup>17</sup> ‘kolla lorry’ translates to killer lorry.

highlighting a reasonably sympathetic outlook amongst these civic players towards the needy.

The homeless were also worried about the safety of their families and their belongings (however limited that may be) and described themselves as vulnerable in this respect. Many spoke specifically about the safety of women and children. During nights as women sleep on the streets, they are at risk of being sexually harassed by drunk men – as such one family man suggested,

*“So, none of us sleep properly...in the night, somehow one person in the house is awake – either an elderly person, or the men in the house.”*

(FGD participant, Davidson Street, February 2020)

Children’s risk of being runover by vehicles, especially during the night, or while they are playing on the streets was also highlighted. While this did not happen frequently, some of them collectively recalled a past incident where two small kids died on the spot when an out-of-state truck ran them over near the church.

When prompted to think about their vulnerability in terms of natural or weather-related disasters like floods, cyclones, earthquakes etc, homeless participants mentioned the 2004 Tsunami, the floods of 2015 Cyclone / floods / heavy rain in 2006, 2015, 2016, but readily highlighted the threat posed by even the slightest of rain during the year.

Using a seasonal mapping exercise, the FGD participants were asked to reflect on their disaster vulnerability. Their reflections highlighted that it is not the big one-time disasters that they worry about most. Rather the regular yearly events of rain and extreme heat present a greater challenge and make them feel vulnerable (figure 19).

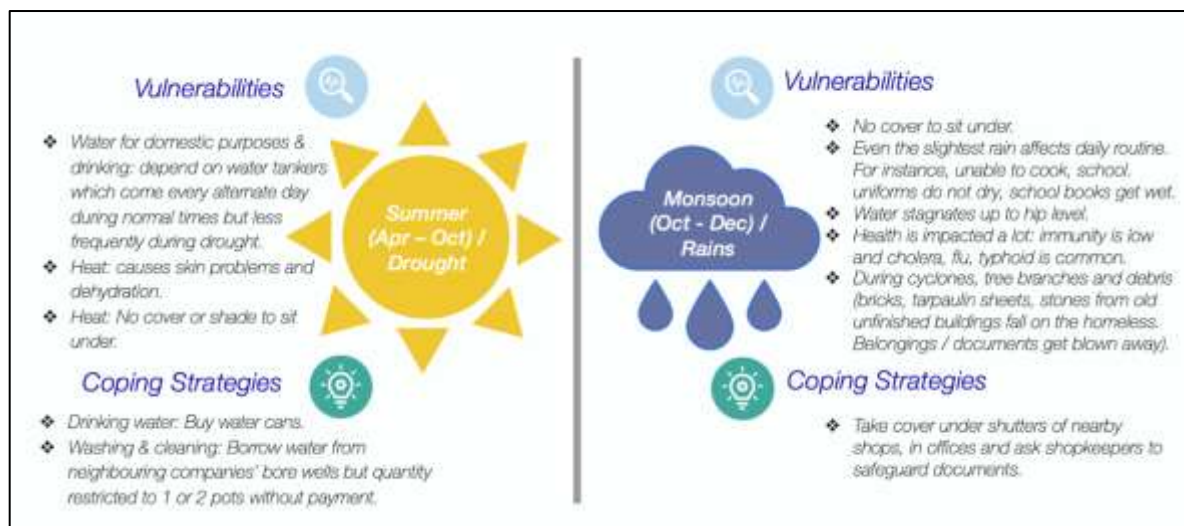


Figure 20: Seasonal vulnerabilities and coping strategies of homeless families living on the streets | Source: Author’s own

Thus, two key points emerge from these reflections. First, that for the homeless everyday vulnerabilities with respect to access to basic resources, safety, and social acceptance remain more relevant and immediate concerns. Second, these everyday precarities aggravate their vulnerability not only during the occasional disaster events, but also their vulnerability to the

yearly cycle of rain and heat commonly experienced in Chennai. Therefore, in their collective memory, 2015 floods or the more recent drought of 2019 do not stand out as exceptional events. Instead, they recall getting some relief from locals and local authorities during such disasters, while they struggle to meet ends and go about their daily lives during the normal monsoons!

#### 5.4. Coping Strategies – The Role of Social Capital

An interesting part of the life on the street seems to do with existing social network that provides the required support to the homeless families to cope with these everyday precarities or vulnerabilities. During the FGD at George Town it was evident that the participants and other passers-by knew each other well. One of the ladies we spoke with was the community's gatekeeper and functioned like the community leader – everyone working/living in the area pays her a certain amount (if they want to engage in sales etc. permanently); she is the one who organizes food, water etc for everyone by contacting Metrowater tankers when required and coordinates with local hotels for food supply. She also provides small loans to families when needed.

While we conducted our field work one woman left her few months old child with an elderly lady participating in the FGD and left to go to her job (she worked as a domestic help in a nearby house). In absence of access to child care facilities these women would find it difficult to go to work without this community support. As such it was obvious that the homeless depend heavily on the social relations and support each other immensely to survive and go about meeting their everyday needs on a daily basis.

This perhaps is one of the key reasons why these families do not want to be relocated elsewhere. Even during Covid-19 outbreak, the homeless groups did not prefer to be moved to the homeless shelters away from this network and into 'confinements'. They have an established social support system built without which they feel even more vulnerable. This issue of social capital emerges as a key strength and coping mechanism for the homeless in the next chapter on their exposure to the COVID-19 pandemic.

## 5.5. The COVID-19 Experience

The pandemic and lockdowns have exposed the vulnerabilities of other urban poor communities such as low-income groups living in slums and resettlement colonies and migrants. It has brought several communities, especially in the migrants to a state of homelessness, thereby linking their experiences with those who are already homeless due to other reasons. This section therefore presents a description of the homeless' experiences of the pandemic interspersed with experiences from other poor communities in the city as well.

While the homeless seemed to be more worried about the usual rains, and the difficulties associated with accessing good quality water, and their children's health in summers and monsoons, than the occasional floods, droughts or storms, COVID-19 pandemic and associated lockdown exposed them to an unprecedented challenge. The following statement from the homeless highlights this:

*“Even the slightest of rain is like a flood for us, we have learnt to face it every year. During summer the children get heat boils, though it is difficult to manage during the rains or summer we have managed to face such disasters, but this Corona is very scary...we do not know how long it will last. How long can relief agencies provide relief?”*

(FGD participant, Stringer St./Anderson St., June 2020)

COVID-19 pandemic started in India by middle of March and by March 24<sup>th</sup> 2020, Government of India declared strict lockdown which continued until 3<sup>rd</sup> May 2020. Chennai, however went in and out of 'strict' lockdown and it was not until 6<sup>th</sup> July 2020 that the city started to slowly reopen. Ironically, Chennai started to reopen (like most other Indian cities) despite spiking COVID-19 cases due to the economic repercussions. The following timeline (figure 20) provides a temporal illustration of how the pandemic played out and the key events associated with its management.



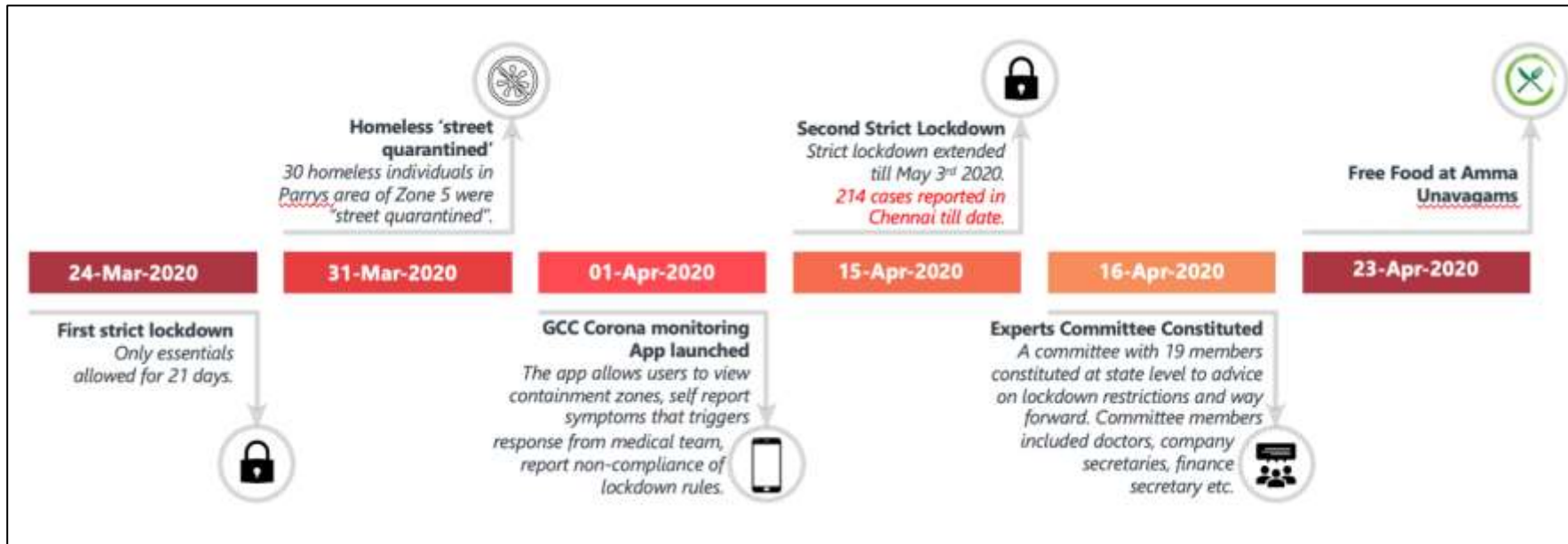


Figure 21: Timeline of selected events linked to COVID-19 first wave in Chennai

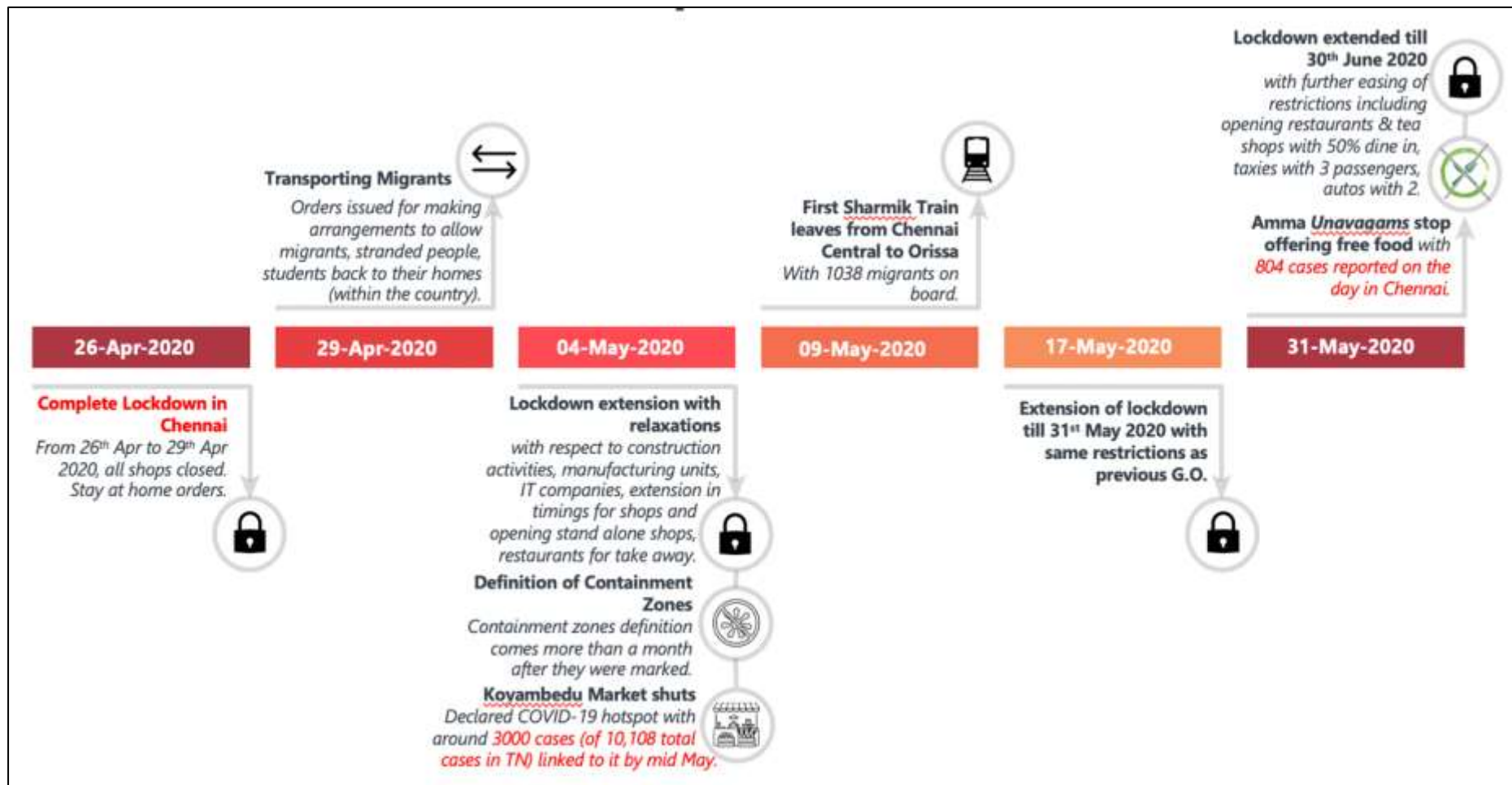


Figure 22: Timeline of selected events linked to COVID-19 first wave in Chennai

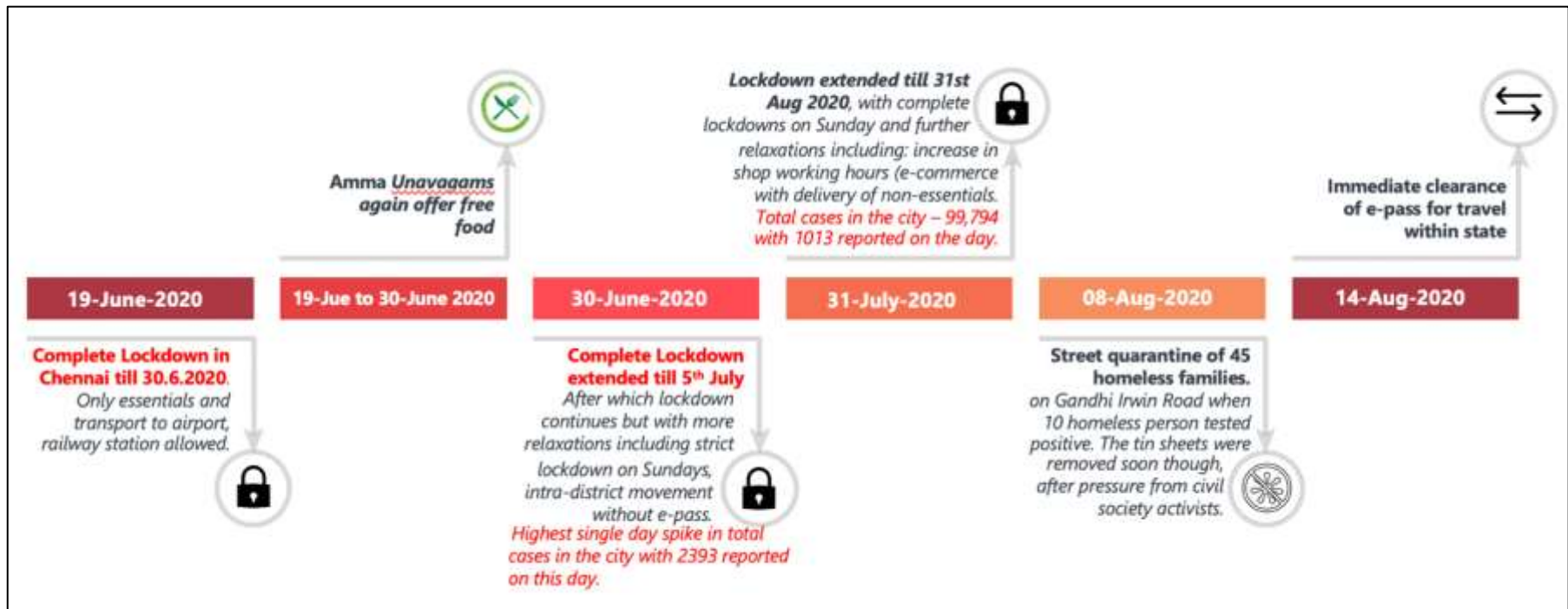


Figure 23: Timeline of selected events linked to COVID-19 first wave in Chennai

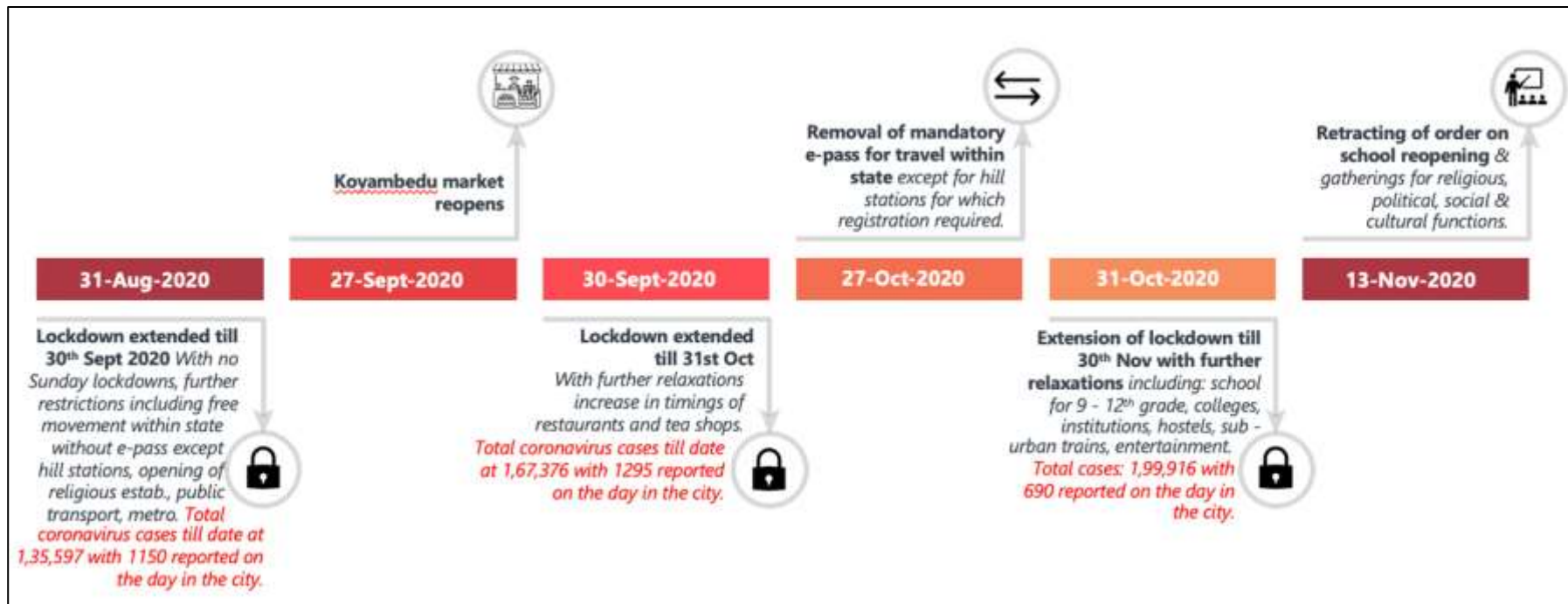


Figure 24: Timeline of selected events linked to COVID-19 first wave in Chennai

During the lockdown, homeless people lost their livelihoods. The large number of street vendors were not allowed to set shops and neither were they able to procure fruits and vegetables for vending. Occasionally, when they were able to procure or were allowed to sell, there was hardly any customers to buy. Men working as coolies did not have work. As daily wage earners, most homeless people and indeed other marginalised communities as well, were in a particularly vulnerable situation struggling to feed themselves. Similarly, the large number of domestic helpers, mostly women lost their jobs as employers preferred not to allow them to work to keep their families protected from COVID-19. Without any early warning from local authorities regarding the lockdown, the homeless and economically vulnerable people lost their jobs overnight. Nearly, 36% of the 50 homeless individuals we interviewed stated that their situation had worsened during Covid-19 outbreak primarily because they had lost their jobs and were no longer able to meet their everyday needs. Thus, in addition to the high risk of exposure to the virus while living out in the open and in congested environments with generally limited access to water, toilets, and nutritious food, the homeless were facing a dire situation where many felt more threatened by the government-declared lockdown than the virus outbreak itself.

