INFORMAL SETTLEMENTS - VULNERABLE AND LOW INCOME GROUPS

DISCOVERY AREA REPORT

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100RC	100 Resilient Cities
ADB	Asian Development Bank
BSUP	Basic Services for the Urban Poor
CBO	Community Based Organisations
CSO	Community Service Organisations
CM	Chief Minister
CMA	Chennai Metropolitan Area
CMDA	Chennai Metropolitan Development Authority
CITU	Centre for Indian Trade Unions
CRRT	Chennai Rivers Restoration Trust
DA	Discovery Area
DPWH	Philippines' Department of Public Works and Highways
DP	Development Plans
DPR	Detailed Project Report
DTCP	Directorate of Town and Country Planning
DQ	Diagnostic Questions
EP	Equator Principles
EWS	Economically Weaker Sections
FAR	Floor Area Ratio
FSI	Floor Space Index
G+	Ground plus
GCC	Greater Chennai Corporation
ICDS	Integrated Child Development Services
IAS	Indian Administrative Services
IFI	International Financial Institutions
ID	Identity
Ha	Hectare
JNNURM	Jawaharlal Nehru National Urban Renewable Mission
LIG	Low Income Groups
LISSTAR	Loyola Institute of Social Science Training and Research
MIG	Middle Income Group
MHUPA	Ministry of Housing and Urban Poverty Alleviation
MUDP	Madras Urban Development Projects
NUHHP	National Urban Habitat and Housing Policy
NGO	Non Governmental Organisations
NMP	National Manufacturing Policy
NOC	No Objection Certificate
OBC	Other Backward Classes
PRA	Preliminary Resilience Assessment
PMAY	Pradhan Mantri Awas Yojana
PHC	Public Health Care Centre
PO	People's Organisation
PS5	Performance Standard 5
RAY	Rajiv Awas Yojana
R&R	Resettlement and Rehabilitation
RWA	Resident Welfare Associations
SAC	Shelter Advisory Committee
SC/ST	Schedule Caste/ Schedule Tribe
SSA	Sarva Siksha Abhiyan
SEZ	Special Economic Zone
S&S	Sites and Services

Sq. ft.	Square Feet
SOP	Standard Operating Procedure
SUH	Shelter for Urban Homeless
SNP	Slum Networking Project
SPARC	Society for the Promotion of Area Resource Centre
TDR	Transfer of Development Right
TNHB	Tamil Nadu Housing Board
TNSCB	Tamil Nadu Slum Clearance Board
ULB	Urban Local Body
UN	United Nations
ZEIS	Special Zones of Social Interest

Executive summary

Chennai joined the 100 Resilient Cities (100RC) network in 2014 with the aim of building resilience to short term shocks and long-term stresses related to urbanisation and climate change. For vulnerable and low-income groups, this means ensuring quality service delivery to people living in informal settlements and other vulnerable but largely invisible groups such as homeless pavement dwellers, migrant workers and the elderly destitute. At the end of the program's Phase 1, the Resilient Chennai team produced a Preliminary Resilience Assessment (PRA), which highlighted six priority discovery areas (DAs) for deeper engagement. One of these priority areas was informal settlements - vulnerable and low-income groups. This document presents an account of the key challenges in this area, focusing on six related thematic areas – or 'diagnostic questions' – that are found to be critical to increasing resilience among Chennai's vulnerable groups. A summary of each question, associated challenges and potential solutions or interventions are presented below.

	Diagnostic Question (DQ)	Challenges and Interventions
DISCOVERY AREA (DA): INFORMAL SETTLEMENT, VULNERABLE AND LOW INCOMR GROUPS	DQ 1: What is the composition of Chennai's informal settlements? On what key parameters do informal settlements vary? What are the main parameters of vulnerability of urban populations in Chennai?	*Challenges* • Different ways of classifying slums with different implications for vulnerabilities of residents (e.g., tenable versus untenable or by land ownership). • A particularly insecure category of slums in Chennai today are those located along waterways and waterbodies. These settlements tend to be old and well settled, offering a large amount of affordable rental accommodation to new migrants and other low-income city residents. However, most of these are firmly on the evictions scanner of the government. • Other deeply vulnerable groups are unrecognized/invisible populations (e.g., migrants, sex workers, sexual minorities, destitute elderly, homeless, child and adult addicts and tribal groups) who face a range of challenges including stigma, criminalisation, abuse, lack of documented identity, and separation from families. • Unrecognized groups are not considered or provided for when public spaces, services and schemes are planned. • Lack of disaggregated data on different types of vulnerable groups.

	Diagnostic Question (DQ)	Challenges and Interventions
		• Lack of awareness among vulnerable groups about existing government programs or facilities. • Poor coordination among various government departments dealing with different groups and different schemes.
		Interventions I. Integrate official recognition of the diversity of urban vulnerable groups into state housing and shelter policies. II. Strengthen dedicated shelter and services programs for vulnerable communities (e.g., the Greater Chennai Corporation-run Shelter for Urban Homeless program). III. Conduct outreach and awareness programs for the public and for members of vulnerable groups on the schemes available for these groups. IV. Coordinate among relevant government agencies and convergence of schemes for vulnerable groups. V. A Comprehensive policy on urban homeless; state-specific operational policy guidelines for effective implementation and coordination. VI. A Special Disaster Response plan for vulnerable communities. VII. Create and regularly update a database on slums and other vulnerable communities.
	DQ 2: What are some pathways to formalise housing that can reduce vulnerabilities and lead to more resilient urban neighbourhoods?	*Challenges* I. Neither states nor markets have the capacity to construct housing at the scale required to house Chennai's slum-dwellers and homeless. II. Despite many state-provided incentives and mandates, the private sector participation in affordable housing has been minimal. III. The dominant model for slum clearance and housing formalisation involves mass construction of Economic and Weaker Section (EWS) tenement units in large resettlement colonies on city peripheries. IV. This approach to housing formalisation has proved more problematic for the urban poor than informal settlements.
		Interventions I. Large-scale regularisation and in-situ upgradation of informally built housing and related infrastructure should be a key part of any affordable housing policy for Chennai. II. Affordable housing policies should spell out mechanisms for augmenting land supply for low-income housing. III. Introduce or strengthen mandatory land reservations for current and future affordable housing demand and strengthen state authorities to enforce this land use. IV. Inclusionary zoning and flexible development control rules: special zoning allocations in project, ward and city-level plans to protect and leverage mandatorily

	Diagnostic Question (DQ)	Challenges and Interventions
		reserved lands for affordable housing uses, e.g., Special Zones of Social Interest (ZEIS) in Brazil. Use inclusionary zoning innovatively to encourage mixed neighbourhood development, and to accommodate a range of affordable housing types, such as old age homes, orphanages, working men/women's hostels and night shelters. V. Revive the 'Sites and Services' model for formalizing informal settlements. This model, successfully implemented in Chennai and many other contexts around the world, provides serviced plots with tenure security, infrastructure and low-interest credit to households, allowing them to incrementally build and expand their own housing within mixed-class neighbourhoods that are well integrated into the urban economy. VI. Delink basic urban services provision (water, sanitation, electricity, etc.) from tenure. This amounts to formalising service-provision without formalising tenure and can produce improved outcomes in situations where formal titling is a challenge. VII. Regulation of land pricing by the state through various mechanisms. III. Democratic, decentralized and dynamic planning: open, participatory, ward or zonal level planning for shorter periods of time (e.g., 5 years) and provision for review and change. IX. Engage communities as project designers and implementers rather than mere subjects through institutionalising community Detailed Project Reports (DPRs) for housing projects or mandating all consultants to prepare DPRs in partnership with community associations. VIII. Declare affordable housing as a priority land use for land acquisition purposes.
	DQ 3: How can in-situ slum upgradation/rehabilitation be maximised and prioritised?	*Challenges* I. Despite policy recommendations advocating for in-situ slum rehabilitation (upgradation, or where this is not possible, redevelopment), it is rarely implemented on the ground. II. The primary constraint cited is land scarcity. III. There is a profound lack of data on vacant land in the city. IV. Large numbers of slums are located on ecologically vulnerable lands. V. Ecological restoration is carried out at the cost of socially vulnerable groups. VI. Where in-situ upgrading is carried out in a few sites in the city, it results in uneven development of urban spaces, crowding out the more vulnerable. VII. Failure to engage residents in upgrading plans. III. In-situ redevelopment prioritized over in-situ upgradation.

	Diagnostic Question (DQ)	**Challenges and Interventions**
		Interventions
		I. Make land available. Since most of the land occupied by slums belongs to the government or the ULB, they can be allowed to remain through policies that prioritise land use and allocation for affordable housing. Innovative revenue-generation can make this feasible for the ULB. For example, they can use Transfer of Development Rights (TDRs), which would allow them to exchange their slum lands for alternate land in other locations or to acquire extra FSI or FAR in prime locations. ULBs can turn these informally occupied lands into social rentals by allowing the settlement to remain and upgrade in-situ, while charging rent for the land. The ULB can also buy up pockets of private land occupied by informal settlements, consolidate the lands and turn them into social rentals.
		II. Most important, vacant land should be identified and brought back for use in affordable housing by means of a mix of taxes and appropriate legal and financial penalties.
		III. City-wide participatory upgrading: upscale the approach from project-based to city-wide interventions to avoid unsustainable rise in property values of upgraded sites; integrate slum upgradation plans into larger city development plans; and ensuring community participation in design, implementation, management and maintenance.
		IV. Building city-wide federations or networks of CBOs to undertake housing upgradation, as in Thailand's Baan Mankong initiative.
		V. Create partnerships between ULBs, NGOs and communities to implement slum upgradation projects, as in the Slum Networking Project (SNP) implemented in Ahmedabad in the 1990s or the Yerawada scheme in Pune in 2009.
		VI. Create a Slum Free Cities Action Plan based on strong in-situ upgradation, as mandated by the Rajeev Awas Yojana (RAY).
		VII. Offer varied tenure security arrangements, such as long-term community leases, pattas and no eviction guarantees where formal title cannot be offered.
	DQ 4: How can the process of resettling vulnerable populations be made more humane and resilience-enhancing?	*Challenges* I. The predominant pattern of slum resettlement in Chennai has been peripheral, mass-scale, state-built, high-rise tenements. This model has been widely found to perpetuate or reproduce impoverishment of vulnerable families and to expose them to new risks such as crime and threats to the physical safety of women, youth and children in the following ways: i. It disrupts livelihoods, disconnects families from the urban mainstream and affects women in

	Diagnostic Question (DQ)	Challenges and Interventions
		particular by reducing their labour force participation and their everyday mobility. ii. It exposes residents to disaster risk, often being located in ecologically fragile zones. iii. Building design (vertical, multi-storied) is inappropriate for the living needs of the urban poor; units are very small and have no spill-over spaces. iv. The sites do not integrate arrangements for livelihood activities, such as vending spaces, shops or workshops. v. Residents of these sites are ghettoized and stigmatized due to the concentration of a single vulnerable class. vi. Service provision is discriminatory and sub-standard. vii. It results in a range of other social problems such as alcoholism, domestic violence, youth drug addiction and school drop-outs. viii. Forced evictions are common and the result of poor due process, consultation and choice. ix. Different types of encroachers are treated differently, e.g., low-income slum dwellers vs. commercial or industrial users or high-income residents.
		Interventions I. Follow international guidelines on involuntary resettlement [such as the International Financial Institution (IFI) guidelines] to developing a more humane resettlement policy. II. Develop a comprehensive resettlement policy with provisions that ensure negative impacts of long-distance and involuntary resettlement are mitigated. III. Develop a Resettlement Action Plan in collaboration with the community. IV. In case in-situ upgradation is not possible, restrict the resettlement radius to within 3 kms. V. Identify smaller tracts of land within the city for resettlement. VI. Resettlement on the 'Sites and Services' model will ensure that the resettled sites are i) well integrated into the urban fabric, ii) designed as mixed-class neighbourhoods; iii) have a flexible built form more suited to the needs of low-income households; iv) integrate livelihood activities and spaces into the residential neighbourhood; and v) allow for strong and self-sustaining resident associations to be built.
	DQ 5: How can the housing market be diversified to cater to varying demands,	*Challenges* I. The dominant approach focuses on ownership models and single-family units and does not meet the shelter needs of groups such as students, working women,

	Diagnostic Question (DQ)	Challenges and Interventions
	particularly those of low-income groups?	temporary workers, and the range of vulnerable groups identified above in DQ1. II. Unregulated and unrecognized rental market. III. Lack of publicly-built, subsidised rental housing. IV. Lack of affordable and alternative forms of housing, e.g., worker accommodations, old age homes, working women's hostel, temporary housing, etc.
		Interventions I. Affordable housing plans and policies should offer a range of affordable non-family-based housing options (e.g., worker accommodations, old age homes, working women's hostels, temporary housing, etc.). II. For worker housing, the responsibility to be shared between the state (through free land, subsidies) and employers, and it should be integrated with other policies such as the National Manufacturing Policy. III. Encourage and support worker-led co-operative housing assisted by unions. IV. Define a Rental Housing Policy that explicitly encourages publicly-built rental housing. V. Create a Resource Centre to monitor migration trends and offer policy and program ideas to the state government.
	DQ 6: How can vulnerabilities in disaster prone areas be reduced?	*Challenges* I. Most factors that shape the disaster vulnerability of informal settlements also apply to Chennai's state-built resettlement colonies, which are particularly hard-hit during floods and cyclones. II. While government disaster vulnerability indicators are technical, socioeconomic and institutional factors also contribute to and exacerbate the vulnerability of low-income groups. III. Disasters are used as entry points to relocate vulnerable communities and informal settlers to peripheral areas, often freeing lands for more highly valued urban development projects. IV. Unequal treatment: selective removal of encroachments by the poor and continued failure to evict elite or state encroachments. V. Disaster response plans are not adequately sensitive to the concerns of vulnerable communities. VI. Providing relief to vulnerable communities is often a challenge after major disasters, and no clear procedures have been developed for effective and sensitive outreach.
		Interventions I. Assess disaster-related losses, including lives, property and key documents (e.g., voter IDs, school records, house papers including allotment letters, NOCs etc.) and restore these critical resources more effectively.

	Diagnostic Question (DQ)	Challenges and Interventions
		II. Offer swift and dignified relief efforts and appropriate compensation to vulnerable groups based on assets and livelihood losses.
		III. Strengthen the institutional capacity for disaster response: learn from innovative best practices from public, private and civic actors; maintain inter-agency coordination and communication.
		IV. Train volunteers, particularly from vulnerable communities, for disaster response (rescue and relief efforts).
		V. Train and sensitise engineers involved in flood protection to the realities of vulnerable settlements.
		VI. Develop disaster-resilient physical infrastructure that is durable and safe: community halls/shelters on elevated ground, storage space for key assets, design of settlement and buildings to provide easy access for rescue/relief operations and evacuation.
		VII. Strengthen basic infrastructure in vulnerable communities so they can withstand everyday and episodic disasters.
		VIII. Ecological restoration should consider social vulnerabilities.
		IX. Removal of encroachments should be prioritised based on ecological needs as opposed to economic, project-based needs and/or legal status of the households.
		X. Mainstream disaster management into housing and urban development plans/projects: stricter implementation of the Master Plan (specifically with respect to preventing development in ecologically sensitive zones) and of area specific regulations (no ground floor construction in flood prone areas, etc.).
		XI. Build disaster-responsive social infrastructure in vulnerable/at-risk neighbourhoods: cadre of first respondents, community organizations, state subsidized food canteens, etc.
		XII. Implement a Special Disaster Response plan for vulnerable communities.

Cities like Chennai survive and thrive on the cheap labour of working-class populations across all sectors of the economy, whether formal or informal. Informality, whether in land tenure, housing forms or access to services, is not an exclusive attribute of low-income settlements in the city. Indeed, much of mainstream urban governance and many elite spaces are marked by informal practices.

Informality shapes the vulnerability of low-income residents in important ways, by creating insecurity of tenure, susceptibility to eviction, poor infrastructure facilities and sub-standard, often unhealthy, living conditions. Yet, informality is stigmatised as illegality, and associated in the minds of propertied urban residents with corruption and vote bank politics, giving rise to hostility toward these settlers. While local bodies hesitate to invest in infrastructure such as

drinking water, sewage or even roads in informal settlements, residents are also reluctant to invest in housing improvements due to fear of eviction.

With these circumstances as a backdrop, carefully building up and ensuring a convergence between living conditions and access to urban opportunities is a crucial task for policies and plans that aim to enhance resilience for the city and its vulnerable populations.

CHAPTER 1: DISCOVERY AREA BACKGROUND: UNDERSTANDING RESILIENCE IN THE CONTEXT OF VULNERABLE URBAN COMMUNITIES

Chennai (formerly known as Madras) has historically been known as a city of slums. Rather than a negative characterisation, this image suggests that the city has always been shaped by a strong inclusion of low-caste migrants into its urban form. Cities like Chennai survive and thrive on the cheap labour of working-class populations across all sectors of the economy, whether formal or informal. The health, well-being and resilience of these communities are critical to the well-being and resilience of the entire city.

Informality, whether in land tenure, housing forms or access to services, is not an attribute that is exclusive to low-income settlements in the city. Rather, much of mainstream urban governance and many elite spaces are also marked by informal practices.