*Box 3: Plight of Migrants*

*With the sudden announcement of the lockdown, migrant workers, from other districts of TN and from other states, were left stranded. As they typically work in the informal sector as daily wage labour, the lockdown meant that these migrants were suddenly left without jobs and consequently without a means to meet their basic requirements of shelter, water, sanitation, hygiene and healthcare. They also did not have money to go home. While, those that were from other states, received support in the form of dry rations from their respective state governments, migrants from other districts of TN did not have access to relief provided by the TN government through the ration cards since their ration cards were registered in other districts and not their place of work. In fact, the TN government also paid for the Shramik trains to transport migrants back to their respective states.*

As homeless families as well as other low-income families lost their sources of income, they were unable to feed their children. The fact that the schools were closed worsened the situation as these children did not have access to the mid-day meals offered at the school. Tens of thousands of families became largely dependent on relief supplies offered by local NGOs, individual donors, and the local authorities.

Homeless families in particular were the most vulnerable to COVID-19, as they lacked the very first line of defence, i.e., a home. While the number of cases and definition of containment zones kept changing, Zone 5 continued to have high number of containment zones for several months. It is important to note that these are also the zones with highest concentration of homeless and highlighting the higher risk this group is exposed to.

Despite the obvious vulnerabilities of the homeless, the government was slow to recognise the impacts of the pandemic on this group. Initially when a person living in a flat was tested positive, the entire street was quarantined, and this included the homeless living on the street who were 'street quarantined'. This meant that they did not have access to toilets, water and food! When these implications were realised, and with considerable pressure from activists, the tin sheets used to barricade the streets were removed. There were also

instances where the government tried to round up homeless people to take them to shelters however it is unclear if they were successful. Homeless families were reluctant to go to shelters because they could not take all their belongings with them while homeless individuals generally tend to vary of going to shelters for the fear that they will be 'locked up' (ref: interviews with homeless individuals).

Additionally, the state-imposed lockdowns resulted in several migrants and others becoming homeless which led to the shelters being overwhelmed. Even before the lockdown was announced on March 24<sup>th</sup> 2020, the shelter helpline numbers were inundated with calls from residents of states and districts who were stranded in the city. GCC is also reported to have given pamphlets to some homeless people urging them to stay in shelters (Narayanan, 2020b). These shelters were disinfected regularly, and residents were given immunity boosters such as '*kabasura kudineer*<sup>18</sup>'. However, there were reports of shelters turning away new people for the fear of them carrying and spreading the virus to existing residents (Aditi, 2020). In fact, to safeguard existing shelter residents, GCC insisted that new residents were checked for symptoms in nearby hospitals and were also asked to produce negative COVID-19 tests. While from a health and safety perspective this was perhaps the right procedure to follow, it impacted those desperate for shelter because it took a couple of days for the test result to come during which time, they did not have access to a shelter or water, food and toilets. It was only after activists pushed for opening up community halls and schools, towards the end of March, that the load on the shelters reduced and the homeless were taken in immediately. By the end of July, 2020, according to GCC,

*"During the COVID-19 epidemic a total of 4198 residents were in the shelters, they were provided with three times hygienic nutritious food, face masks, hand wash and sanitizer for their self-protection."*  
(GCC – SUH city level coordinator, 2020)

Even in terms of health care, there was very little state intervention to test the homeless. While, GCC organised door-to-door testing for all families living in formal settlements, resettlement colonies and to some extent, slums, it did not do the same for the homeless, living on the streets. In fact, according to an NGO working closely with homeless families in Parrys – north Madras, they monitored and test the homeless for COVID-19 symptoms not the local government. The NGO representative also stated that while their NGO covered this area, they are not sure if homeless persons' health in others parts of the city were monitored. While no explicit tracking and testing of homeless people were conducted, GCC did hold fever camps every day in every zone a few months into the virus. These camps were organised to screen and test persons with symptoms and were typically held in community halls / schools. They were accessible to everyone and GCC continued to hold these till Dec 2020.

While in general, the homeless were severely affected by the pandemic and the resulting lockdowns, not all homeless persons were impacted in the same manner. For instance, the impact on homeless families was different from the impact on homeless individuals. In fact, amongst 50 homeless individuals we interviewed in southern and north western Chennai, 62% stated that they felt no impact because of the pandemic. According to the respondents

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<sup>18</sup> '*kabasura kudineer*' refers to an ayurvedic drink that is popular to manage the COVID-19 infection in positive patients.



this was because they were dependent on others for food and water before the pandemic and continued to be dependent on others for the same during the pandemic as well.

#### 5.5.1. How In-access to shelter, sanitation and food impacts homeless people’s experience of COVID-19

Despite efforts made by local authorities and NGOs, the vulnerability of the homeless has been extreme on account of their everyday in-access to basic resources, most important of these being in-access to homes.

In a newspaper article, a homeless person was reported saying,

*“... they (policemen) keep asking us to go back inside whenever they see us. What do they mean by inside? We live on the street!”*  
(Viswanathan 2020)

This statement highlights the precarity of the state of homelessness. While most people took refuge at home to stay safe during the lockdown period, this was not a choice that the homeless had.

Indeed, all the common mantras associated with COVID-19 prevention, such as maintain social distancing, wear masks, and wash hands regularly, all seem largely inapplicable for the

*Box 4: The importance of access to safe and adequate WASH for the urban poor*

*Apart from the homeless, other low-income communities across the city also face hurdles in accessing WASH facilities despite having access to shelter. Typically, residents of slums, resettlement colonies and other low-income settlements often have to share community toilets which are inadequate and in-hygienic and these settlements themselves tend to be congested with not enough space to distance. For instance, in May 2020, low-income families, whose houses were being redeveloped in Pulinathope protested due to the inadequacy in public toilets available in their temporary shelters and the inadequacy of space to maintain physical distancing when a few residents tested positive for the virus (Narayanan, 2020). Even in resettlement colonies such as Kannagi Nagar, Semmancheri and Perumbakkam, the lack of access to space, to distance, when people test positive was stark because these housing units are small i.e., between 120 sq. ft. and 400 sq. ft. often with each family typically having several family members and each resettlement sites consisting of tens of thousands of units (Narayanan & Serena Josephine, 2020).*

homeless population. The homeless families and individuals usually share small spaces out in the streets within temporary set ups built of tarpaulin, cardboard, plastic sheets etc. Having lost income sources during the lockdown, there was no question of these people buying masks, any other protective gears, or sanitizers and soaps. Some of them highlighted that local NGOs and GCC distributed some masks and occasionally soaps and shampoos to maintain personal hygiene. However, such relief support did not reach everyone. To top it all, the homeless who depend on limited numbers of ill-maintained public toilets under normal circumstances were now at a higher risk of catching the COVID-19 virus because a) they do not have a choice but to share unhygienic toilets and b) because they cannot afford to access toilets or access enough water to wash hands frequently. Even during the lockdown, public toilets were accessible only at a

charge of ₹5 per use, restricting access and highlighting the inflexibility of the system to adapt to a disaster.

The dire situation became obvious when a newspaper article reported the dilemma that the homeless groups were forced to face in containment zones. The report suggested that, “While it is usual for Corporation staff to quarantine those in the neighbourhood of a person tested positive for the Coronavirus, they were in a bizarre situation on Tuesday, left to ‘home’ quarantine a group of homeless families” (Vishwanathan, 2020). They reacted by barricading both the ends of the street where one individual had tested positive, essentially “street” quarantining 30 homeless individuals living on this street. While food was made available, initially no explicit attention was given to the fact that this meant that the quarantined individuals did not have access to toilets, let alone any possibility of washing hands regularly! While there was a discussion within government to set up temporary toilets within the containment zones for homeless persons to access, it was found that the easier and quicker option was to simply allow people to access public toilets.

Provision of relief, which began at the end of March and continued till November 2020, involved distribution of food and/or dry rations and water bottles initially. For instance, during the early days of the lockdown, in the *Parrys* area of Zone 5, one NGOs provided relief in the form of food packets and later dry rations. Recognising that women and children constitute a significant number of homeless living on the street, the dry rations also included sanitary napkins, multi grain powder and pluses like chickpea to help meet MHM needs and help improve nutrition levels. When restrictions were being lifted, the contents of the relief kits changed to include more supplementary nutrition for children, pregnant and lactating mothers and the elderly such as dry fruits, dates and health mix (figure 21). By November, the homeless were also provided with tarpaulin sheets to protect them against the rain (personal conversation with IRCDUC). It must also be noted that this NGO involved the ‘beneficiaries’ in selecting the contents of the relief kits ensuring that the process was participatory and actual needs were met, given the budget. A similar process was also



Figure 25: Distribution of relief material to the homeless | Source: IRCDUC

followed by another NGO, who provided relief to families from low-income settlements in the southern and western part of the city. Despite the relief provided by these NGOs and

other citizen-based groups the relief distribution was quite unequal with some people getting more than required relief while others got barely any (see *Section 6.2 COVID-19 pandemic* for more details).

COVID-19 has also underscored the lack of a human centric disaster management approach that recognizes the diversity among homeless groups. They comprise of people at different stages of their life cycle (children, adolescents, adults, elderly) with different physiologies (e.g., male, female, transgender) and different health status (e.g., pregnant women), and therefore can be impacted differently. Discussions with the homeless in Rattan Bazar revealed that their children who were dependent on the mid-day meal scheme, at school, for nutritious food, now had no access to these (FGD 2). This was also the case with children living on Stringer Street (FGD 3).

However, as the lockdown continued for nearly 3 months, the government, NGOs and those engaged in relief and response began to understand the situation better and are constantly learning and improving on the job. For instance, in some areas of Zone 5 such as Rattan Bazar, the police, with whom the homeless typically have a tenuous relationship, have played a supportive role during the pandemic, by organising relief and food and, creating awareness on the virus and prescribed behavioural norms (FGD 2). Indeed, this virus outbreak and the uncertainty associated with its manifestation and cure has exposed us to a disaster situation that we, as a society, have never experienced in the recent past. Therefore, the reactionary approach is understandable. Yet this situation should pave the way for a more community driven and proactive approach so we are better prepared for such future events.

#### 5.5.2. Coping strategy: Role of social capital and active communities during the COVID-19 pandemic

Once again community and social networks/capital seem to play a key role in helping the homeless groups sustain. Here, we must note that social network/capital is not just the internal relations between friends/neighbours, but also the relations/linkages that a community maintains with people and organizations with power to make a difference, for instance the local authorities or NGOs and CBOs. Wherever, this social network was strong, the community seemed to be in a better position to cope with disaster situations more efficiently mobilizing these linkages.

For instance, during the pandemic and lockdown, in Rattan Bazar, and Stringer St./Anderson St. the pre-existing connection with local NGOs ensured that the residents received either cooked food or dry rations from day one. While support was also provided by local MLA and some shop keepers in the area, much of the relief came from the NGOs. Some of these NGOs carried early rapid assessments to understand community level vulnerabilities and needs and were sensitive to the nutritional needs of children, pregnant women, and lactating mothers while organizing relief. Food kits offered by these NGOs included dry fruits, chickpeas, and fruits specially to cater to this population.

The homeless group living in Stringer Street/Anderson St. also managed to leverage their relations with local political leaders to put up a hand pump in the area to ensure that the community had access to water and need not fully depend on water tanker supply or canned water during the COVID-19 pandemic.

This same group also reported how they have pooled resources to hire an individual to clean the public toilet that nearly 500 people use on a daily basis (including themselves and visitors who come to the area). Here, instead of depending on local authorities to take action, the community managed to utilize their limited resources to address this issue of in-access to proper sanitation facility in response to the COVID-19 risk. The existing bonding within the community played an important role for such collective community action.

#### *Key Findings from Chapter 5*

- 1. Majority (more than 85%) of the homeless interviewed had jobs and the homeless families have been living on the streets for generations in the study area (zone V).*
- 2. Access to basic resources while available to the homeless through informal means, is not necessarily affordable or adequate, specifically for resources such as water and sanitation.*
- 3. For the homeless everyday vulnerabilities with respect to access to basic resources, safety, and social acceptance remain more relevant than disaster events.*
- 4. These everyday precarities aggravate their vulnerability not only during the occasional disaster events, but also their vulnerability to the yearly cycle of rain and heat commonly experienced in Chennai.*
- 5. Homeless families depend heavily on their social networks to cope with everyday challenges and disaster events, including COVID-19.*

## CHAPTER 6: DISASTER GOVERNANCE – CHENNAI’S PAST AND PRESENT EXPERIENCE

Chapter 4 illustrates that a three-tier institutional system exists for disaster management involving the national, state and local governments. Within this institutional system, much of the actual disaster management plays out on the ground, spearheaded by local authorities. While the disaster management paradigm recognizes a) the importance of collaboration with non-governmental agencies and civil society and, b) the need to mitigate risks, prepare for future events, and respond to disasters (i.e., the whole cycle of disaster risk reduction), some gaps still remain in terms of how much of this policy recognition translates to action. More importantly, systems put in place in response to specific events often fail to survive the test of time as disaster events keep occurring. This chapter highlights these challenges within the context of Chennai’s past and present experience – specifically the 2015 floods and the ongoing Covid-19 pandemic by drawing mostly on primary data from interviews and secondary data from literature review. We take the example of these two major disasters to discuss how the urban poor in general have been affected, recognising that disasters disproportionately impact not just the homeless but other urban poor communities as well, often driving them to a state of homelessness and, that governance processes are interlinked and interdependent and, not restricted to a certain vulnerable community.

### 6.1. The December 2015 Floods

Chennai experienced catastrophic floods in the year 2015 due to unprecedented rainfall generated by the annual northeast monsoon. Torrential rainfall inundated the entire city including transport hubs such as the airport, major train stations and roads, disconnecting the city and marooning citizens without supply of food, water, medicine and electricity for several days (Ministry of Home Affairs, 2016). The flood claimed approximately 470 lives, destroyed 4.92 lakh houses and displaced around 1.8 million persons who had to be removed to safer places in the entire state. While economic losses were valued at ₹15,000 Cr by industries, the state government estimated that ₹25,912.45 Cr would be required for relief and restoration (Ministry of Home Affairs, 2016; Idicheria et al., 2016; Resilient Chennai, 2019). Poor and vulnerable people, living in informal settlements along waterways or public tenements located in flood prone areas, and the small business enterprises were severely affected. It took more than a week to restore normalcy for some of them and relief measures were carried out for more than a month.

The state government and Indian Meteorological Department (IMD) portrayed the 2015 flood as a natural disaster: A 2016 Ministry of Home Affairs document states that, the rainfall that occurred in 72 hours was more than the average of 100 years and that flooding, and damages were inevitable for this unprecedented rainfall (Ministry of Home Affairs, 2016). However, most policy makers, academics, and experts believe that the 2015 flood was in the making for a long time due to rampant urbanisation which has led to large scale encroachment in natural flood control tools (e.g., *erys* and water bodies), destruction of drainage channels and poor maintenance of these channels all collectively contributing to such so-called natural disasters (Esther and Devadas, 2016; Arabindoo, 2016).

Post-2015 floods, the role of human decisions and actions in contributing to such disaster has received more attention. To mitigate and reduce risk during disasters, the TN State Disaster

Perspective Plan 2018, therefore, recognized mainstreaming disaster risk in development projects and programmes. However, while this is highlighted on paper, development activities continue with no regard for disaster management. Chennai's failure to integrate flood risk reduction on the ground reveals the vulnerabilities of critical infrastructure such as desalination plants, roads, sewage treatment plants (STPs) and electricity infrastructure which are located in areas that are likely to be flooded.

Another key aspect contributing to the flood and widely recognized in scientific literature and policy realm is the complex and uncoordinated governance structure around Chennai's waterbodies. Multiple organisations ranging from government and parastatal agencies like Chennai Metrowater to non-governmental organisations including academic institutions, bi-lateral and multi-lateral organisations and civil society organisations are associated with water governance at different points in the system and different capacities (Roumeau et al., 2015; Roy et al., 2018). This results in overlapping jurisdictions and responsibilities between departments leading to inefficiencies in services delivery which is exacerbated during a disaster. For e.g., PWD owns the major reservoirs and tanks and is responsible for opening/closing shutter gates; Chennai Metrowater is responsible for water supply to the city; GCC is responsible for maintaining the storm water drains in the city and for overall disaster management in the city, while TNSCB maintains some of the resettlement colonies which house poor communities and are located in low-lying areas (Roy et al., 2018). The lack of coordination / communication between these agencies was apparent in 2016 when the gates of the Chembarambakkam reservoir were opened suddenly and without adequate prior warning to communities directly on the flood plains, resulting in wide spread flooding of the Adyar river and severe damage to people and property (The Times of India, 2015).

This lack of coordination is reflected in disaster response and relief as well. In the initial aftermath of the Dec 2015 floods, local volunteer-led organisations playing a critical role in responding to the disaster through rescue and relief efforts. For example, fishing communities mobilized fishing boats to assist in rescue and relief. The strong role played by civil society and NGOs both local and international, voluntary organizations and others was recognised world-wide. For instance, Citizen consumer and Civic Action Group (CAG)'s efforts to partner with an online store to design and provide a relief kit containing essentials like dry food and blankets that were in high demand during the floods was highlighted by CNN while the BBC covered reported how private groups set up hundreds of relief centres like 'Find and Provide' in the city to collect and distribute relief material pouring from other cities (Seshadri, 2015; BBC, 2015). However, there were a few issues in relief and response activities, such as unequal distributions of relief material, politicising of relief activities and lack of coordinated action across multiple stakeholders including the government, non-governmental machinery and international aid agencies. There were also several media reports about the conflicts that NGO's relief material being intercepted by political party workers and prevented from reaching the affected people (The Hindu, 2015). Several areas were overserved while others did not get the attention they deserved (Mariaselvam et al., 2016). Low-income residents of slum resettlement colonies complained that no government officials came to visit them for help, and that they received food from private voluntary organizations (Coelho, 2016). The efforts of non-government actors in providing relief should be recognised for showcasing how collective action can strengthen risk handling capacities as well as how such kinds of efforts can be replicated for other extreme events. The current



system is not effective for handling a flood like situation in Chennai. Instead of repeatedly reinventing the wheel, the memory of 2015 flood should enable government to coordinate and collaborate with similar service providers across the city for conducting efficient rescue and response operations in future.

The floods did bring about some positive change in the manner in which disasters are handled in future. GCC prepared the CDMP for Chennai in 2017 which maps out all the streets which are at risk for flooding. This could greatly help the city authorities in better disaster preparedness. The aftermath of 2015 floods saw a major focus on restoration and conservation of water bodies as a flood (and later drought) mitigation strategy. GCC has taken up the challenge of restoring 210 waterbodies in the city and are working closely with NGOs and Corporates for the same. One such NGO is the Environmental Foundation of India (EFI) which has been playing an active role in the restoration of lakes. As of September 2020, 160 waterbodies including lakes and ponds have already been restored according to GCC (The New Indian Express, 2020). Additionally, the mishandling of Chembarambakkam in 2015 had an impact on how it was managed during the 2020 monsoon season which also saw sustained heavy rainfall for several weeks and cyclone Nivar. Warnings about opening of the flood gates were given well in advance and communities in low lying areas near the banks were evacuated before water was released.