However, informality does shape the vulnerability of low-income residents in important ways. These include insecurity of tenure, susceptibility to eviction, poor infrastructure facilities and sub-standard, often unhealthy, living conditions. Informality is also stigmatised as illegality and associated in the minds of propertied urban residents with corruption and vote bank politics, giving rise to hostility toward these populations. While local bodies hesitate to invest in infrastructure such as drinking water, sewage or even roads in informal settlements, residents are also reluctant to invest in improvements in their homes, due to fear of eviction. Informality also means a lack of access to formal credit, which further impedes improvements to the quantity and quality of the housing stock and the neighbourhood.

It has long been recognised in Indian policy documents that informal settlements and slums are a result and a reflection of the failure of governments to regulate land and housing markets to ensure access to low-income urban residents (Parekh et al. 2008). Yet the dominant approach to formalising housing in Chennai (as in other large Indian cities), consists of large-scale, often involuntary, relocation of slum-dwellers or other vulnerable residents to resettlement colonies, which are often located on ecologically fragile lands outside or on the peripheries of the city. Such approaches have been found to undermine the resilience of low-income and vulnerable urban households.

This document addresses the issue of resilience from the perspective of informal urban settlers in Chennai.

Resilience and the Urban Neighbourhood

The resilience of vulnerable and low-income urban residents, especially with respect to environmental stresses and disasters, is rarely achieved at an individual household level. Neither is it determined by interventions at the level of the whole city. The scale at which resilience may be conceived, built, strengthened and assessed is ideally at the relatively small, social and collective scale of the urban neighbourhood. The neighbourhood combines geographic and spatial features with socio-cultural, economic, infrastructural and governance variables to create a local ecology of resilience.

Resilience in the context of vulnerable and low-income urban communities is shaped by a complex web of factors that do not always converge. There may be trade-offs and tensions between different resilience-enhancing factors in the lives of the urban poor. For example, low-

income households often trade secure and comfortable living conditions for proximity and access to key urban opportunities such as livelihoods and education. Indeed, access to such opportunities is often a more powerful driver of housing preference than living conditions or housing quality.

However, these trade-offs prove to be costly for low-income and vulnerable households, as struggles for daily access to basic amenities such as water, sanitation and waste management in informal settlements have been shown to have a marked negative impact on the productivity of workers and students, undermining their pathways to better social and economic conditions in the city. **Carefully building up and ensuring a convergence between living conditions and access to urban opportunities is a crucial requirement for policies and plans that aim to enhance resilience for the city and its vulnerable populations.**

The norm of "adequate housing", as outlined in a range of policy documents at the state, national and international levels, encompasses a range of factors beyond the housing unit itself. The UN Habitat's definition encompasses security of tenure and a range of material, environmental and social conditions, including adequate space, lighting, security and basic amenities. It also includes accessible location with regard to work and other amenities and declares that the determination of adequacy should be made in consultation with the residents.

Box 1: What is adequate shelter?

"Adequate shelter means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting, heating and ventilation; adequate basic infrastructure, such as water-supply, sanitation and waste-management facilities; suitable environmental quality and health-related factors; and adequate and accessible location with regard to work and basic facilities: all of which should be available at an affordable cost. Adequacy should be determined together with the people concerned, bearing in mind the prospect for gradual development…" (The UN Habitat Agenda).

"The human right to adequate housing is more than just four walls and a roof. It is the right of every woman, man, youth and child to gain and sustain a safe and secure home and community in which to live in peace and dignity." (Office of the High Commissioner of Human Rights, United Nations, retrieved from https://www.ohchr.org/EN/Issues/Housing/toolkit/Pages/RighttoAdequateHousingToolkit.aspx).

Phase I of the Resilience Chennai team's work in the city identified six key Diagnostic Questions (or DQs) to be addressed in detail in the domain of vulnerable and low-income groups. These questions are detailed in Chapter 2.

CHAPTER 2: DIAGNOSTIC QUESTIONS AND METHODS

In this chapter we present the key questions or thematic areas that have shaped this report's discussion on informal settlements and vulnerable communities, and the research methodology followed. The questions were identified through research and wide-ranging consultations with stakeholders during the first phase of Resilient Chennai's work. In this chapter, we discuss existing challenges and present possible interventions for each of these questions.

DIAGNOSTIC QUESTIONS (DQ)	
DQ 1	What is the composition of Chennai's informal settlements? On what key parameters do informal settlements vary? What are the main parameters of vulnerability of urban populations in Chennai?
DQ 2	What are some pathways to formalise housing that can reduce vulnerabilities and lead to more resilient urban neighbourhoods?
DQ 3	How can in-situ upgradation/rehabilitation of slums be maximised and prioritised?
DQ 4	How can the process of resettling vulnerable populations be made more humane and resilience-enhancing?
DQ 5	How can the housing market be diversified to cater to varying demands, particularly those of low-income groups?
DQ 6	How can vulnerabilities in disaster prone areas be reduced?

Methods - Materials presented in this report have been drawn from a variety of sources including:

i) Studies conducted by the authors and by members of the working group, involving surveys and qualitative field studies on informal settlements and resettlement colonies in Chennai. Some key documents consulted for the report include:

- Indian Institute of Human Settlements (2014). *Policy Approaches to Affordable Housing in Urban India: Problems and Possibilities.*

- Madras Institute of Development Studies and Transparent Chennai (2014). *Toward Slum Free Cities: A Review of Innovations and Practices in Slum Clearance, from International and Indian Cities, With Special Focus on Chennai*. Report Submitted to the Tamil Nadu State Planning Commission.

- Garima Jain, Chandi Singh, Karen Coelho and Teja Malladi (2017). *Long-term implications of humanitarian responses: the case of Chennai*. Working Paper 10840IIED, International Institute for Environment and Development (IIED), London.

- Asian Development Bank (2017). *Social Dimensions of Urban Flooding: Transformative Lessons from Informal Settlers.*

- Tamil Nadu Slum Clearance Board (TNSCB) and Darashaw and Co., Pvt. Ltd. (2014). *Rajiv Awas Yojana Slum Free Cities Plan of Action, Chennai Corporation.* Draft Report.

ii) Secondary literature drawn from academic scholarship and policy documents, including the documents cited above.

iii) Discussions with a wide cross-section of groups and individuals engaged with issues around informal settlements and vulnerable populations in Chennai, primarily through a working group consultation that included representatives from government agencies, academic institutions, NGOs, labour unions, consultancy firms and independent researchers and activists (Please see Appendix 1 for a summary of the workshop).

CHAPTER 3: ANALYSIS OF DIAGNOSTIC QUESTIONS

This section addresses each DQ and discusses the challenges it raises and the insights and interventions that have emerged to address these challenges.

DQ 1: What is the composition of Chennai's informal settlements? On what key parameters do informal settlements vary? What are the main parameters of vulnerability of urban populations in Chennai?

I. SLUMS

Slums are the site of the greatest concentration of low-income and vulnerable households in cities. Yet the term 'slums' encompasses a diverse range of settlement types, each vulnerable in diverse forms and degrees. Also, importantly, slums are not a simple proxy for urban poverty, and large numbers of the most vulnerable populations of the city may never find their way into a slum (Coelho 2016).

A 1961 "special" study of slums in Madras city conducted by the Census of India found nearly 100,000 families living in 548 city slums. In 2011, after fifty years of active government interventions in slum clearance, the census found that the number of slum households in Chennai had more than tripled, to 398,847, accounting for 31 percent of the city's population. A subsequent survey conducted by the Tamil Nadu Slum Clearance Board (TNSCB) for the Rajeev Awas Yojana (RAY) found 2173 slums in Chennai in 2014, which indicated a more-than 50 percent increase from the 1431 slums found in 2001. The 2014 figure included 787 slums categorised as "developed slums and tenements" (TNSCB 2014). These referred to slums in which improvements to housing and amenities had been implemented.

Slums and informal settlements in Chennai are differentiated along varied axes:

A. Classification by the TNSCB
   i. Notified vs. Non-notified: The Tamil Nadu Slum (Clearance and Improvement) Act mandates that slums be notified before they are marked for improvement or clearance. The power to notify a slum lies with the TNSCB, which itself was constituted under the Act. Settlement notification offers the slums some protection under law and allows the TNSCB to begin an improvement process. By 1985, TNSCB had notified 1219 slums (TNSCB 2014; Aditi 2016). Since then, no slum has been notified.
   ii. Tenable vs. Untenable: The TNSCB uses this classification to determine whether a slum settlement is fit for improvement or needs to be relocated. The criteria used for assessing

tenability are based on whether the land occupied by the slum is habitable. In Chennai, slums along river margins and water bodies are considered untenable.

iii. Objectionable vs. Unobjectionable: Objectionable slums include those considered untenable as well as slums those that are on land required for public purpose.

A survey of slums conducted for the Rajiv Awas Yojana (RAY) found the following break-up of slums in Chennai city:

Table 1: Tenable and untenable slums within Chennai Corporation

Status	Slums	Households	Percentage to total
Tenable	896	243150	80%
Untenable	235	61830	20%
Total	**1131**	**304980**	**100%**

Source: TNSCB 2014. Only 1131 of the over 2173 enumerated slums were surveyed in this study.

Of the 1131 slums surveyed for the RAY in 2014, 896 were found to be in "unobjectionable" locations and were to be improved or redeveloped in-situ, while 255 were to be relocated.

Table 2: Unobjectionable and objectionable slums in Chennai city

	Slum Conditions	No. of Slums	No. of households
Unobjectionable	Fairly improved and can be delisted with minor improvements	203	56957
	Lacking in infrastructure	253	75681
	Lacking in housing	130	27912
	Lacking in housing and infrastructure	309	82480
	Sub Total (a)	**896**	**243150**
Objectionable	To be Relocated	235	61830
	Sub Total (b)	**235**	**61830**
	Total (a+b)	**1131**	**304980**

Source: Ibid.

B. Classification by land ownership

Slums are also categorised based on the ownership of the land on which they are settled. This is another key determinant of their susceptibility to eviction. Data collected during the RAY survey reveals that most of the land occupied by slums in Chennai is public land owned by various government agencies.

Table 3: Slums classified by land ownership

Land Ownership	Patta	Possession Certificate	Private Land	Public Land	Rented	TNSCB	Nil	Total
Households	33548	3050	15249	146390	12199	91494	3050	**304980**
Percentage to total	11.00%	1.00%	5.00%	48.00%	4.00%	30.00%	1.00%	

Source: Ibid.

C. Classification by housing condition:

Vulnerabilities also arise out of the poor condition and quality of housing stock.

Table 4: Slums by unit size

Extent of Houses	Household	Percentage to total (%)
Less than 20 sq. mts	181876	60%
Less than 21-40 sq. mts	89232	30%
41-60 sq. mts	18451	6%
Above 60 sq. mts	15421	4%
Total	**304980**	

Source: Ibid.

D. Classification in terms of susceptibility to eviction

A particularly insecure category of households in Chennai's contemporary urban landscape are those living along waterways and waterbodies. The Census of India's 1961 "special" report on slums in Madras City found that of the 548 slums recorded in the city, a fifth (or 111 slums), the single largest spatial category of slums, were located on the seashore or on the banks of waterways.

These settlements typically tend to be old and well settled, since squatting on "poromboke" -- or non-assessed, common lands along river or lake banks -- was commonly how migrant labourers found shelter in Chennai. Given the long history of these settlements, most of them are now well-established spaces, with families having invested in them over time, including in concrete structures which are often built up to two or more storeys, and which include amenities such as water supply (street or in-house piped), roads, street lights and household electrical connections, which residents have obtained by negotiating with authorities. Only a small section of these settlements have thatched huts; these are usually at the extreme edge of the banks and house recent settlers. Thus, what are considered objectionable and untenable slums are often established settlements of affordable housing, offering a significant amount of affordable rental accommodation to new migrants and other low-income city residents.

Over the past decade, as a series of large projects aimed at restoring city water bodies have been launched, this category of informal settlements has come most sharply under the evictions scanner. A separate agency, the Chennai Rivers Restoration Trust (CRRT) was created to focus on clearing encroachments near water bodies and reclaiming the lands, and a series of High Court judgements propelled the process of eviction by severely indicting slums situated on river banks as "encroachers" and criminals. These administrative and judicial measures have weakened Slum Clearance Act protections that informal settlements previously enjoyed.

Today, the single largest category of slums slated for summary eviction is that situated in "objectionable" lands along water bodies. Over 10,000 such families have been moved over the past ten years, and an additional 50,000 are slated to be removed in the coming year or two.

II. Other vulnerable urban groups

Apart from low income groups, other sections of the community can also be classified as vulnerable based on their occupation, gender, age, disability and caste. In the Chennai context,

through a Working Group meeting with local experts, several such vulnerable groups were identified: migrants, sex workers, sexual minorities, destitute, fishing communities, street vendors, construction workers, people with HIV/AIDS, station porters etc. These were recognised as population segments that largely remain invisible in policy making and planning and public spaces, services and schemes are designed without accommodating the needs of these groups.

As noted above, slum dwellers represent only a sub-section – that is often better-off – of vulnerable groups in the city. Significant numbers of poor and destitute urban residents never even find their way into a slum, remaining invisible. The following table lists some of these groups

Table 5: Vulnerable urban groups in Chennai and what makes them vulnerable

Vulnerable urban groups	Size of group based on available data	Main parameters of vulnerability
Homeless, pavement dwellers	16,682 persons (Census 2011); 9,087 persons (GCC, 2018)	• Since they reside on pavements, under bridges/flyovers or in public spaces such as parks, railway stations, bus stops, religious places, beaches or markets, they are exposed to extreme weather conditions without access to shelter. These groups are the worst affected by extreme weather conditions. • Women face harassment and abuse when they sleep at night and when using public toilets. • Children face challenges in access to education; they face discrimination in school and are often victims of trafficking. • May be involved in stigmatized occupations such as begging and sex work. • Most remain invisible and lack ID documents such as voter ID cards, ration cards or other entitlements: 48 percent do not have access to ration cards and 42 percent do not have electoral ID cards. • May face stigma and are often criminalised by the police and members of the public who view them with suspicion and hostility.
Migrant workers	Nearly 11 lakh in TN and nearly 6 lakh in Chennai, Kancheepuram and Tiruvallur districts (Philip, 2016).	• Reside in informal camps or on worksites with poor access to services. • Separated from family and social networks. A large majority come from northern and north-eastern states, and face cultural and linguistic barriers and various forms of discrimination from host communities. • Depend on contractors or employers for their everyday well-being. • Mostly do not possess ID cards or state entitlements in their host state. *(Please see box 5 for more details on interstate migrants and their conditions).*
Specific sub-sections of destitute groups including: abandoned elderly, the mentally ill,	No reliable data	• Invisible due to stigma. • Vulnerable to abuse. • State does not have clear information about the multiple vulnerabilities they face. • State policies are not sensitive to their specific needs.

Vulnerable urban groups	Size of group based on available data	Main parameters of vulnerability
street children, disabled persons, some women-headed households, sexual minorities; persons infected or affected by HIV/AIDS)		
Occupational vulnerability: families/individuals involved in begging, sex work, manual scavenging, graveyard workers, etc.	No reliable data	• Face health issues. • Face stigma and criminalisation. • Have no legal protection.
Other invisible populations such as bonded laborers, nomadic tribes, etc	No data	• No identification.

A significant challenge when planning for resilience among vulnerable populations in Chennai is the dearth of disaggregated data on different sections of low-income and vulnerable people. Apart from broad Census aggregates on slums, there is almost no information on the size of groups identified above.

Insights and Interventions

1. *Official recognition:* Tamil Nadu government documents recognise a diverse range of vulnerable groups that need to also be addressed in state housing and shelter policies. The CM's Vision Document 2023 (which currently guides policy making in Tamil Nadu and Chennai) and the draft Tamil Nadu Housing and Habitat Policy explicitly address categories including: fisher communities, sexual minorities, persons with disabilities, destitute homeless individuals, migrants, senior citizens, persons with HIV/AIDS. The CM's Vision Document, while spelling out the need for preparing comprehensive regional plans for all urban agglomerations of over 1 lakh population, states that such plans would be aimed at "urban poverty reduction strategy and inclusionary zoning (old age homes, orphanages, working hostels, night shelters and so on)" (Government of Tamil Nadu 2014, p. 256). It also calls for "creating and updating (a) database on slums, city-wide perspective and slum development plans" in its "Way Forward" section.

2. *Homeless shelters*: The Greater Chennai Corporation (GCC) has been implementing the Shelter for Urban Homeless initiative since 2013. The GCC formed a Shelter for Urban Homeless (SUH) cell at its head office and developed Standard Operating Procedures (SOP) to run them. It publicizes a helpline number (1913) and invites the public to report the location of homeless people in distress situations so that they can

access nearby shelters. Sixty percent of the functional shelters currently operate as "special shelters" for the most vulnerable groups, including women, people with disabilities, the mentally ill and the elderly.

The GCC maintains an online database to track the implementation and progress of the SUH initiative, and established a Shelter Advisory Committee (SAC), which comprises of members of civil society. The SAC also conducts social audits when required, having conducted four so far. The GCC also holds inter-departmental meetings with the aim of linking homeless people with schemes such as the Old Age Pension scheme, the Voter Identity scheme, and the Disability Pension scheme. So far, 9127 individuals have used the shelters; 144 have received old age pensions; 449 have obtained electoral ID cards, 66 have disability ID cards and 435 children have been enrolled in schools. The GCC is allocating space within its premises for the shelters to market products produced in the shelters. The GCC has so far reintegrated 3,466 homeless persons with their families and rehabilitated 1,801 homeless individuals.