The floods have also resulted in better management of storm water drains. Over the years, GCC has been criticized for failing to clean or desilt drains ahead of the northeast monsoon (Lopez, 2017b; Govindarajan, 2017). But, after the floods, GCC contemplated cleaning/desilting the drains periodically throughout the year rather than just once a year, before the monsoons. (Times of India, 2020). GCC is also in the process of implementing a flood warning system technology to ascertain area-wise inundation details during the monsoon. Much of these efforts are technological and infrastructural solutions and do not involve community participation. Even the GCC disaster management plan has completely left-out the role of citizens and their participation or building their capacity for a resilient future (Roul, 2017). To ensure community level disaster preparedness, citizens need to be prepared for handling the risk by building awareness and actions or steps to be taken by citizen prior to, during and after disaster scenarios. Collection and sharing of community-level vulnerability data are much needed during disaster times for the rescue and relief works. For instance, during the floods, homeless persons did not want to go to temporary shelters because they were afraid of their belongings being stolen, if left without protection on the road and because they feared that they will be sent to resettlement colonies (personal conversation with IRCDUC). This sort of understanding of the needs and challenges of different vulnerable groups is key to more inclusive and sensitive disaster management.

GCC also has to establish a cadre of first respondents in the community who they can contact and communicate immediately in an emergency. Large infrastructure and other activities including planning and development in the city need to take into account disaster management by mainstreaming the risk reduction so that disasters are not managed post facto.

## 6.2. Covid-19 Pandemic

Unlike the floods, the COVID-19 pandemic was/is a prolonged disaster that played out over several months, resulting in different sets of challenges and vulnerabilities. The pandemic has again underscored the need for preparedness and mainstreaming of disaster management especially with respect to the homeless and other vulnerable groups like migrants and those living in congested resettlement colonies and informal settlements. A number of key issues have emerged through the course of the pandemic and are discussed in this section.

First, for homeless communities, their primary challenge of lack of housing and access to adequate and safe water, sanitation, food and healthcare has been exacerbated due to the pandemic and the lockdowns. Reports of “street quarantining” (discussed in Chapter 5) emerged in Zone 5 with homeless families struggling to meet basic requirements. Indeed, the role of shelter in reducing risk to diseases, by providing access to related services like water, sanitation and hygiene especially, became apparent during the pandemic. Tamil Nadu recently released the Urban Housing and Habitat Policy in March 2020 which broadly aims at increasing access to affordable housing solutions (HUDD, 2020). One of the primary principles of the policy is inclusion where it states that all sectors of the population should have its voices heard. Accordingly, the policy explicitly recognizes the need to focus on poorer communities, especially those living in slums. However, its emphasis on poorer communities does not extend to urban homeless populations or the integration of the SUH programme which is a major gap.

#### *Box 5: Review of the Tamil Nadu Affordable Urban Housing and Habitat Policy 2020*

*The state government of Tamil Nadu launched its first urban housing policy in March 2020 with the overarching objective of ‘increasing access to affordable urban housing solutions’ (HUDD, 2020, p.10). With a vision that echoes that of SDG Goal 11, Target 1 (minus the deadline of 2030), the policy explicitly and repeatedly states that voices from all sections of the society must be heard.*

***(Lack of) Inclusion of homeless:** With inclusion as one its primary principle, it states that the government will promote a variety of housing designs for the economically weaker sections (EWS) and low-income groups (LIG) which cater to people with different needs such as young single populations, female headed households, elderly, migrants etc. TNSCB & TNHB have been identified as the lead government departments to cater to the needs of “poorest population”. It is surprising that a housing policy does not explicitly consider the homeless (who as the word itself suggests do not have any shelter) as the poorest segment of population.*

*Additionally, the policy also falls short by not explicitly recognising the poor as stakeholders in programmes and projects. It does, however, generally mention that ‘different stakeholders will need to be brought into the decision-making process, to enhance accountability and transparency’ (p. 14).*

*In terms of **access to services**, the policy recognises that along with provision of housing units, related services and infrastructure such as water, sanitation, energy, healthcare, solid waste management and education should be provided to make the units liveable and sustainable. It further states that it will strengthen the regulatory framework of the government to ensure that units are fully serviced before allotment and that the units owned by government fit within some kind of an asset maintenance framework.*

*Finally, with respect to **disaster risk reduction**, the policy explicitly declares that it will specifically promote, for TNSCB projects, ecologically and environmentally friendly housing designs and technologies that do not put pressure on the environment through building materials used while providing the necessary ability to build resilience to climate change and disasters. It also makes a specific mention of needing to deal with extreme temperatures and extreme climate events like flooding, sea storm surge and cyclones in future (!). The recognition of climate change and mainstreaming it by incorporating new environment friendly and disaster resilient technologies in tendering processes is laudable.*

Second, the pandemic has revealed the importance of access to housing related basic services such as water, sanitation and hygiene (WASH) and healthcare to literally, save lives. More than just access, it has underscored the importance of ensuring that everyone has adequate, safe and affordable access to these services at all times and especially during disasters. Chapter 5 discusses issues homeless populations and other vulnerable communities faced in accessing these services. These experiences suggest that disaster preparedness activities, especially for disease outbreaks, should mandatorily ensure that low-income communities are provided with safe and adequate WASH, health care in spaces where they can recover without putting others at risk. In the case of the homeless this could mean removing the ₹5 charge for using the public toilets.

Parallely, the initial few months of the pandemic also saw concentrated efforts from governments, NGOs and citizen-based groups to create awareness on the safe water and sanitation practices and especially handwashing. Several social media challenges such as #SafeHands Challenge, #HealthyAtHome Challenge were launched by the World Health Organisation and adopted celebrities, organisations and countries in an attempt to spread the message of good hygiene and living practices. GCC's efforts in Kannagi Nagar is an example of how concentrated public investment on 'soft infrastructure' i.e., capacity building and awareness creation has helped to reduce risk from the virus and mobilizes communities to play a vital role in the process.

Third, apart from the virus, government protocols to manage it (i.e., lockdowns) had a severe impact on low-income communities. A national-wide lockdown was announced suddenly on March 24<sup>th</sup> 2020 which left several thousands of low-income migrant workers stranded, without any means to support themselves and without any money to go home. According to a well-known activist in the city, who helped the migrants get home, states are required to register all migrant labour employed in the state as per the Interstate Migrant Workmen Act 1979. However, this Act has been completely ignored and states, including Tamil Nadu, do not have any data on how many migrant workers there are in their respective states. He also stated that if the migrants were registered, they were entitled to a paid trip home per year (personal conversation). The non-implementation of the Act lead to a situation where the state and city government a) did not have enough data to respond efficiently and effectively, rather, reacting to each crisis as it occurred and, b) along with help from various private donors, CBOs and NGOs had to bear the high costs involved in organising transport, food and essentials for the migrants to go home.

Once again, these experiences show the need for, not only having appropriate policies in place, but ensuring that these are implemented efficiently such that vulnerability of people, especially the poor, is reduced and they are in a better position to cope with emergency situations.

Fourth, like previous disasters, the general lack of data to better direct relief efforts and limited coordination between agencies and especially between government and the public was apparent. Numerous government departments, NGOs and private citizens were offering relief to the poor sections of society, across the city yet there were a lot of gaps and duplications in the efforts. For instance, some areas such as Besant Nagar and Adyar were over served while others like northern parts of the city were significantly under served. According to one of the volunteers, "there were seven different NGOs serving food to the same people in Besant Nagar during COVID. Got to a point where people were asking if this is veg or non-veg?" (personal conversation).

To their credit, the government i.e., GCC and TN-E Governance Cell did try to coordinate better with NGOs and made a formal call for NGOs and CBOs to register with them and then continue their efforts so that GCC can ensure all areas are equally served. However, this did not quite have the desired impact. According to one NGO, "the GCC call for NGOs to register with them was a nightmare." This was because it created issues within the community they were serving. To illustrate, since the NGO could not serve the entire area, but had to choose beneficiaries based a selection criterion, they were carrying out the relief operations quietly

with no fuss. However, after the registration process, GCC officials insisted on overseeing the distribution in person but did not have the necessary time, so the process was rushed, social distancing norms were disregarded and it created a social unrest within the community when people who were not eligible saw that their friends were getting relief and not them (personal conversation). Further, it was not clear what the government did with all those who registered as the information was/ is not available in the public domain.

Even the discussions on the 2015 floods revealed that there was considerable duplication and lack of coordination among organisations providing relief. However, since then no concentrated efforts have been made to map the NGOs/ agencies in terms of where they work, which groups they cater to and what relief they provide. So, there is no ready list that government or others can consult in the event of a disaster. In fact, it was believed that the Revenue and Disaster Management Department had a list of organisations that provided relief during the 2015 floods but when a group of citizen volunteers tried to access this list, they failed. These incidences suggest that institutional memory is weak and so is willingness to maintain, manage and share data.

In general, the Government of Tamil Nadu is quite apprehensive of working with NGOs and citizen-based groups because of a general lack of trust between citizens and the government and this impedes relief work in particular because the government does not have the resources to handle activities on their own. As one citizen activist described,

*“There is a lack of trust that works both ways, the government does not trust the people and the people do not trust the government. The trust building cannot happen without demonstration of good intent and the ability to do good on both sides. That is something that we need to work on.”*

*(Citizen Activist, Chennai, 2020)*

The lack of data also impacted the quality of relief that people got, because needs of specific population groups such as women, pregnant women, young mothers, elderly and children could not be taken care off. Some NGOs started carrying out rapid assessments to gather this community specific information to customise their relief operations but this was not the norm. For example, one NGO realised that because schools were shut, children from low-income communities were not getting their level of daily nutrition which they were getting through the school mid-day meal scheme. So, they started providing multi-vitamin supplements along with dry rations / food packets. Another NGO provided customised kits with high nutrient content for young mothers and their children and extra rations for elderly who could not frequently go to the shops. In order to develop this kind of detailed database on low-income communities, there needs to be sustained interaction and coordination between public and community-based NGOs and volunteers. If concentrated efforts are taken by the government to collect the data and ensure that it is frequently updated, then the next time a disaster strikes this information would prove to be critical.

Despite these challenges, some areas of governance of disasters which have improved are a) voluntary involvement of citizens and CBOs in relief work b) increased transparency with respect to sharing vital data related to COVID publicly and, c) the wise spread availability of health care provisions by local authorities during the pandemic. Community response to disaster has been positive strengthen not just through the pandemic but during other disasters such as the Dec 2015 floods and Cyclone Vardah. Community involvement during

the pandemic began a week or two into the first lockdown when NGOs and private citizens started distributing dry rations and food packets to homeless people and migrant groups. Further into the lockdown, people were also helping with registering migrants on the TN E-PASS portal, to book their place on Shramik Trains that would take them to their home towns, providing necessities for their journey and paying rents for accommodation in the city. In the midst of this relief work, several creative and innovative solutions emerged. For instance, a WhatsApp group was created with NGOs, volunteers, senior officials and academia to coordinate better over relief distribution. A group of volunteers also helped GCC build a Corona Monitoring App to track cases and provide a platform for citizens to report symptoms to public health workers. Some volunteers also tried to work with private and public hospitals to build an open to all dashboard showing real time data on the number of hospital beds available.

It must also be pointed out that citizen involvement in relief work spread across communities in the socio-economic scale. One of the best examples of people raising up for their own communities is in Kannagi Nagar – a slum resettlement colony in South Chennai where local young boys and girls were involved in robust and sustained awareness campaigns which emphasised the importance of safe hygiene practices, wearing masks and maintaining physical distancing. Kannagi Nagar also emerged as a good example that showcases how leadership among senior government officials play a key role in community mobilisation and how better coordination between government departments including GCC, Police and Health Department resulted in targeted response to contain spread of the virus.



### *Box 6: Role of local communities in COVID-19 – The case of Kannagi Nagar*

*Kannagi Nagar is one of Chennai's first and India's largest slum resettlement colonies, located on the 'IT corridor'. It was built by the Tamil Nadu Slum Clearance Board in the early 2000s to house low-income families displaced from objectional sites such as river and road margins. With a population of around 1,00,000 people concentrated in small houses of 120 sq. ft. to 400 sq. ft. in a dense settlement, following physical distancing norms is extremely difficult especially as residents generally sit outside to carry out their household chores and to get fresh air. Therefore, in the event of virus outbreak, containing the spread and protecting vulnerable persons such as pregnant mothers, elderly and those with co-morbidities within the community would have been next to impossible. Yet, this is exactly what collective effort between Greater Chennai Corporation, Greater Chennai Police and the local communities was able to achieve.*

*The first COVID-19 case in the community was confirmed on April 30, 2020, in a pregnant woman and following this, the infection spread to more than 100 people in the area gradually. Recognising that rapid spread and rise in infections could become devastating, the government, led by the Deputy Commissioner South, worked out a plan to contain the infection. GCC worked with 185 local residents who volunteered to carry out an intensive and comprehensive door-to-door screening operation, to check residents' body temperature and health status. According to one of the volunteers, "we were checking people (for fever) everyday. We are doing it block wise – there are 126 houses per block, we are distributing masks and making a note of people with infants, elderly, those with diabetes, blood pressure, hypertension and checking these people who are at risk with more vigour." Patients who displayed symptoms were taken to government run COVID-19 test centres for further testing and their contacts in the neighbourhood were traced and placed in home quarantine. Volunteers helped them with accessing essentials and also gave them an ayurvedic drink – 'kabasura kudineer' to boost their immunity. The Greater Chennai Police was also involved in this effort and played a role in restricting entry and exit to a single point within the settlement, and ensuring that there was no movement of people in and out of the area.*

*Additionally, GCC worked closely with young volunteers to conduct a robust awareness campaign to emphasise the importance of handwashing with soap, wearing masks and maintaining social distancing. The Police helped these volunteers in their campaign and in monitoring if precautionary measures were being followed by the population. This entire process helped in early detection and treatment of people infected with the virus and in isolating others who were in contact with those infected.*

#### **Lessons learnt:**

- *Substantial citizen involvement in creating awareness about safe practices, making the effort more impactful.*
- *Government can work well with the public and improve coordination between departments to develop effective response to disasters.*
- *When government and the common people work together, the impact is significantly more and entire process yields better results.*
- *Leadership plays vital role if such kinds of public – private engagement is to succeed. Individual officers in GCC played a key role in ensuring that the effort was a success.*
- *Critical for success, is the trust the government placed in the community and vice versa.*

### 6.2.1. Healthcare During the Pandemic So Far

From early on in the lockdown, GCC introduced several measures to try and reduce the spread of the virus from door-to-door surveillance to fever clinics and contact tracing across the city including in low-income settlements like slums and resettlement colonies. Door to door surveillance began in early April, initially in houses that were in containment zones and then expanded to all houses in the city. GCC set up a 'Home Quarantine and Isolation Management System' (HQIMS) and recruited 3300 'FOCUS' volunteers for the surveillance. Essentially the HQIMS provides real time data on the list of quarantined persons including persons who have tested positive and are under home isolation, with their addresses to the volunteers. Based on the data, the volunteers contacted the houses which were under various degrees of quarantine at least twice a day to cater to the needs of the affected persons, in terms of delivering food, medicines, groceries and making sure quarantine norms are maintained (GCC, 2020). GCC also recruited several thousand door-to-door surveillance workers to check health status of residents in non-quarantined households and conducted fever checks on a daily basis for at least a few months – May, June and July. Apart from the door-to-door surveillance, GCC has been conducting 'fever clinics' every day for the past several months. A schedule of each day's camp – with information on where it will be conducted, who are the doctors involved and at what time is put up on GCC's twitter page the day before. Between 8<sup>th</sup> May 2015 and 6<sup>th</sup> Dec 2020, 79,606 fever clinics were held which were attended by 38,48,677 people of which 2,01,047 symptomatic patients were identified and tested for COVID. GCC also distributed '*kabasura kudineer*' to the public, front-line workers, people at quarantined areas, slum areas apart from their own staff.

Most of the above measures worked fairly well in middle class and richer neighbourhoods but not in low-income neighbourhoods. The Kannagi Nagar case was an exception where the local community and leadership from GCC officials played a vital role in the success of the effort. In most other low-income settlements – whether slums, or poor neighbourhoods or spaces where homeless congregate, the above-described activities were not carried out systematically. Community and public toilets which are already scarce were not disinfected regularly and the residents did not have access to masks or sanitizers or disinfectants (personal conversation with IRCDUC).

After all the various types of disasters Chennai has experience, the city should be able to design solutions or put in place institutional systems that can be activated during specific types of disaster scenarios – however this is yet to happen especially with respect to coordination between government, private organisations and citizens for disaster relief. As a stakeholder involved in disaster relief and response states, "*it will come back to the same story that when COVID leaves us, we will quickly forget about it and reinvent the wheel all over again!*".

### *Key Findings from Chapter 6*

- 1. Flood risks and management of floods need to be mainstreamed in development projects, especially those related to marginalised communities.*
- 2. There is no comprehensive database with disaggregated data on vulnerable communities and their needs to direct effective response to disasters and relief work.*
- 3. There is lack of coordination between government departments and between and among government, NGOs and citizens in disaster relief and response.*
- 4. Trust between communities, government and NGOs is critical for well-coordinated and effective disaster response. Partnerships between low-income communities and the government where both parties operate on a mutual level of trust has resulted in better management of disasters.*

# CHAPTER 7: DISCUSSION - UNDERSTANDING DISASTER VULNERABILITY OF THE HOMELESS THROUGH A SOCIOLOGICAL LENS

In Chapter 2 we presented a discussion of existing scholarship on sociological readings of disaster and disaster vulnerability. Drawing from this, we also developed a theoretical framework to guide our research and to make sense of the research findings. Figure 22 below presents this theoretical framework. This framework enables us to recognize the social embeddedness of disaster vulnerability. Here, recalling Vickery’s contention is key: “...disasters are socially produced through political, economic, and social forces that place individuals and communities at risk...It is therefore essential to examine “natural” (and we would add man-made) disaster events as bounded to the social” (2017:18).