These GCC initiatives have been recognised as among the best in India, and officials from Assam, West Bengal and Karnataka have visited to understand how the shelters function. However, there are certain gaps in the programme that need to be addressed, including:

- A need for an information campaign, for both the homeless and the public at large. Many homeless people don't know where shelters are located, and the public doesn't know about the helpline or that they can report the location of homeless persons in distress.
- A need for rescue vehicles and a rescue team (which should include women) to help the homeless during floods and other disasters.
- Similarly, a need for a special disaster response plan for homeless people: the urban homeless are the worst affected during any disaster, and the GCC is aware of their location.
- A need for convergence with state housing schemes and a need to adequately address the needs of families who reside outside of shelters. Over 60 percent of the urban homeless reside in the streets with family members, and some of these families have been homeless for generations. The concept of family shelters has not picked up in the city. So far, only 6 urban homeless individuals have been linked to housing facilities.
- A broader need for coordination among departments and convergence of schemes. This is due to the multiplicity of departments involved in channelling entitlements to the urban homeless. To achieve this, a comprehensive policy on Tamil Nadu's urban homeless should be drafted. National guidelines exist, but state-specific operational policy guidelines are needed for effective programme implementation.

DQ 2: What are some pathways to formalise housing that can reduce vulnerabilities and lead to more resilient urban neighbourhoods?

Formalising housing can have strong positive effects: they can offer vulnerable communities greater security and better access to services. However, they can also carry some negative repercussions, as highlighted in the discussion below.

Housing formalisation is a major thrust in Indian cities today and takes the form of large "Housing for All" missions. These focus on mass-scale construction of new affordable housing units with the goal of re-housing slum dwellers. Since the mid-2000s, affordable housing has received increasing policy attention and funding support from the central government, with missions such as the JNNURM, the RAY, and the Pradhan Mantri Awas Yojana (PMAY) laying priority on constructing housing for the urban poor as a strategy for slum-free cities. Many states are passing Affordable Housing Policies. The Reserve Bank of India has declared priority sector status to "affordable housing."

Challenges

I. The first major challenge is that neither states nor markets have the capacity to construct housing at the scale required to re-house slum-dwellers and the homeless. The nationwide housing shortage, as estimated by the Kundu Committee Report, is 18 million units, with 95 percent of this in the Economically Weaker Section (EWS) and Lower Income Group (LIG) categories. In Chennai, the housing demand, as estimated by the Second Master Plan, was 659,479 units, of which the EWS and Lower Income Group (LIG) components together (at 65 percent of the total demand) account for 428,662 units.

Box 2: Affordable housing: parameters and possibilities

Affordability in housing is defined through two parameters: First, by size, where an affordable unit is between 300 to 600 sq. ft. for EWS and LIG households. Second, by price, where affordability is typically defined by price per unit cost that does not exceed 4 to 5 times the annual median income per household. At the national level, IIHS (2014) calculates that the affordable housing ceiling was Rs 3.06 lakhs in 2011, based on a national median household income of Rs 60,817. The paper cites a study by Monitor Deloitte that found that less than one percent of affordable housing units built by private developers between 2007 and 2013 were under Rs 4 lakhs in price. For housing under Rs. 4 lakh, the Monitor Deloitte report frankly admitted that "this segment is difficult, if not impossible, to serve without subsidy or government support." (IIHS2014, pp. 14-15).

The reality is that neither states nor markets have the capacity to construct affordable housing units at the required scale to re-house slum-dwellers and prevent further slum formation.

II. Social/affordable housing has been prioritised in Chennai's planning processes ever since the first Master Plan, with the state government taking a lead role in directly providing affordable land and housing stock in the city as well as in incentivising the private sector to play a part in this. The government offers 50 per cent additional FSI for builders constructing low-income housing projects and mandates developments on properties exceeding one hectare to reserve 10 per cent of developed land for LIG and EWS dwelling units. However, these measures have not yielded fruit. While private sector participation has been strong in mid- and higher income segments, it has remained a challenge in the lower income and EWS segments.

III. Since the 1990s, the dominant form of intervention to clear slums and pavement dwellings and to render Chennai "slum-free" has been state-sponsored, large-scale construction of EWS tenement units in large resettlement colonies on the peripheries of the city. This mode

of formalisation, often following demolition of houses and forced evictions of slum-dwellers, has given rise to large resettlement ghettos that spawn a range of social and economic problems. This approach to housing formalisation has proved as problematic, if not more, for the urban poor, than informal settlements. This is discussed further under DQ 4 below.

Insights and Interventions:

1. *Indicators for successful slum clearance:* A global consensus has emerged in international as well as Indian policy documents on the key elements of a humane and sustainable solution to the problem of slums. The following six criteria distil broadly-agreed indicators of the success of a formalisation program in creating decent and sustainable neighbourhoods.[1]

   i. *Tenure security:* Does the intervention provide slum residents with shelter that is protected from evictions and secure in the long run? All national housing policies, including the National Urban Housing and Habitat Policy (NUHHP) 2007, and the Deepak Parekh Committee report (2008) recognise that tenure security is a crucial lever in ameliorating slum conditions, primarily by encouraging households to invest, both financially and socially, in improvements to their housing and allowing them to build stakes in the neighbourhood.

   In most southern urban contexts, *de facto* tenure security arrangements may often prove to be more feasible, inclusionary and transformative than formal titling. While property titles enhance economic security for poor households by turning homes into assets and facilitating access to institutional credit, they may also dispossess many who cannot establish eligibility, and may raise housing costs in low-income neighbourhoods. A range of arrangements such as long-term leases, no-objection certificates (NOCs), no-evictions guarantees and community titles can offer informal settlers the *perceived* security of tenure that allows them to invest in housing improvements. However, in the current Indian context, where land has emerged as the prime resource in urban development, with land acquisition occurring on a large scale and land markets changing rapidly, formal titling may appear to offer the strongest and most durable security of tenure for vulnerable urban households.

   ii. *Improvement in environment and living conditions:* Interventions that improve living and environmental conditions and enhance residents' access to basic amenities and services are critical to building resilience both for the neighbourhood and for the city as a whole. The NUHHP 2007 emphasizes the links between improved environmental and living conditions and higher productivity of urban workers: "*It is a well-established fact that safe, hygienic and spacious provisioning of housing duly buttressed with adequate basic services and a congenial habitat promotes significant improvement in productivity of workers*" (Ministry of Housing & Urban Poverty Alleviation 2007: 6). Bringing slum-dwellers into the ambit of state services benefits municipal agencies as well as households. State denial of basic services brings private providers into the gaps, spelling higher costs and often poorer services for households. It also makes them vulnerable to

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[1] These indicators are drawn from the study "Toward Slum-Free Cities: A Review Of Innovations And Practices In Slum Clearance From International & Indian Cities, With Special Focus On Chennai" by Madras Institute of Development Studies (MIDS) in collaboration with Transparent Chennai (TC), 2014.

powerful and unregulated local interests. As illegality or informality of tenure blocks slum-dwellers' entitlements to state-provided basic services, recognition or regularization of the settlement is a critical step in facilitating access to such services. Conversely, state initiatives to install or improve infrastructure and services in a settlement often operates as a mode of de facto tenure security by providing assurance that evictions are not imminent, thereby encouraging residents to invest further in improving their housing or environment.

iii. *Livelihood security:* Does the intervention strengthen the livelihood security of the urban poor, create conditions for their integration into dynamic urban economies and provide opportunities for socioeconomic mobility? Interventions that undermine the livelihood security of urban working-class residents have a high likelihood of failure. India's NUHHP 2007 and RAY guidelines push for shelter arrangements for the urban poor that are in-situ or near their workplaces, "to ensure that development does not lead to loss of livelihood linkages or additional commuting hours leading to loss of income" (MHUPA 2007; MHUPA 2013). Both documents recommend that relocation be considered only in the case of "untenable" locations which potentially endanger the health or safety of residents, and recommend that in such cases, mobility and livelihood linkages be integrated into the resettlement effort.

iv. *Sustainability*: This indicator comprises three domains: governance, habitat and long-term access. Is the intervention governed and managed in a way that creates a viable and sustainable urban neighbourhood? Are the agencies responsible for management and maintenance accountable to residents? Do the institutional arrangements safeguard their access to the benefits of the intervention? The crux of a successful slum-clearance intervention lies in its sustainability over time. Robust management and maintenance of inputs and investments, essential for a durable transformation of a slum, are in turn determined by three governance aspects. First, effective coordination among state agencies with clear channels of accountability, second, strong partnerships with NGOs, civil society groups and community-based organisations (CBOs) in planning and execution of the intervention, and third, the inclusion of beneficiary communities in planning, design and implementation.

v. *Inclusiveness/breadth of coverage:* Does the intervention create a broad-based entitlement, or a limited package that excludes many? Does it serve to expand the supply of affordable and decent housing in the city? High-quality interventions with a limited/selective reach which exclude large numbers often prove counter-productive by perpetuating or recreating slums elsewhere (UN Habitat et al., 2008). Single-site or low-scaled in-situ upgrading projects, for instance, can enhance plot values, edging out residents with weak tenure rights, including tenants, into new slums (Cities Alliance, 1999).

vi. *Costs:* Are the interventions financially sustainable for the beneficiaries and for the state? The costs of slum clearance deserve consideration in two interrelated aspects: demand or affordability of the intervention for slum residents (including questions of access to finance), and its financial sustainability for governments. As international agencies such as the World Bank, UN-Habitat and the Cities Alliance have emphasized since the 1970s, building cost-recovery into the design of the intervention allows for a larger scale of coverage and a more inclusive model.

2. *Regularizing and upgrading informally built housing stock*: If, as seen above, neither states nor markets can deliver affordable housing at the required scale, who can meet the gap? According to IIHS (2014), "The answer is households themselves." In Chennai, it is what IIHS (2014) call the *noncorporate private sector,* comprising households, communities, and local contractors, that has built the largest housing stock in the 'below Rs. 4 lakh' category. The affordable housing gap in Indian cities, as the Kundu committee points out, is not so much about a lack of houses or widespread homelessness but about a large volume of self-built housing that falls short of adequacy standards. This housing has the advantage of being built to suit the needs and resources of residents, allowing for incremental expansion and improvements, and is usually located in areas that provide access to livelihoods and employment. Thus, as IIHS (2014) describe it, "affordable housing is inadequate; adequate housing is unaffordable" (p.4). Affordable housing policies, thus, must include a large component of in-situ upgrading, aimed at formalising and bringing the existing affordable housing stock up to adequacy.

   In effect, programs of formalising housing must find a viable balance between direct building of new EWS housing stock by the government and upgrading of existing self-built housing. The latter approach avoids demolishing already built housing stock, thereby contributing substantial savings for both the household and the government. It also accommodates the forms and designs that people have constructed to suit their needs.

3. *Mandatory reservation of land*: 'Affordable Housing' policies recently passed in Rajasthan and Karnataka attempt to augment the supply of land for current and future demand for affordable housing, by creating mandates and strong institutions with authority to reserve land for this purpose (IIHS 2014). Rajasthan reserves not less than 10 percent of gross land area under each scheme to be reserved for affordable housing and not less than 20 percent of developed land for plotted development schemes. Odisha reserves land at the ward-level, allowing for a more decentralized framework of accountability to specific land allocations (ibid.). As IIHS (2014) notes, inclusion of these reservations in Master Plans makes judicial enforcement possible. It also notes that such "mandatory reservation policies can also expand, over time and with the right political support, into the kind of land banking schemes imagined by the Rajiv Awas Yojana. Such a transition would be a significant step forward into regulating the use of public land and directing it towards affordable housing. If such policies can also leverage existing land pooling schemes (such as those in Gujarat), they could become significant game-changers." (p.40).

4. *State interventions for increasing housing stock:* State initiatives in Tamil Nadu and Chennai have proactively attempted to increase the stock of affordable housing through measures such as:
   a. Setting aside 10 percent of plots/apartments in all large layouts/apartment buildings for EWS.
   b. Offering incentives like 50 percent extra FSI and 10 percent Permissible Maximum Coverage in multi-storied building developments in exchange for serving LIG families.
   c. Offering higher FSI for reconstruction of sites with old and dilapidated houses and increasing number of dwelling units.

   The CM's Vision Document 2023 pushes for joint efforts by the two state housing agencies, Tamil Nadu Housing Board (TNHB) and Tamil Nadu Slum Clearance Board (TNSCB), to meet the needs of low income groups and to minimize speculation in land prices. It also

envisages a greater role for public private partnerships to enhance the ability of private builders to deliver housing for economically weaker sections and low-income groups.

5. *Inclusionary zoning and flexible development control rules*. As IIHS (2014) point out, special zoning allocations in project, ward and city-level plans could more effectively protect and leverage these mandatorily reserved lands for affordable housing uses. The concept of "Special Zone of Social Interest" has been used in Brazil (where it is known in ZEIS) as a zoning category to mark land being used for social purposes such as low-income housing. Such marking has effectively protected these lands and uses against forced eviction. "Inclusionary zoning could also incorporate livelihood to create integrative, dynamic mixed-use spaces" (ibid., p 42). Flexible development control rules can also be applied to these specially marked zones.

6. *The Sites and Services (S&S) approach* that was implemented in several Indian cities including Chennai in the 1980s, fulfils many of the criteria for successful slum clearance outlined above. S&S projects were implemented in Chennai between 1977 and 1988 under the Madras Urban Development Projects (MUDP) I and II by the Tamil Nadu Housing Board (TNHB) and were funded by the World Bank. They constitute an important moment in Chennai's history of affordable housing and slum clearance. This approach to housing formalisation provided small plots with tenure security, adequate infrastructure and low-interest credit to households, allowing them to invest in improving their own housing. These schemes catered to a mixed socioeconomic group, wherein plots for lower income groups were subsidized by market rates for the sale of 'Middle Income Group' (MIG) plots. The MUDPs made significant advances in providing affordable shelter to large numbers of the urban poor, covering over 76,000 slum households over 10 years, at a much lower outlay than the tenement construction schemes. Many of the S&S sites in Chennai today are solidly built, vibrant and dynamic lower middle-class neighbourhoods where residential spaces are closely enmeshed with livelihood spaces such as shops, saloons and workshops and with community infrastructures such as schools, temples and meeting halls. These sites have emerged as among the most successful models of housing formalisation, yielding resilient and sustainable urban neighbourhoods which have offered their residents strong opportunities for social and economic mobility over a relatively short period of time.

7. *Delinking provision of basic urban services from tenure conditions.* This amounts to a fomalisation of service-provision without formalisation of tenure. In other words, this approach dispenses with the requirement of evidence of legal title for a household to obtain a basic service such as water or a sewage connection from the government. Such a measure can go a long way in improving living conditions in informal settlements. While many governments have been reluctant to implement this approach, fearing that this would hinder future efforts to evict illegal settlements, there has been a growing trend at the national level to delink service provision from tenure requirements. For example, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM)'s Basic Services for the Urban Poor (BSUP) sought "to ensure universal and equitable access to basic services for all urban dwellers, including slum residents who may be living in non-notified, irregular or illegal settlements*,* by connecting these areas to municipal services, i.e., water supply, toilets, waste water disposal, solid waste disposal, roads, power, etc." (Ministry of Urban Development, undated, p. 5-6). The Rajiv Awas Yojana (RAY) also mandated bringing all slums, notified or non-notified, into its ambit for improvement (MUHPA, 2013). The National Urban Sanitation Mission recommends providing water and sanitation to

households without evidence of formal ownership of houses. "Every urban dweller should be provided with minimum levels of sanitation, irrespective of the legal status of the land in which he/she is dwelling, possession of identity proof or status of migration. However, the provision of basic services would not entitle the dweller to any legal right to the land on which he/she is residing" (MoUD 2008, Annexure I, p. 14).

8. *Democratic, decentralised and dynamic planning*: The 74th Amendment's attempts to activate ward and area *sabhas* as the relevant scale of planning in Indian cities, has largely failed. However, making planning more open and participatory, bringing it to smaller scales like wards and zones and pinning it to shorter timeframes (like 5 years) with provisions for dynamic review, iteration and change can make all the difference for the success of formalisation schemes (IIHS, 2014). Such attempts have emerged in select pockets around the country. Pilot ward-level plans are being drawn up in eight wards in Delhi. In Hyderabad, sanitation and solid-waste management plans were brought under ward committees. In Mumbai, the municipal corporation piloted a localized planning process in collaboration with civil society groups in M-East ward (ibid.). As IIHS (2014) points out, ward-level planning offers a feasible institutional structure for community participation in governance and to facilitate zoning that can allocate land to low-income housing. "Within a framework of prioritizing in-situ upgradation, the ward becomes an important scale at negotiating the presence of "slums" in their immediate geographic contexts" where negotiations between slum settlements and their better off neighbours are critical for the sustainability of the intervention (ibid., p 48).