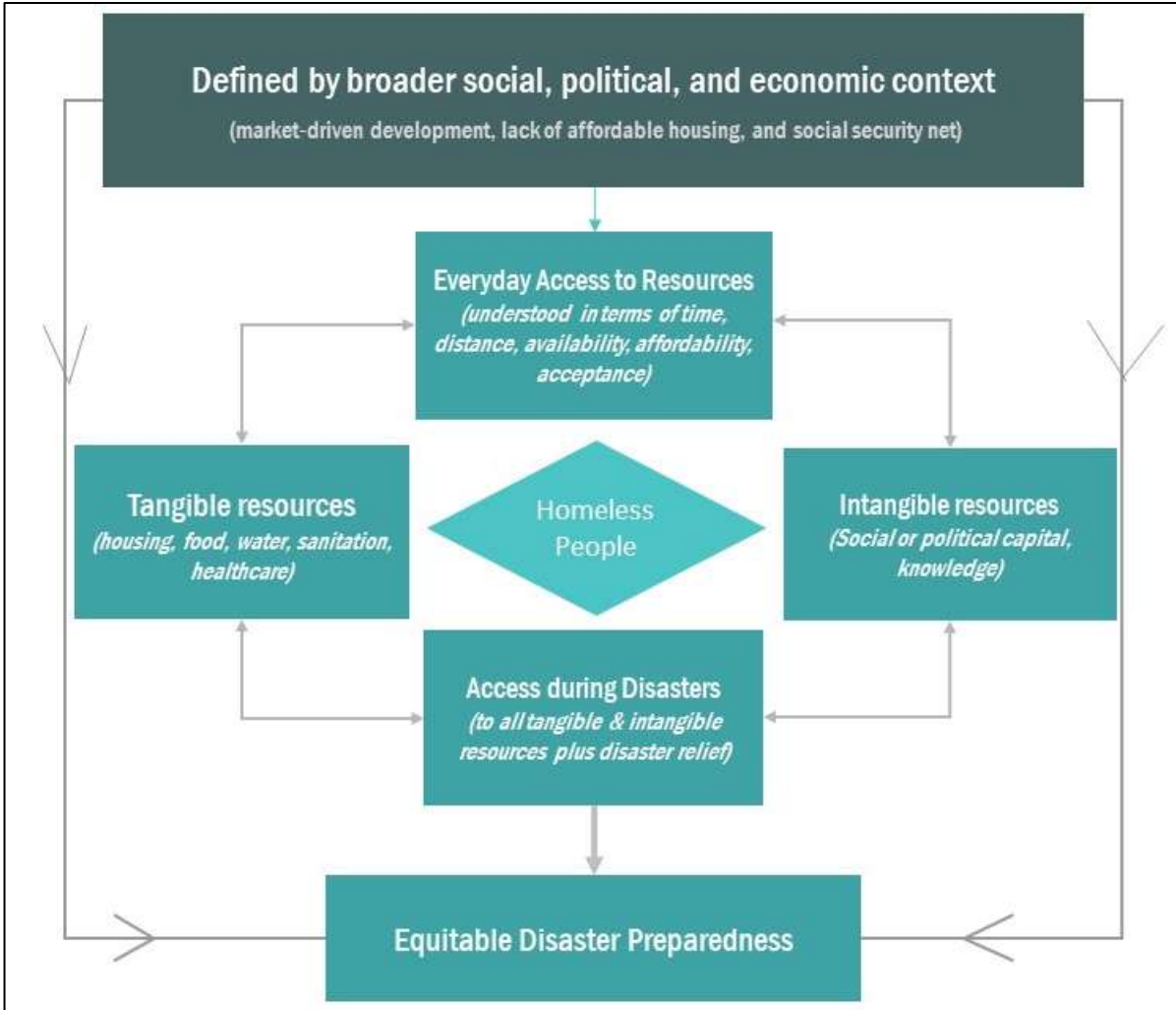


Figure 26: Theoretical framework | Source: Author’s own

The social situatedness of disaster vulnerability as explained in the above diagram is related largely to how different groups of people living under different socio-economic and political context are exposed to varied levels of risk to their life, livelihood, and assets. This risk remains directly related to how these groups are able or unable to access tangible and intangible resources on a regular basis and also during specially taxing times like major disaster events. Hence, to achieve equitability in state efforts of disaster management and

governance, it is not enough to solely focus on post-disaster relief. Rather, broader policy and planning interventions are necessary to generally improve access to basic/essential resources such as housing, jobs, healthcare etc. By extension mainstreaming DM within all sectoral policies and programs remain critical.

In this chapter, we will use the empirical findings already discussed in Chapters 5 and 6, to present a few examples that highlight the importance of this sociological interpretation of disaster vulnerability of Chennai's homeless and related policy implications.

### 7.1. Housing Dilemma: No House, no Basic Services

A critical gap in the homeless population's ability to face/cope with disasters is presented by their homelessness. While the city of Chennai is growing and developing to meet the goal of becoming a "world-class city", it is lagging behind in terms of offering appropriate housing and livelihood options amongst other essential services like healthcare, education etc. for the socio-economically weaker sections of the society. This is troubling given that nearly 30% of Chennai's population lives in slums and informal settlements, often in disaster prone areas (Resilient Chennai, 2019). This is not inclusive of the estimated 9000 to 40,000 (see table 9) homeless people living either in shelters or on the streets of Chennai. These numbers are likely to increase as rapid urban development, loss of agricultural land in peri-urban areas, and migration of people looking for better livelihood options continue.

Without dedicated policies and programs to ensure that the economically weaker section of the population has access to basic resources, like housing, Chennai cannot expect to become a disaster resilient city as housing provides the first line of defence in times of disasters. In the first instance, the recently released Tamil Nadu Urban Housing and Habitat Policy seem to present some hope as it broadly aims at increasing access to affordable housing solutions (HUDD 2020). The policy rests on the primary principle of inclusion and emphasizes that all sectors of the population should have its voices heard in planning/designing housing solutions. However, while the policy explicitly recognizes the need to focus on poorer communities, especially those living in slums, it seems to ignore the urban homeless population and fails to integrate the SUH programme.

This research has highlighted that a substantial part of the homeless are families (nearly 88% of the 249 surveyed homeless) working in the informal sector, who have lived for decades on the streets and the SUH program until now has been unable to offer them any solution as its focus remain on shelters for individuals (men, women, children, disabled etc). These families need housing solutions that are permanent, affordable, and closer to their place of work (where they usually live currently in temporary/make-shift structures along footpaths, roadsides, under bridges etc).

With lack of housing comes lack of access to other essential resources like water and sanitation facilities. Nearly 74% of homeless people surveyed for this project highlighted that they access water from Metrowater tankers that supply on a relatively regular basis or buy water cans (which is an expensive arrangement for them). The areas in zone V where we conducted field work hardly had any public taps, hand pumps that the homeless can use. More than water, the homeless spoke about access to toilets as a challenge. With limited and unclean public toilets in the vicinity that they have to pay Rs 5 per visit for, the homeless

people found it problematic to maintain personal health and hygiene. These conditions highlight the everyday precarity of the homeless people’s lives who then understandably seem to be more worried about storing their water pots and their documents safely during monsoons or frequently accessing toilet due to stomach-related illness common during every rainy season, than a one-time flood event.

This everyday precarity translated into especially vulnerable conditions during disaster times. During the Covid-19 outbreak, while washing hands often, bathing after travelling outside, and generally maintaining personal hygiene became common mantras and practices amongst all, these were not things that the homeless could take for granted. With limited ability to use toilets frequently and absence of water fountains or washbasins something as trivial as washing hands posed a major challenge that increased the risk of the spread of Covid-19 virus amongst the homeless. Their risks were also higher given the unhygienic conditions of the public toilets that large numbers of homeless share along with other visitors. See figure 23 for a quick review of the above discussion on the linkages between a market-driven development regime, State housing policy, homeless people’s housing dilemma, and by extension vulnerability to disasters.

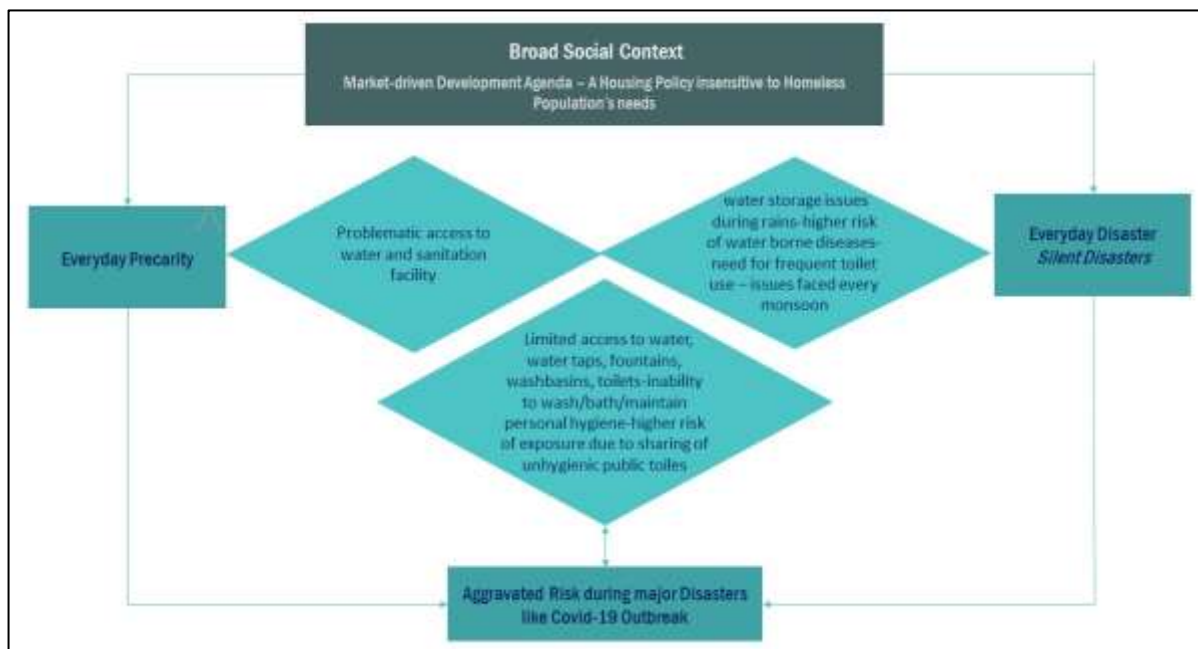


Figure 27: Housing dilemma: No house, no basic services | Source: Author’s own

## 7.2. Socio-political attitude: Homeless perceived as valueless

That socio-political attitude towards the homeless play a key role in determining their treatment in society, access to various tangible and intangible resources, and hence their capacity to cope with their everyday challenges and emergency situations has been highlighted by many scholars (Edgington, 2009; Lynch & Stagoll, 2002; Jewell, 2001, Vickery, 2017). The general attitude amongst public and policy-makers to think of the homeless as unwanted and criminals is common place across the world. Specifically, the state policies under the neoliberal/market-driven regime have been theorized by geographer, Neil Smith as state revanchism or urban revanchism. He explains the increasing trend in strict and often punitive state regulation of the homeless/poor in cities as an outcome of the aggressively



entrepreneurial policy focus that wants cities to showcase all that is 'world-class' and brush the rest under the carpet (Smith 1996, 1998, 2001).

Vickery also highlighted how this socio-political attitude is responsible for weak social safety nets for the homeless in cities driven strongly by neoliberal regime (2017). He has thus discussed that as the welfare state rolled back in the context of increasingly market-driven policy arena, it has caused greater reliance on NGOs (which usually have limited resources) to fulfil the needs of the marginalized.

We see a reflection of this in the sort of anti-begging, anti-loitering laws and even strict eviction rules by the courts. Tamil Nadu, like most other states in India, has a Prevention of Begging Act 1945, which treats beggars as criminals and allows them to be arrested for begging. The state police have not booked people under this Act for several years (John 2018) yet an informal threat of eviction exists. In Chennai this translates into an everyday risk that threatens the homeless from losing their "homes" and their meagre belongings. In our empirical research, police harassment stood out as one of the key vulnerabilities that the homeless living in the streets of Chennai spoke about. Some of them explained that they would rather live on the streets accepting the risk of yearly flooding and extreme heat rather than moving to shelters in fear of abuse.

During disasters this lack of trust within the homeless community towards the state/authorities becomes even more apparent. While prior to major flooding or cyclonic events, the local government makes attempts to rescue and shift the homeless from the streets to shelters, the homeless often refuse to go because of the fear that once they leave back their make-shift homes and assets behind, they will be evicted, and they will not be able to come back to their "homes". Also, a general lack of trust and fear of being "taken away" by the authorities during the Covid-19 outbreak was evident. This also limited the extent to which the homeless accessed public health services. Some even feared that their organs would be sold away without their knowledge once they were taken away to government hospitals for treatment. This sense of distrust amongst many homeless is a manifestation of years of public and civic neglect and apathy that treats the homeless as the "culprit of urban decay" (Slater, 2009) and tend to remove them or make them invisible from the urban scene. During Covid-19 first outbreak and associated lockdown during March-August 2020, a lot of civil society and media attention was centred around the migrants who lost their jobs overnight and did not have any means of getting back home. This drove the local and state authorities to arrange for shelters for the migrants and along with civil society find ways of ensuring safe passage of these migrants back home in different parts of TN and India. What is interesting is that while initially, school buildings, community halls etc. were opened up to provide shelter to these migrants as well as other homeless people, one NGO representative working closely with the homeless and the government, reported that once the migrant population was sent back, the remaining homeless people were evicted from the shelters to fend for themselves. This representative explained that while the migrants are part of the political agenda, the homeless are not – hardly anyone cares what happens to them because the homeless do not have any political influence. Figure 24 below is a reflection of how the entrepreneurial and somewhat punitive tendencies (Smith, 1996; 2001) of the public and government pose everyday threats as well as major limitations on how the homeless experience disaster events.

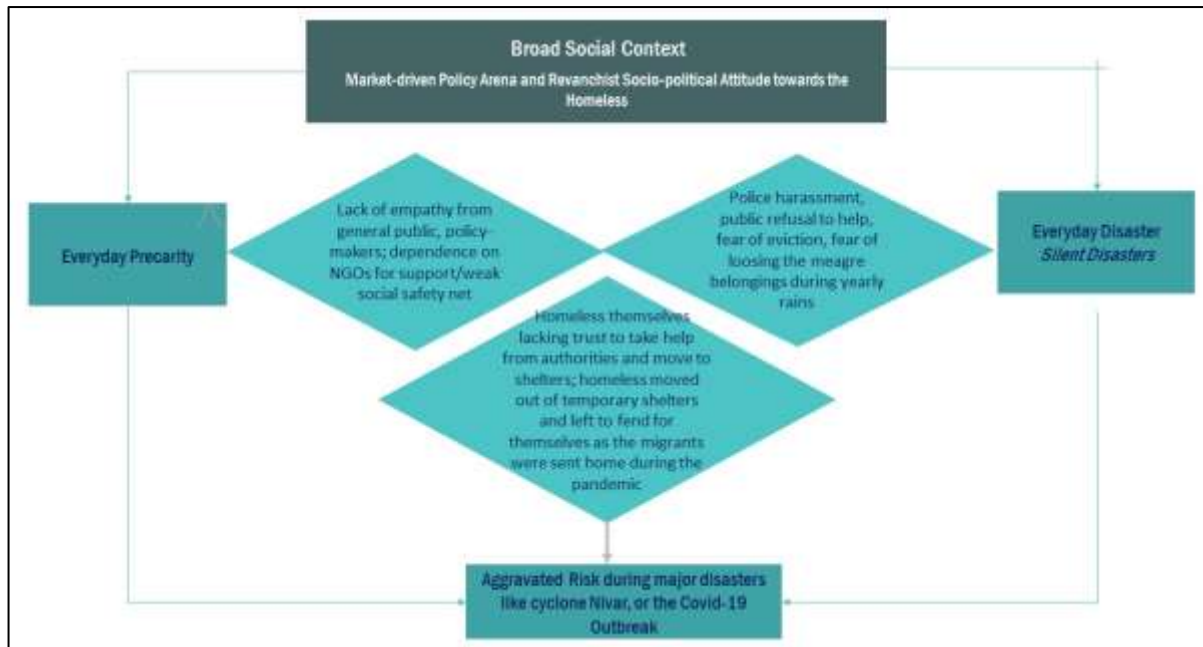


Figure 28: Socio-political attitude: Homeless perceived as valueless | Source: Author's own

### 7.3. The Homeless - Invisible and Inaudible in Planning and Policymaking

Participatory planning and transparent governance are not key virtues in the context of Chennai (Coelho et al, 2012). Public dissatisfaction has been expressed on multiple occasions for the lack of public participation in developing key planning and policy documents. For example, the First Master Plan of Chennai, released in 1995 was stalled by the High Court, as public protests spurred highlighting the limited public solicitation during the planning process (Ellis, 2012). In 2018, when official public hearings were organized in Chennai regarding the eight-fold expansion of the Chennai Metropolitan Area, once again participants reported it to be just a show of tokenism while there was limited scope for dialogue (personal attendance at the event). Most recently, the Housing and Habitat policy also faced reaction from civil society agencies working for the city's marginalized. These organizations have pointed out the lack of sensitivity to the needs of the homeless and poorest sections of the society in this policy (personal conversation with an NGO representative).

While the case of the Supreme Court of India in the writ petition 196/2001 brought about some key changes including the introduction of the Shelter for Urban Homeless Program<sup>19</sup>, still many gaps remain. Most stark among them is the absence of the homeless people's voice in some of the more critical resource planning – such as housing, land-use, infrastructure development- all of which directly and indirectly shape how the homeless access homes, public spaces, and basic services.

This is also apparent in the State and City Disaster Management Plans, which make broad statements regarding the need to pay special attention to the vulnerable, but fail to recognize

<sup>19</sup> The case of the Supreme Court of India in the writ petition 196/2001 brought about some key changes – with the establishment of the Commissioners of the Supreme Court who then prepared a detailed Handbook on a Shelter for Urban Homeless Program (2014) State and local governments are now expected to pay greater attention to meet the basic needs of the homeless. However, so far only limited cities seem to have substantially implemented the program, including Delhi and Chennai.

the homeless as the most vulnerable. In a planning regime where despite emphasis on Community driven Disaster Risk Reduction planning on paper, limited attempts are made to prepare and plan for disasters with those who are likely to be affected by such disasters<sup>20</sup>, the homeless remain particularly marginalized. While their vulnerability is high and needs quite different from most others in the cities, they continue to remain invisible and inaudible in existing plans. As such, state and city level plans do not acknowledge the homeless community's needs, and do not urge to maintain proper data on the homeless, their diversity, location, and vulnerabilities so disaster relief and preparedness plan is sensitive to their concerns.

Such data gaps often manifest in inadequate and inefficient disaster relief efforts. This became apparent during the interviews with the homeless and various government officials and NGO representatives, as they spoke of some people getting too much help while others none during the 2004 Tsunami, 2015 floods and the COVID-19 lockdown period. This was largely because relief was adhoc and local authorities, a) did not have the relevant data to assess where the need really is and b) nor did they coordinate with existing network of NGOs to ensure proper reach. The homeless communities usually living in areas where certain active NGOs work were the ones to get help while in other areas many had to survive without any help.

On another front, the homeless also reported that they were asked to present their ration cards or voter's ID to get relief during the 2015 floods – this is particularly problematic because most homeless do not have such documents<sup>21</sup>. Similar constraints related to the homeless people's IDs was evident during Covid-19 pandemic. While GCC was lauded for its generally efficient healthcare services, door-to-door monitoring, and frequently organized fever camps across the city, the homeless did not seem to feature strongly into this city-wide health plan. While the fever camps were open to all, the need to show ID proof restricted accessibility for the homeless. The primary tactics used to tackle the homeless involved declaring containment zones and cordoning off streets to quarantine homeless families and individuals often without access to basic needs like toilets. Figure 25 below offers a review of how the non-participatory nature of planning translates to the invisibility of the homeless in policies and plans including the disaster management plan and therefore increases their disaster vulnerability.

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<sup>20</sup> With exceptions in states like Gujrat and Orissa where GOI and UNDP led programs were implemented.

<sup>21</sup> In addition to offering secured access to shelter and food, the SUH program handbook clearly mentions that "(A)ll homeless persons, in shelters or outside them, should be automatically entitled to various individual entitlements (such as Old age, widows, and disability pensions, BPL identification, PDS ration cards, Electoral cards, etc) without requirements of additional documents such as address and birth proof. In reality however, the homeless are often asked for documentation to access these entitlements. Getting such documents remain a difficult challenge as the homeless are to either approach the GCC/ULB or get a letter from the local Tahasildar – in both instances risking losing their place of living and livelihood as the homeless live in the margins of informality and illegality. Those homeless are able to get ration cards and voter's ID prepared who have some connect with local political parties.