9. *Community DPRs (Detailed Project Reports)*: Communities could be engaged as project designers and implementers rather than simply subjects and participants. One way to institutionalise their role in planning is to engage them in developing DPRs for housing projects (ibid.). The DPR offers a suitable vehicle for active community engagement as it works at the scale of a single project or set of integrated sites and involves the "beneficiary" community in making key decisions on the nature of the intervention (ibid.). IIHS (2014) suggests that capacity for this can be built by broadening the notion of "consultant" usually hired by state nodal agencies to prepare DPRs. Community actors bidding for DPR preparation must be given a separate set of eligibility criteria and must be supported through coalitions or consortia which provide technical and academic expertise. Alternately, they suggest, all consultants preparing DPRs can be required to partner with a representative federation of community residents and associations. This will require investment in both time and resources by both the consultant and the community, but it could yield significant time and cost savings and help to ensure the sustainability and effectiveness of the project itself.

DQ 3: How can in-situ slum upgradation/rehabilitation be maximised and prioritised?

The stated thrust of most policy documents in India and worldwide is on in-situ improvement or redevelopment of slums. As Table 6 below shows, the JNNURM, the RAY and the National Urban Habitat and Housing Policy (NUHHP) 2007 all emphasise proximity to work opportunities as a critical feature of adequate housing for the urban working classes. This thrust is also emphasised in various Tamil Nadu government documents. The Vision 2023 document spells out a priority for "development of housing in proximity to employment centres" (Government of Tamil Nadu 2014).

The nationwide housing mission, RAY, launched in 2009 envisaged slum clearance through a city-wide approach, based on Slum Free City Action Plans to be drawn up for all cities, with in-situ upgradation or redevelopment at the centre of the scheme. However, in implementing the RAY, very few cities actually adopted this approach.

In-situ upgradation, where possible, has many advantages over in-situ redevelopment. Slum upgrading involves providing tenure security and environmental improvements *in situ*, along with some financial assistance for housing investments and, most critically, eliciting the participation of residents in planning and implementing the project. The Cities Without Slums Action Plan endorsed by 150 heads of state and government at the UN Millennium Summit in September 2000, and reflected in the UN Millennium Declaration, declares city-wide slum upgrading as the most effective strategy for addressing the problem of slums (see Cities Alliance 1999). The Cities Alliance identifies slum upgrading as "the least expensive, most humane way of enhancing a city's much-needed stock of affordable housing, instead of destroying it", and an option that is both "good for the poor and good for the cities they are part of" (1999:13).

Table 6: Policies emphasizing in-situ slum rehabilitation in India and Tamil Nadu

Policies	Extracts emphasizing in-situ interventions for slums
National Urban Habitat and Housing Policy, 2007	"It is of critical importance that the strategy of in-situ slum upgradation is adopted for preponderant proportion of the slum dwellers, since they provide valuable services to residents living close to their own dwelling places."
Report of The High Level Task Force on Affordable Housing for All, 2008	"In-situ development on public lands is one of the most effective instruments for addressing affordable housing issues in partnership with the Government. … in-situ development provides a route, which is speedy, effective, economical and sustainable."
Rajiv Awaas Yojana (RAY) (National shelter mission), launched in 2011	"In-situ development of selected slum would be preferred to ensure that development does not lead to loss of livelihood linkages or additional commuting hours leading to loss of income." Relocation only for "untenable slums."
BSUP and JNNURM	"Care will be taken to see that the urban poor are provided housing near their place of occupation."
Chief Minister Jayalalithaa's Vision, 2021	The way forward in addressing the problem of slums comprises "… granting tenure security to slum dwellers by suitable enactment, in-situ upgradation and resettlement options through a transparent process for slum improvement, using land as a resource for housing and shelter development for slum dwellers and increasing the accessibility improvements and maintenance of basic amenities in an integrated manner"

Challenges

Why, despite this firm prioritisation of in-situ rehabilitation of slums in all policy statements, is it so rarely implemented in Indian cities, including Chennai?

1. The standard answer to this is the scarcity of urban land. This constraint is claimed to be particularly severe in Chennai and other metro cities.
2. Large proportion of slums are located on "untenable" or "objectionable" lands.
3. The imperative to restore waterbodies and waterways as part of efforts to prevent flooding, enhance the ecological health of cities and create aesthetic cities necessitates the removal of large numbers of slums from the banks.

Other challenges arise in the implementation of slum upgrading schemes, including:

1. Uneven development of spaces and "gentrification" if only a small number of slums are upgraded. Development control regulations that lay down minimum unit sizes.
2. Without active and sustained engagement over time of residents, settlers and owners of informal settlements, upgrading plans cannot be carried out.

Insights and Interventions

1. *Making land available:* How do we address claims of land scarcity for slum upgrading in cities? First, as IIHS (2014) points out, the argument of land "scarcity" does not work when the lands are already occupied and used for informal housing. The largest share of this land is government-owned. On average in urban India, 40 percent of the land on which slums are located is owned by urban local bodies, 10 percent by other public agencies and about 3 percent by the railways. In Chennai, as shown above, over 70 percent is owned by various government agencies. The issue then is how public land is valued and the priority accorded to different uses.

   Giving priority to affordable housing in land use policies has long been called for in Indian urban policy documents. The Deepak Parekh committee report in 2008 pressed for a comprehensive, long-term urban land policy that addresses the housing requirements of the urban poor and recommended that affordable housing should be declared "public purpose" for land acquisition purposes (Parekh et. al., 2008). However, ULBs are under pressure to monetise their land to demonstrate financial sustainability for infrastructure grants and loans. IIHS (2014) suggested four types of short term interventions to allocate these lands for in-situ affordable housing while also generating revenue for the ULB:

   i. Using Transfer of Development Rights (TDRs) for public land: This would allow ULBs to exchange their slum lands for alternate land in other locations or to acquire extra FSI or FAR in prime locations. Such arrangements could allow ULBs to accommodate in-situ upgradation while generating revenue from their land.

   ii. Converting occupied land into social rentals: Here, the ULB can give security of tenure in the form of a 'no-eviction guarantee' to the occupying household in return for a nominal rent on the land. Options for rent-to-own or community-managed leases could also be offered. Government scheme funds could be used for upgrading the site and providing infrastructure, which additional rent/user fee could be charged. IIHS (2014) calculates that in a mid-size town, this could generate up to 10 percent of own revenue for the ULB.

iii. Enabling buy-back on occupied private land: the ULB could use affordable housing funds to purchase private land pockets already occupied by slum households, thus consolidating its lands which can then be used for social rentals as above.

iv. Bringing vacant land back into the market: There is evidence that a significant amount of vacant land exists in Chennai. The mapping of vacant land mandated under RAY was not carried out. It is imperative that vacant land be brought back into circulation into the housing market using a mix of taxes and appropriate legal and financial penalties. For publicly held land, vacancy could be defined as long-periods of being unused or under-used. Land found to be "vacant" by this definition could be compelled into use as supply for affordable housing (IIHS, 2014).

2. *City-wide participatory upgrading*: At a global level, learning from the earlier generation of slum upgrading projects contributes to a few key advances in this approach. These are:
   i) An emphasis on upscaling the approach from project-based to city-wide interventions. This is a strategy to avoid an unsustainable rise in property values of upgraded sites, which could crowd out vulnerable residents.
   ii) A focus on integrating slum upgradation plans into larger city development plans and strategies with a view to mainstreaming the approach.
   iii) An insistence on community participation in design, implementation, management and maintenance. Studies of slum upgrading initiatives emphasise that, to be effective, slum upgrading must go beyond technical interventions and address social, institutional and financial aspects.

3. *Building city-wide federations or networks of community based organisations (CBOs)* to undertake housing upgradation. The Baan Mankong initiative in Thailand demonstrated a successful initiative where community federations undertook substantial roles in the upgrading of settlements. As IIHS (2014) notes, "such federation creates a governance space that is markedly different from individual committees seeking to negotiate with the state" (p. 49).

4. *In-situ slum upgrading was implemented in Chennai in the 1980s* under the MUDP projects, wherein large numbers of slums were notified and provided with basic infrastructure, while households were issued No Objection Certificates (NOCs) for tenure security and subsidised credit to improve their housing. These areas have evolved over time into sturdy, well-integrated low-income neighbourhoods with incrementally built-up and expanded houses, improved infrastructural and environmental conditions and a well-developed sense of belonging and community. The low cost of the intervention allowed for wide scalability and coverage through this approach. Many families were able to repay their dues to the Slum Clearance Board as the credit involved was low. There was minimal disruption in livelihoods, and many families have benefited from rental income over the years.