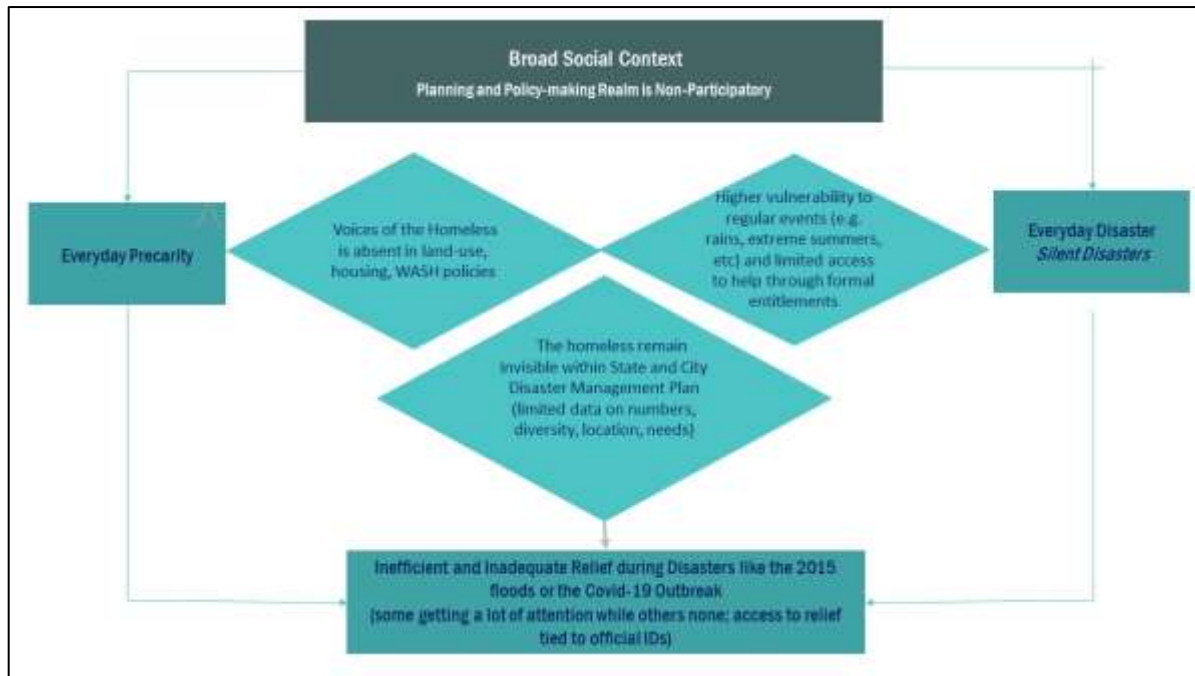


Figure 29: The homeless - invisible and inaudible in planning and decision making | Source: Author's own

The above discussion highlights how the broader social, political, and economic regime shape the homeless people's precarious life with limited access to the various tangible and intangible resources that are necessary to improve their ability to cope with especially difficult/disaster situations. Using Vickery's words, the homeless community's ability to deal with disasters depend on the "...context in which they live. They draw upon resources to the extent that those resources are available and accessible both before and during time of disasters" (2017:24). Hence, to the homeless, their vulnerability is related to such silent everyday disasters as the lack of a roof over their heads, inability to access clean water and toilet facilities, police harassment and the risk of eviction – issues that they deal with day in and day out. More than the occasional flood, drought, and even the ongoing pandemic, it is these everyday challenges that threaten them.

This explains the need to think about disaster vulnerability of the most marginalized section as a development-related crisis and much attention is needed to improve their access to basic infrastructure and services and mainstream disaster risk reduction thinking in all development projects, whether it is housing development, water supply, or education/skill development programs all of which can be sensitive to the needs of the poor generally and specifically during disaster events.

### *Key Findings from Chapter 7*

- 1. The homeless do not have access to basic services as this is often linked to access to housing which they lack. This everyday precarity translates to extremely vulnerable conditions during disaster times.*
- 2. Despite making valuable contributions to local economy, the homeless are perceived as valueless this social attitude plays a key role in determining their treatment in society, access to various tangible and intangible resources, and their capacity to cope with their everyday challenges and emergency situations.*
- 3. While attempts are being made to improve community participation in key planning decisions, these attempts do not include the homeless. In fact, disaster management policy / programme documents which are increasingly recognising other vulnerable communities such as women, children and differently abled have not recognised the homeless.*

## CHAPTER 8: BEST PRACTICES

This chapter presents best practices on disaster management and marginalised communities more broadly from other states and countries by drawing on data from secondary sources.

### 8.1. Odisha State Disaster Management Plan 2019

Odisha's management of disasters has been widely recognised across the world as one of the best examples of public policy in the global south, for reducing the number of fatalities from extreme events such as cyclones (World Bank, 2019; Dash & Chandak 2019; Senapati, 2015). Before Cyclone Phailin in 2015, the state government's disaster management department acted proactively in evacuating around one million people from coastal areas to already constructed cyclone shelters, conducted aggressive and wide-spread awareness campaigns in areas that are vulnerable to the cyclone and consequently managed to reduce deaths from the event. The cyclone claimed only 21 lives as opposed to tens of thousands of lives lost as a result of the super cyclone in 1999. Recognising these efforts, the UN called Odisha a global leader in disaster management and risk reduction and it is the first state in Southern / South-East Asia to be felicitated and recognised by the agency for its disaster management efforts (Senapati, 2015).

*Figure 30: Cyclone Fani crossing over Odisha in 2019*



*Source: Sinha, 2019*

The 1999 super cyclone became the turning point for the state to change the way in which it manages disasters. One of the first things the government did was to set up the Odisha State Disaster Management Authority in the same year. This government entity has been the driving force behind the transformation of the state's disaster management regime from a reactive and response-based approach to a more pro-active and risk reduction framework that actively seeks to involve communities. The latest State Disaster Management Plan 2019 reflects this paradigm shift and provides a comprehensive overview of how the state intends to be proactive, reduce risk and involve communities in disaster management.



The plan begins by stating that its broad objective is “to protect and minimise loss of lives and property from disaster and to promote the culture of disaster risk prevention and mitigation at all levels.” It goes on to discuss in detail the many vulnerabilities of the state in terms of physical exposure to environmental, climatic, biological chemical and industrial events. The plan also describes socio-economic vulnerability to some extent, and is one of the few state plans to do so. Under this section, it recognises that vulnerability to disasters is not just caused by physical exposure but is also mediated by socio-economic factors and conditions of communities. It explicitly involves population groups that are at high risk from disasters, namely, people below the poverty line, fishermen families, single women households, elderly, children, women, differently-abled, rural artisans and weavers in disaster risk reduction (DRR) as explained in the following paragraph. The plan also recognises that since poor residents of cities tend to live in informal settlements where access to basic infrastructure is poor, they are more at risk from natural and man-made disasters (OSDM 2019, p: 44).

The extent to which communities have been involved in disaster planning and management is discussed in the community-based disaster management section. This section states that disaster management plans should be framed at district, block, gram panchayat and village level. It also lists all the ‘community-based’ preparedness programmes implemented by the state between 2002 and 2009. Furthermore, the sensitivity of the plan to recognise the needs of specific vulnerable groups is illustrated in how it has shaped projects on the ground. For instance, cyclone shelters have been designed, keeping in mind persons with physical disabilities (OSDMA 2019; p: 91). Yet, there is no explicit attempt to include the homeless. For the future, it champions for representation of women in all disaster management committees and teams and the need for including communities in training activities, especially as first responders to disasters. However, beyond this, there is no explicit inclusion of communities, either vulnerable or others in disaster planning.

Finally, Odisha’s plan must be appreciated for taking disaster risk reduction to the next level by discussing how it can be mainstreamed into development planning, which is often missing in state or even national level policies. The plan highlights that disaster risks must be integrated in all development activities particularly in the project appraisal and monitoring and evaluation stages. It suggests the use of planning tools like logical framework analysis, and result-based frameworks to help identify clear indicators to measure and monitor disaster risk along with other project development indicators. The plan then, goes on to pick key development programmes such as MNREGA and Swatch Bharat Abhiyan (Gramin) to illustrate where and how disaster risks can be integrated.

To conclude, the Odisha State Disaster Management Plan 2019, is one of the more comprehensive plans in the country, and perhaps the region. It does have a few drawbacks in that the plan tends to focus more on rural areas than urban centres and therefore planning frameworks to involve communities are more suited for rural areas than urban areas. For instance, framing disaster management plans at a village level could be a truly community driven process but at a city level, not so. Despite these deficiencies, the plan does a fairly good job of recognising and incorporating disaster management frameworks recommended by academic/ scientific literature and can therefore be considered a model for other states.

#### Box 7: Lessons learnt from Odisha

1. Odisha's plan is proactive and takes a risk reduction approach that entails early planning to manage disasters, unlike most other state plans which tend to focus on risk mitigation. It explicitly emphasizes the need to mainstream and illustrates how to mainstream disaster risk reduction in development programmes and projects.
2. The plan employs a human-centric approach to disaster management by illustrating a sociological understanding of disaster vulnerability. It does more than simply mentioning some of the vulnerable population groups, by recognizing needs of certain vulnerable groups and involving communities in planning activities.

## 8.2. Disaster Resilience Among Communities in Gujarat

The UNDP has been supporting the Government of India since 2002 to empower communities in rural and urban areas to manage and reduce disaster risks. Through the Disaster Risk Management Programme implemented between 2002 and 2009, 17 states, including Gujarat were supported to put communities at the heart of decision-making processes around disaster management. In this case study, we focus on the efforts of Gujarat to highlight how DRR has been successfully integrated into existing development plans and communities have been trained to play an active role in the disaster management process.

Consecutive disasters, namely a devastating cyclone in 1998 and Bhuj Earthquake in 2001 resulted in significant destruction of life and property. The cyclone, with wind speeds of 170 to 200km per hour and tidal surges as high as 25 feet, affected 6 million people across 2938 villages in the state. Total damage was estimated at ₹ 21,699 million (UNDP, 2007). The earthquake was one of the highest ever recorded in the country with a magnitude of 7.7M<sub>w</sub>. It not only resulted in the loss of 13,805 lives, and injured 1,67,000 people but also caused considerable destruction to property and infrastructure including critical health infrastructure. Direct losses were estimated at ₹ 1,53,083, indirect losses at ₹30,476 million and tertiary losses at ₹1,00,670 million (*ibid*). These disasters prompted the Government of Gujarat to review their existing disaster management practices and made them recognise that a more holistic approach was necessary if they wanted to minimise damage. The UNDP was approached to support the state government to establish the 'Transition Recovery Approach' which advocated for communities playing a central role in managing and reducing future disaster risks.

The first major reform was institutional – The Gujarat State Disaster Management Act was enacted in 2003 followed by the development of the Gujarat State Disaster Management Policy which advocates for a proactive disaster mitigation and risk reduction approach and defines clear roles and responsibilities for all stakeholders including Government of Gujarat, Gujarat State Disaster Management Authority (GSDMA), District Collector/ Magistrate, local self-governments, communities, traditional and modern media, NGOs, educational institutions and corporate sector in all phases of disaster management.

Through the DRM programme, UNDP has focused on activities to build awareness and capacity, and train stakeholders on incorporating disaster risk reduction (DRR) methods in development plans, land use planning, project design and appraisal, especially in hazard

prone areas. For instance, houses built under the Indira Awas Yojana (precursor to Rajiv Awas Yojana and Jawaharlal Nehru National Urban Renewal Mission), have been built to resist earthquakes and floods, by including a cost-effective concrete plinth and a lintel band as opposed to mud houses built earlier. Similarly, village roads in Junagadh district have been heightened as they would get inundated even during the slightest of rainfall. As the then district collector says,

*“mitigation has in fact become, a part of the developmental process. In talukas and villages, not just IAY and Sardar Awas Yojana housing, but PHCs, and schools are adhering to the earthquake resistant construction regulations.”*  
(UNDP 2007)

The project has also equipped local communities to prepare for disasters and respond more efficiently. Multiple disaster management teams were trained at various levels in specialised functions such as first-aid, search and rescue, shelter management, evacuation and early warning dissemination which can help the communities, before, during and after disasters. These village disaster management teams have been particularly successful in reducing loss of lives by mobilising collective / community ingenuity and innovation. For instance, while each village was provided only five emergency rescue kits from the government, using their training and ingenuity, members of these teams in multiple villages developed their own lifebuoys using dried coconut shells stuffed in a plastic cement sack when a cyclone caused severe flooding in 2006.

Specific capacity building projects have also been undertaken to train a wide range of stakeholders from government officials and policy makers to youth volunteers, medical practitioners, teachers, engineers, architects and even persons lower down in the value chain such as masons and ration shop owners. Training was provided on various aspects of disaster management such as structural safety, lifesaving skills, first aid and fire safety. For stakeholders in the construction sector, targeted training was provided on how to retrofit existing structures to ensure safety against earthquakes, floods and cyclones. Such kinds of programmes must be replicated in other states, because they impart valuable training to low-skilled workers who are responsible for the actual construction.

Not only has the DRM programme helped communities with DRR, but it has also taken a gendered approach to disasters. The programme recognises that while women play a crucial role in supporting their families before, during and after disasters, they are not involved in decision making processes around management of disasters such as rescue and evacuation efforts and mapping exercises. Therefore, extensive gender sensitisation efforts were taken up at administrative levels to change pre-conceived notions about women and their roles.

*Box 8: Lessons learnt from Gujarat*

- 1. The programme effectively demonstrates how disaster risk reduction can be integrated in development projects by constructing affordable houses to resist earthquakes and floods.*
- 2. It has incorporated community-based disaster risk reduction to good effect by providing targeted first responder training to local communities, who internalised the training to develop their own life saving devices i.e., lifebuoys.*

### 8.3. Building Resilience: Plans to Respond to Extreme Weather in Australia

Significant literature on disaster impact on vulnerable communities has come out of Australia. Among these are, policies and plans from Sydney, rural South Australia and Melbourne that focus on reducing vulnerabilities of homeless people during heat waves and bushfires.

The Inner City Health Program's Extreme Heat Procedure was developed by St Vincent's Hospital in Sydney. A primary stimulus for the program was a significant increase in observable hospital admissions from the homeless community during heat events. In response to this observation, the hospital developed the Extreme Heat Procedure which was a collaborative and inter-agency response to extreme heat. The heat response is triggered by weather forecasters which then sets off the response protocol in-house and on the streets. The street-based outreach component is crucial in identifying the most vulnerable who are otherwise unable to reach emergency services. The response protocol provides information on hot weather safety and safety warnings, supplies of protective equipment such as water, hats and sunscreen and assistance in terms of following up with high-risk persons and those who miss appointments.

A hazard preparedness plan for bushfires, floods, storms and heat developed by an NGO operating in rural South Australia followed a similar procedure. Pre-event risk assessments were conducted specific for each person in relation to the environment, information cards with contact information of emergency services are handed over and awareness created on general emergency response best practices. Assertive outreach forms a critical component of this intervention as well, where support workers try their best to access the most vulnerable among the homeless and once contact is established, follow up with periodic welfare checks.

#### *Box 9: Lessons learnt from Sydney and rural South Australia*

*Both the Australian plans emphasise the following practices which are critical to reduce vulnerabilities of the homeless:*

- 1. Aggressive outreach to reach the most vulnerable among the homeless groups.*
- 2. Providing information and material support.*
- 3. Inter-agency collaboration between homeless services and emergency services.*
- 4. Protecting staff from the effects of severe weather.*
- 5. Increasing community support for extreme weather responses for the homeless community*
- 6. Sharing information between homeless and emergency services*

*Source: Every and Richardson (2017)*

#### 8.3.1. The heat and homeless plan of the city of Melbourne

This plan was developed in response to the 2009 heatwave and bushfires which highlighted the communication gap with vulnerable communities when responding to extreme weather events. It was a collaborative effort involving homeless agencies across Melbourne, people with lived experience of homelessness and emergency services. The plan aims to better mitigate the effects of extreme heat on the homeless communities by underscoring the following:

- A. Fostering relationships with emergency support and making full use of existing plans and resources.
- B. Developing participatory heat response by tapping into the knowledge of peer support workers and people with lived experience of homelessness.
- C. Creating “cool places” and temporary shelter during heat events by connecting with appropriate partners to access peer support, emergency supplies and support workers. This could also include building relationships with local businesses and other stakeholders managing public spaces which could be used for shelters from extreme heat.
- D. Communicating warnings and providing resources to assist people to manage the heat. These resources could include:
  - a ‘tap map’ which is a map of all the cool places (such as spaces with green areas, canopy cover), hospitals, police stations, libraries, publicly accessible open space such as malls and shopping centres with air conditioning within the city.
  - a ‘helping out’ booklet with information on heat health (e.g., stay hydrated, stay in shade, go to air con) to build community awareness on extreme events for people who are homeless.
  - distribution of pool passes and movie tickets (!) for homeless to stay indoors during the day.

The plan also reflects on extent of impact of some of these initiatives. It illustrates that in order for these initiatives (especially sharing public spaces like pools and movie theatres) to work, the attitude of the community at large towards homeless people also needs to change. This suggests that the problem of disasters and homelessness goes beyond emergency response, touching upon broader societal behaviour. The City of Melbourne has been trying to general attitude towards homeless people through outreach activities, including engaging with local businesses.

*Box 10: Lessons learnt from Melbourne*

- *Melbourne has thought of innovative ways to keep the homeless ‘cool’, for instance by giving them pool passes and movie tickets and developing a ‘tap map’ which identifies cool spaces in the city.*
- *People experiencing homelessness are often socially isolated. When they do access public spaces for shelter, they face negative attitudes and misunderstanding. Homelessness services have not traditionally been included in emergency management. Both of these issues expose people to more extreme weather.*
- *A comprehensive plan to address exposure to extreme weather includes working closely with homeless services, people with a lived experience of homelessness, and emergency services, to share information both ways – increasing community services’ knowledge of and access to emergency information and emergency services’ knowledge of homelessness. Sensitising the community towards homeless people can also improve the latter’s access to public spaces.*

*Source: Every and Richardson (2017)*

## 8.4. No Wrong Doors Approach

The Los Angeles City Council has adopted a unique and comprehensive strategy that takes into consideration both short term and long-term issues to address the state of homelessness. One of the primary components of this strategy is the 'no wrong doors approach' to improve the city's interactions with homeless individuals and provide government staff with required tools, relationships resources necessary to connect homeless individuals to appropriate services and systems of housing.

Essentially, 'no wrong doors' can be used to describe a system in which a homeless individual can be immediately linked to supportive services irrespective of their point of entry to the system, in other words, what door of government they enter. For instance, if a homeless person seeks help from the LA Police Department (LAPD), the department is required to immediately provide mental health support (if needed) and connect the individual to the appropriate department, based on the individual's needs which could be, linking them to County Health Sobering Centres or care facilities for dealing with mental health issues or County shelters and so on, based on each case. The LA City Council has also been conducting training and capacity building programmes for the LAPD and other departments such as the LA Fire Department and the Bureau of Sanitation on how to act as first responders when a homeless person contacts them or they come across such persons during the course of their work.

**04**

**OTHER SERVICES**  
Please contact if you have any problems with any other issues.

**05**

**WHO DO I CALL IF I AM HOMELESS?**  
Call your local coordinator for housing or other support

**RESOURCES**  
To Help the Homeless In The City of Los Angeles

[01 Housing](#) | 
 [02 Employment](#) | 
 [03 Health](#) | 
 [04 Other Services](#) | 
 [05 Who to Call?](#)

BETTER RESOURCES + INFO = BETTER LIVES

**YOUR NOTES:**

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SPY	(818) 983-4091
DOWNTOWN	(213) 488-9338
HOLLYWOOD	(323) 462-6311
EAST LA	(323) 999-4814
SILVERLAKE, WESTLAKE, MID-WILSHIRE	(213) 744-0724
WEST LA	(310) 296-4448
SOUTH LA	(323) 918-0444
SOUTH BAY	(310) 831-9122

211 NEED HELP? Homeless families seeking help should visit [www.211LA.org](http://www.211LA.org) or dial 211 from a phone.

**No wrong DOOR**  
Access Homelessness Resources Here

If you ever come across the "NO WRONG DOOR" LOGO at any City facility, you are welcome inside. City employees can provide information on resources to services you may need.

**No wrong DOOR**  
Access Homelessness Resources Here



**HOUSING**  
If you are in need of a shelter or housing, the agencies listed here may be able to provide you with information on how to obtain temporary or permanent housing.

**01**

Los Angeles Mission  
303 East 9th St.  
Los Angeles, CA 90013  
(213) 629-1227  
[WWW.LOSANGELESMISSION.ORG](http://WWW.LOSANGELESMISSION.ORG)

Union Rescue Mission  
545 San Pedro St.  
Los Angeles, CA 90012  
(213) 347-6300  
[WWW.URM.ORG](http://WWW.URM.ORG)

The Salvation Army  
916 S. Francisco St.  
Los Angeles, CA 90015  
(213) 896-9178  
[WWW.SALVATIONARMYUSA.ORG](http://WWW.SALVATIONARMYUSA.ORG)

PNTH  
340 North Madison Ave.  
Los Angeles, CA 90004  
(323) 644-2200  
[WWW.PNTH.ORG](http://WWW.PNTH.ORG)

Midnight Mission  
601 South San Pedro St.  
Los Angeles, CA 90014  
(213) 624-9258  
[WWW.MIDNIGHTMISSION.ORG](http://WWW.MIDNIGHTMISSION.ORG)

LAYSA Emergency Response Team (ERT)  
811 Wilshire Blvd., 6th Floor  
Los Angeles, CA 90017  
(213) 325-6581  
[WWW.LAYSA.ORG/ERTD-HELP](http://WWW.LAYSA.ORG/ERTD-HELP)

Shelter Hotline  
1 (800) 548-6047

**EMPLOYMENT**  
Please contact the agencies listed here in order to receive assistance finding employment.

**02**

South Los Angeles (SALW-LETC)  
Service Hours: Mon-Thur 8:30-5pm  
Fri 8:30-12pm  
2965 S. Vermont Ave.  
Los Angeles, CA 90037  
(323) 730-7900  
[WWW.LETC.COM](http://WWW.LETC.COM)

West LA (WLS)  
Service Hours: Mon-Tue: 9-6am  
Wed-Thur 8-5pm; Fri 8-2:30pm  
12140 Mandelana Way #240  
Marine Del Rey, CA 90292  
(310) 309-6500  
[WWW.WLSA.ORG](http://WWW.WLSA.ORG)

Northwest LA (Goodwill)  
Service Hours: Mon & Fri 8-5pm;  
Tue-Thu 8-7pm; Sat & Sun 9-1pm  
342 N San Fernando Rd.  
Los Angeles, CA 90031  
(323) 529-2000  
[WWW.GOODWILLSOCIAL.ORG](http://WWW.GOODWILLSOCIAL.ORG)

Downtown/Pico Union (PDUCE)  
Service Hours: Mon-Fri 9:12-12pm;  
Sat 9-12:45pm, Sat-Fri Closed  
1855 Wilshire Blvd #900A  
Los Angeles, CA 90017  
(213) 353-1677  
[WWW.PDUCELA.ORG](http://WWW.PDUCELA.ORG)

Harbor Gateway (Pacific Gateway)  
Service Hours: Mon-Fri 8-5pm  
1851 N Gaffney St. #F  
San Pedro, CA 90731  
(310) 720-5700  
[WWW.PACIFICGATEWAY.ORG/TWIDPOK](http://WWW.PACIFICGATEWAY.ORG/TWIDPOK)

Community Centers, Inc.  
Service Hours: Mon-Fri 9:12-12pm,  
1:30pm-4:15pm; Fri 9:12-4:5pm  
7318-7326 S. Vermont Ave.  
Los Angeles, CA 90044  
323-752-2115  
[WWW.COMMUNITYCENTERS.ORG/PHOTOES.PHP](http://WWW.COMMUNITYCENTERS.ORG/PHOTOES.PHP)

El Proyecto del Barrio, Inc.  
Service Hours: Mon-Fri 8-5pm  
Mon & Wed evenings (by appt.)  
9074 Laurel Canyon Blvd.  
Sun Valley, CA 91352  
(818) 504-0334

**HEALTH**  
If you are in need of healthcare, please contact one of the agencies listed below to obtain services.

**03**

Wingport Center Services  
586 South San Pedro St.  
Los Angeles, CA 90013  
(213) 833-3021  
[WWW.WINGPORT.ORG](http://WWW.WINGPORT.ORG)

SHARE1 Downtown  
423 South Broadway  
Los Angeles, CA 90013  
(213) 213-0100  
[WWW.SHARE1PROJECT.ORG](http://WWW.SHARE1PROJECT.ORG)

Center for Harm Reduction  
512 East 4th St.  
Los Angeles, CA 90013  
(213) 617-9408  
[WWW.CHR.ORG](http://WWW.CHR.ORG)

Wesley Health Center  
for Community Health  
322 South San Pedro St.  
Los Angeles, CA 90013  
(213) 484-6350  
[WWW.WESLEYHEALTHCENTER.ORG](http://WWW.WESLEYHEALTHCENTER.ORG)

Union Rescue Mission  
545 S San Pedro St.  
Los Angeles, CA 90013  
(213) 347-6300  
[WWW.URM.ORG/CONTACT.ORG](http://WWW.URM.ORG/CONTACT.ORG)

Downtown Woman's Center  
442 S San Pedro St.  
Los Angeles, CA 90013  
(213) 680-0400  
[WWW.DOWNTOWNWOMANS.ORG](http://WWW.DOWNTOWNWOMANS.ORG)

Mental Health Hotline  
1 (800) 854-7771

Alcohol & Drug Hotline  
1 (800) 229-7708

Figure 31: Brochures prepared for No Wrong Door approach

**Box 11: Lessons from Los Angeles**

This approach brings the state of homelessness to the centre of governance and decision making by advocating for 'no wrong doors', thereby ensuring that all departments in the city government have a responsibility towards homeless people. This type of holistic approach can help to comprehensively bring together different departments / government agencies that deal with the homeless on an every-day basis such as Greater Chennai Police, Revenue & Disaster Management Department, TNSCB, Chennai Metro Water and TNEB and can be anchored by GCC. It can help better coordinate services for the homeless and make the city and the government inclusive. It can also help to identify gaps between current services offered by the government vs needs of the beneficiaries.

## CHAPTER 9: RECOMMENDATIONS

This report investigates the homeless community's experience of disasters in Chennai through a sociological lens and therefore recognizes "...disasters are socially produced through political, economic, and social forces that place individuals and communities at risk" (Vickery, 2017:18). As such this study attempts to reveal how natural and/or biological disaster events and their impact remain intricately related to the social.

The findings of this research reinforce a key point, that the high degree of vulnerability faced by homeless persons in Chennai is embedded in the precarity of their everyday lives with limited access to social, economic, political resources. Therefore, empowering the homeless to ensure they can live a dignified life, have their voices heard, and have access to the basic needs is critical not only for reducing their vulnerability to disasters, but also improving their resilience to the more mundane and regular events such as the yearly waterlogging/flooding during the North East monsoons. These, more mundane events, were repeatedly mentioned as key threats by the homeless who rarely spoke of the tsunami, or the 2015 floods as disasters that affected their lives.

A sociological understanding of homeless population's vulnerability also resonates well with the paradigm of disaster risk reduction which emphasizes that disaster management is much more than just providing relief and responding to a disaster event. Rather, effective disaster management encompasses looking at the entire disaster cycle and work towards planning for and mitigating disaster risks, while preparing for disaster events in case they still happen, and finally work towards effective relief and rebuilding post disaster (Khan et al, 2008).

Keeping these themes of the everyday precarity of the homeless and the whole cycle of DRR in mind, this report organizes the recommendations under two broad categories:

1. **Building resilience in everyday lives** highlights those higher-level policy/program related recommendations that will improve the lives of the homeless generally reducing their vulnerability.
2. **Building resilience to cope with disasters** are more targeted recommendations offered to ensure the homeless community is better prepared and responds effectively to any disaster situation.

### 9.1. Building Resilience in Everyday Lives

#### 9.1.1. Provide access to shelter (including transit shelters/ housing)

Shelter / housing constitutes the first line of defence against any disaster. Homeless families, who have been living on the streets for generations, need access to family shelters or permanent housing. For homeless individuals there is a need to provide different kinds of affordable housing arrangements such as working men's / women's hostels, rental accommodation etc. The recently released TN Affordable Urban Housing and Habitat Policy 2020 acknowledges that there is need to provide diverse housing solutions such as rental units, hostel accommodation, mixed-income developments and so on.

Apart from the categories of housing provided in the policy, it is highly recommended to set up transit shelters such as the ones set up for children in street situations. At these shelters the residents can be screened thoroughly in terms of their mental and physical state, their needs can be assessed and their behaviour observed before they are sent to the appropriate institution – whether a regular shelter, hospital, or care home, etc. These transit shelters would need dedicated staff who are psychiatrists and mental health professionals, equipped to deal with the homeless and provide them with the care they require.

#### 9.1.2. Providing Access to Basic Services

Providing shelter / housing is synonymous with providing safe and adequate access to basic services such as drinking water, sanitation, food and healthcare. Adequate housing has been recognised as part of the Universal Declaration of Human Rights since 1948 and is relevant to all member states including India. The Right to Adequate Housing explicitly states that housing should be adequate, should include provision of basic services (e.g. safe drinking water and sanitation and food storage and disposal), should be habitable i.e. it should guarantee physical safety and protection against damp, rain, heat and wind, not be cut off from health care centres, schools, child care, employment opportunities and so on (UN-HABITAT n.d.). Further, it is critical that the homeless have access to health care since many of them tend to have mental / physical health problems. In fact, in many cases they have become homeless due to such health issues. Positive mental and physical health helps people cope better with shocks and stresses.

In the absence of shelter, homeless communities lack access to these basic services in a safe, affordable and adequate manner. For instance, our survey of homeless families reveals that 95% use public toilets for which they have to pay ₹5 per use which restricts the number of times they can use the toilets and the maintenance of the toilets is poor. Also, there are no permanent arrangements to provide water to the families who currently depend on an informal arrangement with Chennai Metrowater for their tankers. This inadequacy in WASH services has put the homeless into a specifically vulnerable spot during the Covid-19 pandemic.

It is recommended that GCC a) increase the number of public toilets through the Swachh Bharat Initiative, especially in homeless hotspots and make these free for the homeless and; b) provides access to potable and affordable drinking water through more *Amma Kudineer*<sup>22</sup> counters set up in hotspots. With respect to health care, while the government hospitals are open to all, in the absence of transit shelters, shelters themselves need to mandatorily have at least one staff who is a professionally trained psychiatrist. Currently, NGOs running shelters are providing counselling through various means but much on their own, as doing so is not mandated.

#### 9.1.3. Single window system for providing entitlements

The Right to Adequate Housing also explicitly includes access to entitlements in its provisions. Further, District Collectors are mandated to provide entitlements to the homeless through a

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<sup>22</sup> *Amma Kudineers* are water ATMs which supply RO purified water free of cost to those who cannot afford it.

single window system for those applying through shelters. Our findings highlight that NGOs running shelters try and provide their residents with Aadhar cards, ration cards and other entitlements. This service is not available to the homeless families who cannot access shelters, leading to disenfranchisement and the service itself is fraught with challenges due to the complex paperwork involved.

As suggested by a shelter representative, the District Collector / GCC can consider opening dedicated 'e-seva' counters for homeless persons to register for Aadhar cards and other entitlements like ration cards, livelihood and housing schemes etc. These counters need to have staff who are sensitised to the condition of the homeless and aware of the SUH programme.

#### 9.1.4. Creating awareness among the homeless about welfare schemes

The DAY-NULM programme states that street vendors can be provided with ID cards that will enable them to access other state government welfare schemes. However, our survey results reveal that of those who are street vendors, only 54% have registered with the government (See section 5.1). Similarly, our results also find that there are other Government of Tamil Nadu welfare schemes like the Chief Minister's health insurance scheme and other national schemes like the National Domestic Workers Association and the Migrant Workmen Act 1979 which the homeless can access, based on their livelihood profiles but are currently not accessing as they are unaware of the schemes.

Therefore, awareness needs to be created among the homeless about which entitlements they can access and how. This may be done through the SUH programme as well as mass awareness drives on the streets. Since GCC officials are already visiting the shelters several times during the month – one of these meetings can be held at a time when the shelter residents are likely to be in and awareness programmes can be conducted. For the homeless on the streets, more awareness needs to be created on the shelter programme itself and the availability of shelters. This is already being done by the SUH team of GCC. In 2017, GCC was the first ULB to recognise World Homeless Day on Oct 10<sup>th</sup> and started building awareness about the shelters. This practice continues till today. Instead of this ad-hoc awareness building drive, a dedicated and structured programme, which can include streets plays, mime, music concerts, street theatre etc., can be put in place and conducted several times during the year.

#### 9.1.5 Sensitise the general population and government departments on homelessness

Punitive policies and social attitudes aggravate homeless people's vulnerability by criminalising and disempowering them. There is a need to raise awareness amongst citizens and other government officials who are not SUH staff, police, etc. that a large section of the homeless population are hardworking people trying to live a decent life (85% of the homeless we spoke to were working). Collective empathy and understanding can be key in supporting them as the homeless often depend on local shop keepers and residents for a roof over their head during heavy rains, or a bucket of 'free' water during peak summer. More empathy from the locals and line department officials from other departments who work on the streets therefore matter.

GCC can explore various options to conduct these sensitisation sessions. For instance, all line department persons from across government agencies and especially, Parks, Roads and Storm Water Drains Departments within GCC, Chennai Metrowater, TNEB and most importantly the Police should have a mandatory sensitisation session twice a year on how to deal with homeless persons and who to contact in case they encounter one. Los Angeles has 'no wrong doors approach' where government departments are equipped with required tools, relationship resources (including providing mental health services) necessary to connect homeless individuals to appropriate services and systems of housing. A similar kind of programme can be considered for Chennai.

Public sensitisation campaigns can happen through the radio and social media campaigns involving celebrities like the #SafeHands campaign which was endorsed and promoted by celebrities across the world. Organisations working with the homeless can organise events to throw light on the contribution of the homeless to the local economy and the fact that these are hardworking people for the most part. World Homeless Day (October 10<sup>th</sup>) could be leveraged for this purpose where NGOs along with GCC can organise events across the city where the homeless themselves participate to sensitise the public.

#### 9.1.6. Provision of timely relief/ preparing for the more common/ everyday threats in the short run

The homeless are highly vulnerable to everyday social and environmental vulnerabilities including mental and physical harassment, road accidents, rain, heat, common diseases (cholera, dengue) etc. They feel more threatened by these everyday threats than by major disasters. Vulnerability of homeless can be greatly reduced if adequate and timely warnings and SOPs to deal with these less-than-disaster situations are systematically provided. Also, simple measures can be adopted especially for those living on the streets. For instance, providing tarpaulin covers to protect belongings and raincoats for children, can be extremely beneficial support before the NE monsoons. Similarly, to deal with heat, water / buttermilk / *elaneer* stations can be set up in homeless hotspots.

#### 9.1.7. Develop an urban homeless policy

There is currently no homeless policy in the country. The homeless shelters are being administered through the SUH scheme under the DAY-NULM programme., which restricts the scope of the shelters since the programme is a livelihood mission and not a housing programme. Additionally, DAY-NULM is essentially a livelihood mission and was conceptualised based on the situation in Delhi where there are more homeless individuals and not cities like Chennai where the number of homeless families is quite high. As such, the SUH programme does help address broader issues of lack of access to housing or basic services which are linked to homelessness. Further, there is no certainty in its continuance and funding is restrictive as SUH is only one component of the DAY-NULM programme. Therefore, there is a need for evolving a comprehensive policy for the urban homeless that will, among other things:

- A. Recognise and mainstream issues of the homeless in all existing housing, disaster and welfare policies and programmes of the state and central government such as the Smart Cities project etc.;

- B. Improve access to housing and entitlements by enhancing coordination between government departments and through convergence of schemes and laws;
- C. Suggest inclusion of homeless shelters and hotspot locations in the master plan to ensure integration into the formal planning process;
- D. Explicitly recognise that the homeless are not a homogeneous group, but are very diverse with different socio-economic characteristics who have different needs (e.g., children, women, elderly persons with disabilities) and equip shelters in terms of qualified staff and infrastructure to cater to these needs;
- E. Facilitate reintegration with families by linking with Missing Persons Registry and referral to long term institutional care where reintegration is not possible and;
- F. Enable access to socio-economic and psychosocial rehabilitation processes;
- G. Provide skills training for all homeless including those on the streets through the Tamil Nadu Skills Development Corporation and holding a recruitment camp once a year;
- H. Implement a dedicated homeless programme with budgetary allocation from the TN Shelter Fund.

## 9.2. Building Resilience to Cope with Disasters

Mainstreaming disaster risk reduction in urban policy and programming is essential for inclusive and just disaster management. The SUH scheme, like most other development programmes, does not incorporate disaster risk reduction officially in its framework. Rather, SUH officers undertake ad-hoc actions to reduce disaster impact including advising shelters to keep stock of essentials before onset of the monsoon. To effect sustained, long term change, more systemic actions are required to target homeless shelters and homeless individuals and families on the street. Some of these actions include:

### 9.2.1. Integrate disaster risk reduction in SUH scheme

Currently the SUH scheme does not integrate disaster risk within its framework. While our results reveal that there are some ad-hoc actions (i.e., SUH staff communicating with all shelters to keep stock of provisions and basic needs before a cyclone) to reduce impact of disasters, no systemic processes are in place to reduce disaster risk in the long term. For instance, when buildings are considered for shelters, GCC needs to ensure that they are not in flood prone areas, they are designed in such a way that is safe not just from floods, storms, heavy rainfall events and earthquakes but also fires. Further, the COVID-19 pandemic has exposed us to a different kind of disaster that highlights the need for social distancing, availability of adequate water and sanitation facilities to serve shelter residents without overcrowding. These considerations need to be automatically integrated in the SOPs for choosing shelter spaces and especially as new shelters are added.

### 9.2.2. Early warning and communication

An essential part of disaster mitigation is the communication of upcoming disasters well in advance, to give communities time to prepare and respond effectively to them. This involves setting up early warning communication / announcement systems that can automatically communicate warnings to shelters. Some kind of transmission system originating from the GCC control room to each shelter which would have a loud speaker, can be set up. For the homeless on the streets, loud speakers can be set up in homeless hotspots (data for which is already available). Information that can be relayed would include: warnings, government guidelines, contact info of emergency services such as National Disaster Response Force (NDRF)/ State Disaster Response Force (SDRF), Police, relief organisations and health care



services. In fact, the Chennai Resilience Strategy 2019 essays a similar disaster warning announcement system for the entire city which is linked to the State Emergency Operations Centre (SEOC) (Resilient Chennai, 2019). A similar kind of message was/is being relayed by GoTN for COVID-19 on the phone. Downloading the TNSDMA app can also be made mandatory among shelter coordinators and staff.

### 9.2.3. Aggressive and innovative outreach and communication campaigns

Information regarding disaster risks, preparation and rescue/recovery efforts need to be widely available through multiple media and in multiple languages as the homeless comprise of a diverse group of people including differently abled persons from across the state and country, with low levels of education and limited access to smart phones. This could include: print media - newspapers, visual media – street art and posters (with braille options), street plays and theatre (with scripts available in braille), radio campaigns and phone calls. Shelters for the disabled can consider recruiting professionals who can disseminate this information to persons with disabilities especially those who have speech, visual or hearing impairments. The campaigns can be conducted aggressively before impending disasters and before specific seasons like the monsoon and summer. Advertising agencies can be roped in as consultants for this purpose as part of CSR activities.

### 9.2.4. Community-led disaster preparedness plan

Disaster risks can be significantly reduced if communities are actively involved in planning for disasters. The purpose of this project was to bring to the fore-front, the voice of the homeless and their concerns so that future disaster management plans may take these points into consideration. Including the homeless and organisations/ people working closely with them in any disaster management planning exercise should become an institutionalized practice and not driven by individuals. The SUH team has a very good working relationship with all shelters and can easily conduct these planning meetings every year along with the periodical monitoring meetings that are already underway. However, a separate action plan needs to be incorporated to involve homeless families in this process as well and may be done through FGDs conducted in hotspot locations.

### 9.2.5. Revise the city-disaster management plan/ create a disaster preparedness guide relevant for Chennai's homeless

The CDMP brought out by GCC in 2018 sets out the roles and responsibilities of government departments within and outside GCC and identifies streets and areas at high risk from flooding. However, it does not include specific steps to involve communities in disaster management and does not include targeted actions to address vulnerabilities of marginalised communities especially the homeless. Therefore, it is recommended to revise the existing plan or create an entirely new plan based on the following recommendations.

- A. *Make provisions to install affordable, adequate and safe WASH:* Often access to WASH services becomes a huge challenge during disasters. For the homeless, this is an everyday challenge, exacerbated during heat waves, monsoons and disasters. GCC can install mobile Water ATMs, handwashing stations and a greater number of toilets in homeless hotspots on a permanent basis to improve access.
- B. *Build capacity of the homeless (including those on the streets to act as first responders):* GCC and NGOs already working with homeless communities can

collaborate with disaster response agencies such as the NDRF and SDRF to provide first responder training to community representatives from the streets. The training could include how to administer CPR and first aid, who to contact and how during emergencies and specific responses depending on the type of disasters. This training can be held once a year, probably before the monsoons.

- C. *Build capacity of shelter staff to manage disasters effectively:* Specific capacity needs to be built among shelter staff to reduce impact from disasters. Similar to the first responder training programme for the homeless, the capacity building session can include training on disaster preparedness, mitigation and response and how to provide emergency first aid for specific disasters, such as cloud bursts and floods, heat waves, pandemics and earthquakes. Some of this is happening but is not systematic - The NDRF team from the 4<sup>th</sup> Battalion, Arakkonam provided training on “Community awareness/preparedness programme on Disaster Management” for all the shelter Coordinators last year. As mentioned earlier, it also important that other government agencies apart from GCC such as Chennai Metrowater and the police be trained on how to engage with the homeless.
- D. *Leveraging social capital to reduce disaster impact:* Social capital or connections which people have with other individuals and agencies who can provide active support during emergency situations is critical for reducing people’s vulnerability. Already, social capital is proving to be the primary coping mechanism for the homeless. During COVID-19 strict lockdowns in April – May, homeless families in Royapuram set up community kitchens where they collectively cooked to feed their families. They specifically asked relief organisations for relief in the form of dry rations and not cooked food, for these kitchens. Even during normal circumstances, children are often taken care of by other women within the community while the mothers work. Nurturing these social networks, by officially recognising them will be critical to help homeless communities cope better during emergencies. NGOs already working with homeless families would be best suited to conduct activities that can bring the communities together and help build capacity among the homeless deal better with everyday issues and disasters.
- E. *Better government – NGO coordination for disaster risk reduction:* Good coordination between government agencies and between government and non-governmental bodies is crucial role in effectively managing disasters and for mitigating risks in the short and long term. Currently, while the TNSDMPP and CDMP have detailed roles and responsibilities for departments they do not include non-governmental agencies, which are vital in the relief and response process. And, gaps in coordination were stark in the manner in which disasters like the 2015 floods and COVID-19 pandemic were handled.

The government needs to be the anchor for the entire coordination process with clear line management structures that are accountable and participatory. These structures which detail hierarchies, roles and responsibilities should ideally vary with the type of disaster. For instance, short term shocks and natural disasters such as cloud bursts, cyclones, flooding, earthquakes and tsunamis would have a different structure than

droughts or disease outbreak situations like COVID-19 which are long-drawn out events. Coordination can be strengthened by:

- *Mobilizing existing institutional structures* such as SUH programme, Domestic Workers Association and Street Vendors Association. Periodic first responder training can be provided to residents and staff of shelters, community leaders from the streets and members of these above-mentioned associations as many homeless are part of these. Through the programme a volunteer army of first responders can be trained who can be called upon to assist in the event of a disaster.
- *Mobilizing volunteer / NGO base* through formal procedures to prepare, plan and respond to disasters more effectively. For any collaboration between government and non-governmental organisations to work in the city, some level of trust is required on both sides. Trust- building exercises, conducted not just during disasters but periodically through the year, are important to ensure success for the collaborations. During the COVID-19 pandemic, GCC officials created a WhatsApp group to coordinate relief work but this platform soon became ineffective because of several reasons. NGOs and relief agencies were also asked to register with GCC before providing relief. However, these measures were rather ad-hoc. A more “systematic way of working with RWAs (and not just NGOs) who have a better reach with the people” (personal conversation with Chennai’s Chief Resilience Officer) is the need of the hour. The NGOs/ CBOs involved in this process could potentially be verified and an official list can be finalised based on who works where, with which type of beneficiary group, and the strengths each NGO have. During this process of mapping out NGOs, where they work and which vulnerable group they work with, GCC will get a clear picture on the gaps – in terms of which areas and vulnerable groups are underserved and therefore direct relief in a more targeted manner.

#### 9.2.6. Creating disaggregated data on vulnerable communities

Different kinds of data are required to reduce impact on disasters on vulnerable communities. On the one hand, the city needs accurate flood risk maps which can predict which areas of the city will be prone to flooding based on the intensity of the event. Currently, inundated streets have been marked based on prior experience. i.e., the streets that were flooded during the 2015 floods. But for more accurate assessment, the city requires investment in flood modelling equipment and GIS based risk models with data collection points in critical locations across the city and its water bodies. It also needs to know more about the vulnerable populations, especially the homeless, in terms of their age, gender, health condition, work and education status, if they are inter-state migrants or not etc. This kind of detailed information can help in more targeted response and relief and in more effective, long term disaster mitigation.

Private-public collaborations are vital to gather this data. Universities and specialised research centres are best suited to access and set up flood risk models and observe long term trends in rainfall, stream flows, surface temperatures and so on. While, gathering data on vulnerable communities (which can in future be overlaid on flood risk maps) can be done by

NGOs / volunteer base who are already working with the communities and are best placed to gather this data. Here it is vital to select NGOs which have trust both ways – with the communities and with the government. Eventually all this data can go into a common data base which has to be updated regularly (as the homeless population is a dynamic group) which can help target relief and response.

### *List of Key Recommendations*

#### *Building Resilience in Everyday Lives*

1. Providing access to shelters including transit shelters.
2. Providing access to basic services especially to homeless on the streets.
3. Sensitising the public and government line departments on homelessness.
4. Develop an urban homeless policy.

#### *Building resilience to cope with disasters*

5. Integrate disaster risk reduction in the Shelter for Urban Homeless scheme.
6. Developing a community led disaster preparedness plan to better manage disasters.
7. Revise the City Disaster Management Plan to improve governance and management of disasters through a collaborative approach.

## BIBLIOGRAPHY

AHRC (Australian Human Rights Commission) (2003). Race Discrimination In AHRC Annual report 2002-2003. Available from <http://www.humanrights.gov.au/publications/annual-report-2002-2003-chapter-7>

Aditi, R. (Nov 26 2020). Cyclone Nivar: Families seek relief from flooded homes. The Times of India. <https://timesofindia.indiatimes.com/city/chennai/cyclone-nivar-families-seek-relief-from-flooded-homes/articleshow/79420923.cms>

Aditi R. (2020, March 21). Shelter homes turn away the homeless in Chennai citing coronavirus contraction fears. The Times of India. Accessed from: <https://timesofindia.indiatimes.com/city/chennai/shelter-homes-turn-away-the-homeless-citing-coronavirus-contraction-fears/articleshow/74739445.cms>

Albuquerque, C.D. (2014). Realising the human rights to water and sanitation: A Handbook by the UN Special Rapporteur Catarina de Albuquerque, [https://www.pseau.org/outils/ouvrages/ohchr\\_realizing\\_the\\_human\\_rights\\_to\\_water\\_and\\_sanitation\\_a\\_handbook\\_2014.pdf](https://www.pseau.org/outils/ouvrages/ohchr_realizing_the_human_rights_to_water_and_sanitation_a_handbook_2014.pdf)

Alexander, D., Gillard, J., & Wisner, B. (2012). Disability and disaster . (B. Winser, J. Gillard, & I.Kelman, Eds.) Abingdon: Routledge.

Amster, R. (2004). *Street people and the contested realms of public space*. LFB Scholarly Publishing LLC.

Annamalai, T., Narayanan, S., Devkar, G., Santosh Kumar, V., Devaraj, R., Ayyangar, A. & Mahalingam, A. (2017). Incorporating the life cycle approach into WASH policies and programmes – A Systematic Review, International Initiative for Impact Evaluation (3ie), <http://www.3ieimpact.org/en/publications/systematic-review-publications/3ie-systematic-review-35/>

Anderson, W. (2005). Bringing children into focus on the social science disaster research agenda. *International Journal of Mass Emergencies and Disasters*, 23, 159-175.

Arabindoo, P. (2016). Unprecedented Natures? *City*, 20:6, 800-821.

Auclair, C. (July 13, 2020). *Housing for all to Create Sustainable and Inclusive Cities – UN Habitat [presentation]*, Madras Chamber of Commerce and Industries (MCCI)'s "Urban Thinkers Campus" Conference.

Balasubramanian, D. (Feb 16 2020). *Urban Heat Islands in India*, The Hindu. <https://www.thehindu.com/sci-tech/science/urban-heat-islands-in-india/article30830560.ece>

Barnett, G., Beaty, R.M., Chen, D., McFallan, S., Meyers, J., Nguyen, M., Ren, Z., Spinks, A. & Wang, X. (2013) *Pathways to climate adapted and healthy low income housing*. National Climate Adaptation Research Facility, Gold Coast.

British Broadcasting Corporation (BBC). (December 5 2015). The volunteers who kept Chennai afloat through the floods. <https://www.bbc.com/news/world-asia-india-38166471>.

Blaikie, P., Cannon, T., Davis, I. & Wisner, B. (1994). *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. Routledge.

- Bolin, R. (2006). Race, Class, Ethnicity, and Disaster Vulnerability. In Havidan Rodriguez, E. L. Quarantelli, and Russel R. Dynes (Eds.), *Handbook of Disaster Research*, (pp. 113-130), Springer.
- Bolin, R., & Bolton, P. (1986). Race, religion and ethnicity in disaster recovery. University of Colorado. Boulder: Natural Hazard Center.
- Braun, V. & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. Sage.
- Coelho, K. (2016). Placing The Poor In The Flood Path: Post-Disaster Slum Resettlement In Chennai. The Caravan. <https://caravanmagazine.in/vantage/placing-the-poor-in-the-flood-pathpost-disaster-slum-resettlement-in-chennai>.
- Coelho, K., L. Kamath & M. Vijaybaskar, eds, 2012, *Participolis: Consent and Contention in Neoliberal Urban India. Cities and the Urban Imperative*. Routledge. New Delhi: Taylor and Francis, 2012, pp. 253-273.
- Comptroller and Auditor General (CAG). (2017). *Report of the Comptroller and Auditor General (CAG) of India on performance audit of flood management and response in Chennai and its suburban areas*. Government of Tamil Nadu.
- Chaudhry, P. et al. (2011). Urban Greenery Status of Some Indian Cities: A Short Communication, *International Journal of Environmental Science and Development*, 2:2.
- Clarke, V. & Braun, V. (2014). Thematic analysis. In T. Teo (eds.) *Encyclopedia of critical psychology* (pp. 1947–1952). Springer Science+Business Media.
- Chennai Metropolitan Development Authority (CMDA). (2008). *Second Master Plan for Chennai Metropolitan Area, 2026*. Government of Tamil Nadu.
- Collier, W., Jacobs, K.R., Saxena, A., Baker-Gallegos, J., Carroll, M. & Yohe, G.W. (2009). Strengthening socio-ecological resilience through disaster risk reduction and climate change adaptation: Identifying gaps in an uncertain world, *Environmental Hazards*, 8, 171 – 186.
- Cope, M. (2010). *Coding qualitative data*, In (Eds.) Iain Hay, *Qualitative Research Methods in Human Geography Edition 3<sup>rd</sup>*, Oxford University Press (pg. 223-233)
- Corporation of Chennai. (2014). *Standard operating procedure for institutionalising basic services for the urban homeless*. Government of Tamil Nadu.
- Choimeun S., Phumejaya N., Pomnakchim S. & Chantrapornchai C. (2010) Tool for Collecting Spatial Data with Google Maps API. In: Kim T., Ma J., Fang W., Park B., Kang BH., Ślęzak D. (eds) *U- and E-Service, Science and Technology*. Communications in Computer and Information Science, 124. Springer [https://doi.org/10.1007/978-3-642-17644-9\\_12](https://doi.org/10.1007/978-3-642-17644-9_12).
- Cusack, L., van Loon, A., Kralik, D., Arbon, P., & Gilbert, S. (2013). Extreme weather-related health needs of people who are homeless. *Australian Journal of Primary Health*, 19, 250-255.
- Cusack, L., de Crispigny, C., and Athanasos, P. (2011). Heatwaves and their impact on people with alcohol, drug and mental health conditions: a discussion paper on clinical practice considerations. *Journal of Advanced Nursing*, 67(4), 915-922.



Department of Environment (DOE). (2015). *Tamil Nadu State Action Plan on Climate Change (TNSAPCC) final draft report*. Government of Tamil Nadu. Retrieved from: <http://www.environment.tn.nic.in/sapcc.html>

Devulapalli S et al. (Oct 18 2019). Which is India's greenest metro? *Mint*, <https://www.livemint.com/news/india/which-is-india-s-greenest-metro-11572280645457.html>

Dash, S & Chandak, H. (2019, May 9). Fani defanged: Odisha shows the way. *The Wire*. <https://thewire.in/environment/cyclone-fani-defanged-disaster-management>

Edgington, S. (2009). *Disaster Planning for People Experiencing Homelessness*. Nashville: National Health Care for the Homeless Council.

Ellis, R. (2012). Public performances: enacting citizenship through public consultation for Chennai's Second Master Plan. In Coelho, K., L. Kamath & M. Vijaybaskar (Eds.), *Participolis: Consent and Contention in Neoliberal Urban India, Cities and the Urban Imperative*. pp. 253-273. Routledge.

Enarson, E., & Morrow, B. (Eds.). (1998). *The gendered terrain of disaster: Through women's eyes* Westport: Praeger.

Esther and Devadas. (2016). A calamity of a severe nature: case study – Chennai, India. pp. 227-236.

Evangeline, JT et al. (2015). An Analysis of Vegetation Cover and Estimation of Land Surface Temperature using LANDSAT 8 Data-A Case Study of Coastal Zones of Chennai Corporation. *Journal of Advanced Research Geoscience Remote Sensing*. Vol. 2. pg.34-39.

Every, D. (2015). *Disaster risk education, community connections and emergency communication with people who are homeless*. Report prepared for Victorian SES.

Every, D. & Richardson, R. (2017). *Building the Disaster Resilience of the Homeless Community*. CQUniversity and the Red Cross in collaboration with VCOSS, NCCARF and ShelterSA for the National Emergency Management Project.

Fothergill, A. & Peek, L. (2004). Poverty and disasters in the United States: A review of recent sociological findings. *Natural Hazards*, 32, 89-100

Fritz, C. (1961). Disasters. In R.K. Merton & R.A. Nisbet. (Eds.), *Contemporary Social Problems*, (pp. 651-694). Harcourt.

Herzog C, Handke, C. & Hitters, E. (2019). Analyzing Talk and Text II: Thematic Analysis, In Van den Bulck, H., Puppis, M., Donders, K. & Van Audenhove, L. (Eds.).

Housing and Urban Development Department (HUDD). (2020). *Tamil Nadu Affordable Urban Housing and Habitat Policy*. Government of Tamil Nadu

Gaillard, J.C., Walters, V., Rickerby, M., & Shi, Y. (2019). Persistent Precarity and the Disaster of Everyday Life: Homeless People's Experiences of Natural and Other Hazards, *International Journal of Disaster Risk Science*. 10, 332–342

Gandhiok, J. (Dec 31 2019). Letting Delhi breathe: City's green cover up six per cent in two years. <https://timesofindia.indiatimes.com/city/delhi/letting-delhi-breathe-citys-green-cover-up-6-in-2-years/articleshow/73037835.cms>

Geospatial World (2008). Anna University to make flood map for Chennai city, Tamil Nadu, <https://www.geospatialworld.net/news/anna-university-to-make-flood-map-for-chennai-city-tamil-nadu/>

Gin, J.L., Kranke, D., Saia, R. & Doballan, A. (2016). Disaster preparedness in homeless residential organisations in Los Angeles County: Identifying needs, assessing gaps. *Natural Hazards Review*, 17(1).

Gran Castro, J. A., & Ramos De Robles, S. L. (2019). Climate change and flood risk: vulnerability assessment in an urban poor community in Mexico. *Environment and Urbanization*, 31(1), 75–92.

Greater Chennai Corporation (GCC). (2018). City Disaster Management Plan. Government of Tamil Nadu.

Green, E.P., Virginia Rieck Warren, B.A., Broverman, S., Ogwang, B., & Puffer, E.S. (2016). Participatory mapping in low-resource settings: Three novel methods used to engage Kenyan youth and other community members in community-based HIV prevention research. *Global Public Health*, 11(5-6), 583–599.

Ganie, M.A. et al. (2016). Determining the Vegetation Indices (NDVI) from Landsat 8 Satellite Data. *International Journal on Advanced Research*. 4(8)

Govindarajan, V. (November 10, 2017). In Chennai, some localities worked early to avoid flooding – by getting their drains cleaned. Scroll. Retrieved from: <https://scroll.in/article/857176/how-some-chennai-localities-beat-monsoon-flooding-by-getting-their-stormwater-drains-cleared>.

Greater Chennai Corporation (GCC). (September 21, 2020). The Chennai: Together we stand, GCC Newsletter, 4. [https://chennaicorporation.gov.in/news\\_letter/Newsletter%20Forth%20Issue.pdf](https://chennaicorporation.gov.in/news_letter/Newsletter%20Forth%20Issue.pdf)

Greater Chennai Corporation (GCC). (July 29, 2020). *Kannagi Nagar – The Exemplary Story* [video]. YouTube. <https://www.youtube.com/watch?v=mur5ql6Uoo4>

GCC Twitter status update: <https://twitter.com/chennaicorp/status/1335615036778303490>

Hewitt, K. (1983). The idea of calamity in a technocratic age in *Interpretations of calamity from the viewpoint of human ecology*, pp. 3-32. Allen & Unwin.

Government of Tamil Nadu. (2014). TN Vision 2023 : *Strategic plan for infrastructure development in Tamil Nadu*.

*Holstein, J. A., & Gubrium, J. F. (1995). Qualitative research methods, Vol. 37. The active interview. Sage Publications.*

Idicheria, C. et al. (2016). Transforming Chennai: A Research Report on Building Micro, Small, and Medium Enterprise Resilience to Water-Related Environmental Change. Okapi Research and Advisory and Mercy Corps.

Information and Resource Centre for the Deprived Urban Communities (IRCDUC). (2015). *Detailed Survey of the Urban Homeless in Chennai*.

Information and Resource Centre for the Deprived Urban Communities (IRCDUC), Uravugal Social Welfare Trust, Nizhalgal Social Welfare Trust, Gurusamy Rights and Development Education

(GRADE) Trust. (2019). *Socio-Economic Analysis of the Urban Homeless in the cities of Chennai, Coimbatore and Madurai – Tamil Nadu*, Supported by Indo-Global Social Service Society (IGSSS).

International Federation of Red Cross and Red Crescent Societies. (2013). *World Disasters Report: Focus on technology and the future of humanitarian action*.  
<https://www.ifrc.org/PageFiles/134658/WDR%202013%20complete.pdf>

Jason, LA., Keys, CB., Suarez-Balcazar, YE., Taylor, RR. & Davis, MI. (2004). Participatory community research: Theories and methods in action. *American Psychological Association*.  
<http://psycnet.apa.org/psycinfo/2003-88379-000/>

Jayaraman, N. (May 16, 2020). A walk with migrant workers: Why these heartbroken people are leaving TN. The News Minute. Accessed from: <https://www.thenewsminute.com/article/walk-migrant-workers-why-these-heartbroken-indians-are-leaving-tn-124671>

Jeganathan, A., Ramachandran, A., Ramachandran, P., Kumar, D.S. (2016). Spatial variation of temperature and indicative of the urban heat island in Chennai Metropolitan Area, India, *Theoretical and Applied Climatology*, 123, 83-95.

Jacobs, K. & Williams, S. (2009). *Natural disaster preparation and response: issues for state housing authorities*. Australian Housing and Urban Research Institute: Melbourne, Victoria.

Jewel, B. (2001). Sydney housing: One year after the Olympic Games. *Alternative Law Journal*, 6(6), Available from <http://www.austlii.edu.au/au/journals/AltLawJl/2001/107.html>

John, E.A. (July 6, 2018). Government has no plan to free streets of beggars, *Times of India*,  
<https://timesofindia.indiatimes.com/city/chennai/govt-has-no-plan-to-free-streets-of-beggars/articleshow/64799975.cms>

Kailes, J. I., & Enders, A. (2007). Moving beyond “special needs”: a function based framework for emergency management and planning. *Journal of Disability Policy Studies*, 17, 230-237.

Kanthimathi, L. (May 26, 2020). *Voluntary groups help migrant labourers in their efforts to get back home*. The Hindu. Accessed from: <https://www.thehindu.com/news/cities/chennai/voluntary-groups-help-migrant-labourers-in-their-efforts-to-get-back-home/article31676572.ece>

Kennedy, L., Varrel, A., Denis, E., Dupont, V., Dhanalakshmi, R. et al. (2014). Engaging with Sustainability Issues in Metropolitan Chennai. City report series (Chance2Sustain). Publication en ligne, City report series (Chance2Sustain).

Vasilescu, L., Khan, A., Khan, H., (2008). DISASTER MANAGEMENT CYCLE – A THEORETICAL APPROACH, [Management & Marketing - Craiova](#), 1, 43-50

Klein, R. J. T., Nicholls, R. J. & Thomall, F. (2003). Resilience to natural hazards: how useful is this concept? *Environmental Hazards*, 5, 35–45.

Kneebone, E. (2014). The Growth and Spread of Concentrated Poverty, 2000 to 2008- 2012. Research Brief, *The Brookings Institute*.  
(<http://www.brookings.edu/research/interactives/2014/cocnentrated-poverty#/M10420>).

Lynch, P. & Stagoll, B. (2002) Promoting equality: Homelessness and Discrimination. *Deakin Law Review*, 7(2). Available from <http://www.austlii.edu.au/au/journals/DeakinLawRw/2002/15.html>

Lopez, A.X. (November 8, 2017b). How agencies make short work of storm water drains in Chennai. *The Hindu*. Retrieved from; <https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/how-agencies-make-short-work-of-stormwater-drains-in-chennai/article20001909.ece>.

Mariaselvam, S. et. al. (2016). The Chennai floods of 2015: urgent need for ethical disaster management guidelines. *Indian Journal of Medical Ethics*. Vol. 2.

Ministry of Environment and Forests (MoEF). (2010). *Climate Change and India: a 4\*4 Assessment. A Sectoral and Regional Analysis for 2030s*. Government of India. Retrieved from: <http://www.moef.nic.in/downloads/public-information/fin-rpt-incca.pdf>

Ministry of Housing and Urban Poverty Alleviation (MoHUPA). (2002). *Guidelines – Night Shelter for Urban Shelterless*, Government of India: [http://mohua.gov.in/upload/uploadfiles/files/3\(3\).pdf](http://mohua.gov.in/upload/uploadfiles/files/3(3).pdf)

Ministry of Housing and Urban Affairs (MoHUA). (2018). *Deendayal Antyodaya Yojana – National Urban Livelihoods Mission Mission Document*. Government of India.

Ministry of Home Affairs. (August 12th 2016). *Disaster in Chennai caused by torrential rainfall and consequent flooding-198th report*. Government of India. New Delhi.

Morrow, B. H. (1999). Identifying and Mapping Community Vulnerability. *Disasters*, 23(1), 1-18

Narasimhan, B et al. 2016. *Chennai Flood 2015, A Rapid Assessment Report*. Interdisciplinary Research Centre for Water Research, IISc Bengaluru, 2016.

Narayanan, V. (March 21, 2020). *COVID-19: Residents of other districts, stranded in Chennai, approach Corporation shelters*. *The Hindu*. <https://www.thehindu.com/news/cities/chennai/covid-19-residents-of-other-districts-stranded-in-chennai-approach-corporation-shelters/article31127386.ece>

Narayanan, V & Serena Josephine, M (May 13 2020). *Coronavirus | Resettlement colonies at risk of becoming clusters*, *The Hindu*, Accessed from: <https://www.thehindu.com/news/cities/chennai/coronavirus-tnscb-resettlement-colonies-at-risk-of-becoming-covid-19-clusters/article31577811.ece>

Narayanan, V. (May 28th 2020). *Residents of K.P. Park tenements ask for houses to be allotted to them*. *The Hindu*. Accessed from: <https://www.thehindu.com/news/cities/chennai/residents-of-kp-park-tenements-ask-for-houses-to-be-allotted-to-them/article31694327.ece>

Narayanan, V. (March 12<sup>th</sup> 2020b). *Homeless people seek shelters, government help*. *The Hindu*. <https://www.thehindu.com/news/cities/chennai/homeless-people-seek-shelters-government-help/article26503629.ece>

National Disaster Management Authority (NDMA). (2019b). *National Disaster Management Guidelines - Community based disaster risk reduction – Draft*, Government of India.

Ngo, E. B. (2001). When disasters and age collide: reviewing vulnerability of the elderly. *Natural Hazards Review*, 2, 80-89.

*The Palgrave Handbook of Methods for Media Policy Research*. Basingstoke: Palgrave Macmillan, pg. 385-401

Odisha State Disaster Management Authority (OSDMA). (2019). State Disaster Management Plan. Government of Odisha.

Pelling, M., & Wisner, B. (2009). *Disaster risk reduction: Cases from urban Africa*. London: Earthscan.

Peek, L. (2008). Children and disasters: understanding vulnerability, developing capacities, and promoting resilience: an introduction. *Children, Youth and Environments*, 18, 1-29.

Phillips, B. (1996). Creating, Sustaining, and Losing Place: Homelessness in the Context of Disaster. *Humanity and Society* 20(1): 94-101.

Phillips, B., & Morrow, B. (2008). *Women and Disasters: From theory to practice*. Bloomington: Xlibris.

Perry, R. W., & Mushkatel, A. H. (1986). *Minority citizens in disasters*. University of Georgia Press.

Public Health Department (2020). List of Shelter for Urban Homeless Addresses and Contact details, Greater Chennai Corporation.

Office of the High Commissioner of Human Rights (OHCHR). (n.d.)  
<https://www.ohchr.org/Documents/Issues/Housing/homelessness.pdf>

Ray-Bennett, N. S. (2009). The influence of caste, class and gender in surviving multiple disasters: a case study from Orissa, India. *Environmental Hazards*, 8, 5-22.

Ramin, B. & Svoboda, T. (2009). Health of the homeless and climate change. *Journal of Urban Health*, 86(4), 654-64

Rajeev, M.M. (2012). *Disaster Management: The role of local self government and community participation in Kerala*, THESIS, School of International Relations, Mahatma Gandhi University.  
Resilient Chennai & Okapi Research & Advisory. (2018). *Discovery Area Report on Chennai's Water Systems*. Chennai.

Resilient Chennai. (2019). *Resilient Chennai - Kaleidoscope: A city through my eyes*. Chennai: 100 Resilient Cities, Greater Chennai Corporation, Okapi Research and Advisory.

Richardson, J. (2014). Beyond vulnerability: Developing disaster resilience capacities to target household preparedness activities: Part 2 [online]. *National Emergency Response*, 28(1): 4-7

Roumeau, S., Seifelislam, A., Jameson, S., Kennedy, L. (2015). *Water Governance and Climate Change Issues in Chennai*. USR 3330 "Savoirs et Mondes Indiens" Working papers series no.8.

Roy, P., Kumar, K., Karunakaran, Z. & Ayyangar, A. (2018). *Chennai: Emerging tensions in Land, Water and Waste Governance*. Okapi Research and Advisory, Fields of View, Centre for Urbanisation, Buildings and Environment, IIT Madras and Tamil Nadu State Planning Commission, Government of Tamil Nadu.

Roul, A. (2016). Can Chennai's city disaster plan ensure resilient future? Down to Earth . Retrieved from, <https://www.downtoearth.org.in/news/natural-disasters/can-chennai-s-city-disaster-plan-ensure-resilient-future--59268>.

Sanders, B. & Brown, B. (2015). "I was all on my own": experiences of loneliness and isolation amongst homeless people. Crisis UK.

[http://www.crisis.org.uk/data/files/publications/LonelinessReport\\_FINAL.pdf](http://www.crisis.org.uk/data/files/publications/LonelinessReport_FINAL.pdf)

Seshadri, A. (December 7, 2015). Relief effort underway for flood-ravaged Chennai in India. Cable News Network World. Retrieved from: <https://edition.cnn.com/2015/12/06/asia/chennai-india-floods/index.html>.

Settembrino, M. (2017). Exercising Agency: How Men Experiencing Homelessness Employ Human Social, and Cultural Capital to Mitigate Natural Hazards Risk. *Natural Hazards Review* 18(4): 05017004.

Settembrino, M.R. (2016). Hurricane Sandy's impact on the predisaster homeless and homeless shelter services in New Jersey. *Journal of Emergency Management* 14(1): 7-16.

Settembrino, M.R. 2015. Vulnerable yet resilient: Homelessness and disaster response in the United States. *Natural Hazards Observer* 40(2): 4–9.

Senapati, A. (2015, August 17). UN facilitates Odisha for its disaster management model during Phailin. *Down to Earth*. <https://www.downtoearth.org.in/news/un-felicitates-odisha-for-its-disaster-management-model-during-phailin-43087>

Sinha, A. (2019, May 3). Explained: Why Cyclone Fani in Odisha is an unusual Storm. *The New Indian Express*. <https://indianexpress.com/article/explained/simply-put-why-fani-is-an-unusual-cyclonic-storm-5705562/>

Slater, T. (2009). Revanchist city. In R. Hutchison (Ed.), *The encyclopedia of urban studies*. Thousand Oaks: Sage. Accessed 8th June 2013. [www.geos.ed.ac.uk/homes/tslater/revanchsit.pdf](http://www.geos.ed.ac.uk/homes/tslater/revanchsit.pdf).

Smith, N. (1996). *The new urban frontier: Gentrification and the revanchist city*. London: Routledge.

Smith, N. (1998). Giuliani time: The revanchist 1990s. *Social Text*, 57, 1–20. doi:10.2307/466878.

Smith, N. (2001). Global social cleansing: Post liberal revanchism and the export of zero tolerance. *Social Justice*, 28(3(85)), 68–74. Law, Order, and Neoliberalism.

Shivakumar, C. (2018, April 21). Tamil Nadu government: Policy notes have sustainable development goals. Accessed from: <http://www.newindianexpress.com/cities/chennai/2018/apr/21/tamil-nadu-government-policy-notes-have-sustainable-development-goals-1804348.html>;

Sturgis, R., Sirgany, A., Stoops, M., & Donovan, N. (2010). *Winter homeless services: Bringing our neighbors in from the cold*. Washington: National Coalition for the Homeless.

Suresh, S. (2018, July 3). Corpn. finds 9,000 homeless, to build 12 new shelters. *The Times of India*. Accessed from: <https://timesofindia.indiatimes.com/city/chennai/corpn-finds-9000-homeless-to-build-12-new-shelters/articleshow/64834120.cms>. Accessed on: 15th April 2019.



Supriana, I., Lestari, D. & Satya, D. (2014). Spatial Data Model for Corporate Based on Google Maps Platform. *Proceedings of 2014 International Conference on Data and Software Engineering, ICODSE 2014*. 10.1109/ICODSE.2014.7062672.

Supreme Court Commissioners (2010). *Tenth report of the commissioners of the supreme court permanent shelters for urban homeless populations for Supreme Court of India*. WR 196/2001

The Hindu. (Dec 6, 2015). Row over 'Amma Sticker' in TN flood relief work.

<https://www.thehindu.com/news/national/tamil-nadu/chennai-rains-and-relief-works-row-over-amma-stickers-in-tn-flood-relief-work/article7954953.ece>.

The New Indian Express. (September 3 2020). Restoration of waterbodies gains pace in Chennai. Retrieved from: <https://www.newindianexpress.com/cities/chennai/2020/sep/03/restoration-of-waterbodies-gains-pace-in-chennai-2191770.html>.

Tamil Nadu State Disaster Management Authority (TNSDMA). (2018). *State Disaster Management Perspective Plan 2018 – 2030*. Government of Tamil Nadu.

TimesNowNews. (Dec 8, 2020). Chennai neighborhood faces water havoc as flooding continues weeks after cyclone Nivar. <https://www.timesnownews.com/chennai/article/chennai-neighborhood-faces-water-havoc-as-flooding-continues-weeks-after-cyclone-nivar/692132>.

The Times of India. (December 9 2015). Delay in opening sluice gates caused flooding. Retrieved from: [http://timesofindia.indiatimes.com/articleshow/50099873.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://timesofindia.indiatimes.com/articleshow/50099873.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst).

Times of India. (November 4 2020). Corporation considering regular desilting of drains through. [http://timesofindia.indiatimes.com/articleshow/79037097.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://timesofindia.indiatimes.com/articleshow/79037097.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst).

The New Indian Express. (Nov 26 2020). Cyclone Nivar: Chennai largely escaped waterlogging due to improved infra, says corporation chief <https://www.newindianexpress.com/cities/chennai/2020/nov/26/cyclone-nivar-chennai-largely-escaped-waterlogging-due-to-improved-infra-says-corporation-chief-2228377.html>.

The New Indian Express: (Nov 26 2020). They would rather face Nivar than lose livelihood. <https://www.newindianexpress.com/cities/chennai/2020/nov/26/they-would-rather-face-nivar-than-lose-livelihood-2228095.html>.

The Hindu. (March 23, 2020). Over 2000 people housed in Corporation's shelters. Accessed from: <https://www.thehindu.com/news/cities/chennai/over-2000-people-housed-in-corporations-shelters/article31138307.ece>

The Wire (Nov 28, 2020). Was Chennai So Well-Prepared – or Did Cyclone Nivar Not Bring as Much Rain? <https://science.thewire.in/environment/chennai-cyclone-nivar-preparedness-rain-adyar-river-chembarambakkam-reservoir-desilting/>.

The World Bank. (2011). *Climate change, disaster risk, and the urban poor*. Washington: The World Bank.

Town and Country Planning Organizations (2014). Urban Greening Guidelines, 2014. Ministry of Urban Development.

Townley, G., Kloos, B. & Wright, PA. (2009). Understanding the experience of place: Expanding methods to conceptualize and measure community integration of persons with serious mental illness. *Health & Place*. 15(2), 520–531.

UNDP, (n.d.). *Urban Risk Reduction – Fact Sheet*, A Government of India and UNDP programme. [https://www.in.undp.org/content/india/en/home/operations/projects/closed/goi-undp\\_urban\\_riskreductionproject.html](https://www.in.undp.org/content/india/en/home/operations/projects/closed/goi-undp_urban_riskreductionproject.html)

UNDP. (2007). *Towards a disaster resilient community in Gujarat*. UNDP, Government of India.

UN-Habitat. (n.d.). The Right to Adequate Housing Fact Sheet No 21. Office of the United Nations High Commissioner for the Human Rights. [https://www.ohchr.org/Documents/Publications/FS21\\_rev\\_1\\_Housing\\_en.pdf](https://www.ohchr.org/Documents/Publications/FS21_rev_1_Housing_en.pdf)

Uravugal Social Welfare Trust (2018). *Socio-economic demographics of the urban homeless in Greater Chennai Corporation*, For Public Health Department, Greater Chennai Corporation.

Valentine, G. (2001). At the drawing board: developing a research design. In M Limb, C Dwyer (Eds.), *Qualitative Methodologies for Geographers: Issues and Debates* (pp 41-54). Arnold & Oxford University Press.

Vickery, J. (2017). Every Day Is a Disaster: Homelessness and the 2013 Colorado Floods. *Sociology Graduate Theses & Dissertations*. 59. [https://scholar.colorado.edu/socy\\_gradetds/59](https://scholar.colorado.edu/socy_gradetds/59)

Viswanathan, N. (March 31 2020). Around 30 homeless people ‘street’ quarantined in Chennai without toilets and masks. The New Indian Express. Accessed from: <https://www.newindianexpress.com/cities/chennai/2020/mar/31/around-30-homeless-people-street-quarantined-in-chennai-without-toilets-and-masks-2123885.html>

Walters, V., & Gaillard, J. (2014). Disaster risk at the margins: Homelessness, vulnerability and hazards. *Habitat International*, 44, 211-219.

Wasserman, J. A., & Clair, J. M. (2010). *At home in the street: People, poverty and a hidden culture of homelessness*. Lynne Rienner Publishers.

Wells, J. (2005). *Protecting and assisting older people in emergencies*. Network paper No. 53. London: Humanitarian Practice Network, Overseas Development Institute

Williams, D. S., Costa, M. M., Sutherland, C., Celliers, L., & Scheffran, J. (2019). Vulnerability of informal settlements in the context of rapid urbanization and climate change. *Environment & Urbanization*, 31(1), 157-176.

Williams, G. (2010). Non profits Struggle to Keep Up With Suburban Poverty.” *The Chronicle of Philanthropy*, October 6. [http://philanthropy.com/article/nonprofits-struggle-to-keepup/124841/?sid=&utm\\_source=&utm\\_medium=en](http://philanthropy.com/article/nonprofits-struggle-to-keepup/124841/?sid=&utm_source=&utm_medium=en) .

Winkler, I., & Satterthwaite, M. L. (2017). Leaving no one behind? Persistent inequalities in the SDGs. *The International Journal of Human Rights*.

Wisner, B. (1998). Marginality and vulnerability: Why the homeless of Tokyo don't 'count' in disaster preparations. *Applied Geography*, 18:1, 25-73.

Wisner, B., Blaikie, P., Cannon, T. & Davis, I. (2003). *At Risk: natural hazards, people's vulnerability and disasters* (2<sup>nd</sup> Ed). Routledge.

Wisner, B., Gaillard, J. C., & Kelman, I. (2012). *Handbook of hazards and disaster risk reduction*. Abingdon: Routledge.

World Bank. (2011). *Climate change, disaster risk, and the urban poor*. Washington: The World Bank.

United Nations General Assembly (UNGA). (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development*,. A/RES/70/1, para. 4.

World Bank, (2019, June 14). What states can learn from Odisha in disaster preparedness and mitigation. <https://www.worldbank.org/en/news/speech/2019/06/14/odisha-fani-disaster-preparedness>