5. *The Baan Mankong* in Thailand, launched in 2003, is an example of a city-wide slum upgrading program where the government worked with community cooperatives to resolve the housing crisis. The program incentivised the formation of housing cooperatives by slum dwellers, which were then provided with financial support to upgrade or build houses. The government actively facilitated land transfers from various government agencies to the community cooperatives, ensuring tenure security

through long term community leases. The program targeted 400,000 households and covered over 100,000 households by 2014. It was entirely community managed and led. Nearly 75 percent of households were able to purchase the land they lived on or obtain collective long term leases. There was no loss of livelihood. In fact, communities formed building teams to carry out construction work in areas that had taken on upgrading projects, thus deriving livelihood opportunities from the project. The low costs and shared financial burdens allowed for wide scalability of the program. The household contributions (about $500 per household) were to be paid back in monthly instalments.

6. *The Slum Networking Project (SNP)* was implemented in Ahmedabad beginning in the mid-1990s, as a partnership between Ahmedabad Municipal Corporation and local NGOs, with central government assistance. It covered 13,000 households in 60 slums. Effective de facto tenure was provided through a 10-year "no evictions" guarantee, which allowed communities to confidently invest in upgradation. Communities designed plans to ensure relocations were carried out only if absolutely necessary. Significant improvements were effected in slums by the SNP – for instance, parts of the city received sewerage connections for the first time. Residents carried out significant home improvements. Community health programs were strongly emphasised and had positive impacts. Community participation as well as partnerships between NGOs and the Municipal Corporation contributed greatly to making the program sustainable. For instance, SEWA Bank's role in providing loans to families who could not afford the beneficiary contributions was critical in ensuring sustainability of the intervention. Studies showed that amenities like roads, sewerage and storm water drains were cheaper to provide under the SNP than in other projects. However, the SNP could be carried out only in slums on public lands owned by the State Government. Also, only homeowners benefited from the program, leaving out the large population of tenants. This created a divide between those entitled to infrastructural development and those who were not entitled.

7. *In-situ slum improvement in Yerawada, Pune.* This project was launched in 2009 by the Pune Municipal Corporation and carried out in partnership with NGOs such as Society for the Promotion of Area Resource Centre (SPARC), Mumbai, with central government funding through the JNNURM. It aimed to upgrade seven high density slums in Yerawada housing 4,000 families, which had severe deficiencies in services, and to provide them infrastructure on par with the rest of the city. The project aimed to provide titles and envisaged that at the end of the project the area would be de-notified as a slum. It succeeded in rebuilding over 1,000 *kutcha* (shack) housing structures and effecting significant improvements in environmental conditions, with individual toilets constructed in all houses, no increase in density in the neighbourhood and no displacement. Beneficiary communities were involved from the design stage, where they worked consultatively with architects. There was greater inclusiveness as diverse requirements and needs were accommodated. The scheme accessed a subsidy of Rs. 3 lakh from the government for each house, which cost Rs. 3.5 lakh to improve, with residents paying 10 percent of the cost. This figure, however, does not include the cost of the land.

Several other successful examples of in-situ upgrading initiatives exist in different parts of the world. The key ingredients they display are the willingness and ability of governments to make

land available to accommodate the low-income housing in-situ, partnerships between the government, NGOs and communities, strong community engagement in the process of designing and planning the intervention and institutional support from local and state governments.

DQ 4: How can the process of resettling vulnerable populations be made more humane and resilience-enhancing?

The predominant pattern in current slum resettlement is mass-scale, high-rise, peripheral, state-built tenements. Since 2000, over 50,000 households have been moved from informal settlements in Chennai to such sites outside the city, and another 30,000 are facing the threat of eviction and resettlement to these sites. The latest state-of-the-art resettlement colony in Chennai, Perumbakkam, has almost 24,000 tenements built in eight-storied complexes on a marshy site, of which only 14,000 are currently occupied.

The model of mass-scale, peripheral resettlement housing remains problematic for a range of reasons. It has been widely found to perpetuate or reproduce impoverishment of vulnerable families and expose them to new risks such as crime and threats to the physical safety of women, youth and children for the following reasons:

i.   The distance of these sites from previous habitations and their disconnection from the urban mainstream cause loss of livelihoods. This has been found to affect women in particular, reducing their mobility, significantly reducing their labour force participation and their everyday mobility.

ii.   In Chennai and across India, sites selected for construction of resettlement colonies are in ecologically sensitive areas, usually low-lying and flood-prone, which exposes residents to disaster risks.

iii. The design of state-built resettlement tenements is often inappropriate to support the residential practices in low-income households. The current dominant model for EWS housing in Chennai (as elsewhere in metropolitan India) is vertical housing of ground plus three to eight floors ("G + 3-8"). This model envisages the housing unit as purely residential and doesn't allow for any spill-over uses, thereby limiting the extent to which housing can serve as an anti-poverty instrument. Residences in typical, organically built low-income urban neighbourhoods combine several purposes: workspace or workshop, storage space, and facilities for incremental expansion to accommodate growing families or rentals -- a major source of income for many low-income households.

iv.   In addition, the tenement units are typically very small in size, which, combined with the inflexible design and lack of spill-over space, severely undermines their adequacy. The amount of dwelling space available is a critical determinant of the quality of life in housing interventions for the urban poor. The Deepak Parekh committee defines the minimum size of EWS/LIG housing units as 300 to 600 sq. ft. (Parekh et. al., 2008). Slum clearance policies across India have adopted different standards for minimum carpet area in redevelopment or resettlement housing projects, but many, including large resettlement projects in Chennai, have in the past built houses that measure less than 200 sq. ft. Congestion, which defines many slum residences, is thus reproduced by state interventions. From 2010, however, the government of Tamil Nadu has adopted a more generous norm of around 340 sq. ft of carpet area for newly constructed EWS housing.

v. The sites fail to integrate arrangements for livelihood activities such as vending spaces, shops or workshops.

vi. Ghettoization and stigma. Partly due to the poor quality of infrastructure and services and partly due to the concentration of working class residents, these colonies quickly acquire a reputation of being unsafe and rough. This stigma actively hinders residents' access to jobs in the vicinity.

vii. Access to civic and social infrastructure facilities (from drinking water and street lighting to schools, hospitals and child care) continues to be a challenge, both in terms of quantitative and qualitative adequacy. Neglect and discriminatory standards are associated with the low caste/class profile and the overall vulnerability of the population.

Box 3: Poor services are linked to crime

The association of poor service conditions in resettlement colonies with law and order problems has been officially acknowledged by the Government of Tamil Nadu. A 2011 Government Order of the Housing and Urban Development Department (GO(Ms) No. 117 HUD, dated 26.08.2011) states that "Since the basic amenities like water supply, electricity and other social infrastructures have not been provided to [people] at the time of occupation, serious law and order problems arose."

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viii. Broken livelihoods and lack of employment opportunity cause a range of knock-on problems such as indebtedness, chronic unemployment, alcoholism, domestic violence, youth drug addiction and school drop-outs.

ix. The overall increase in crime due to the above factors make these sites unsafe for male and female youth, and for women. High rates of child marriage are reported from Kannagi Nagar, one of Chennai's resettlement colonies, as parents consider this the only way to keep their girls safe and protected. Incidents of child trafficking have also been reported from Chennai's resettlement colonies.

x. Fragmentation of communities: In Chennai, households from a single community, neighbourhood or slum are accommodated in different blocks in the resettlement colony. This has several negative effects. Families are unfamiliar with and therefore distrustful of their neighbours, even after living together for several years. Divisions and conflicts are common. This fragmentation has implications for collective action.

xi. Issues of belonging and identity: Since the colonies are built and managed by the state, many residents, even years after resettlement, do not feel a sense of belonging there. They have little incentive to invest in and take care of the new spaces. The design of buildings, the fragmentation of communities during relocation, the insecurity and threats to safety they experience and the poor services all contribute to many residents feeling alienated from the place (Coelho 2016).

Insights and Interventions

1. *International guidelines against involuntary resettlement[2]*. There has been at least three to four decades of recognition at the international level that involuntary resettlement of

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[2] This point draws heavily on the report: "Social Dimensions of Urban Flooding: Transformative Lessons from Informal Settlers" (ADB. 2017).

vulnerable communities for development projects compromises the resilience and sustainability of the resettled populations as well as the larger urban fabric. Worldwide, the outcomes of resettlement projects implemented in the 1990s show some improvement over those of the 1980s, suggesting that some lessons have been learned about how to mitigate the risks of impoverishment associated with involuntary resettlement.

An important outcome of global attention to these outcomes is the articulation of a set of guidelines, policies and standards that govern resettlement. International Financial Institutions (IFIs) such as the International Finance Corporation (IFC), and multilateral banks such as the World Bank and Asian Development Bank (ADB) have all outlined standards that must be

complied with to avoid the negative impacts of project-linked resettlement of vulnerable groups. There is increasing convergence among IFIs in terms of these standards: most are modelled on the IFC's Performance Standard 5 (PS5), which outlines a Resettlement Action Plan Framework to prevent or mitigate such outcomes. The majority of multilateral project lenders mandate compliance with these standards.

Box 4: IFI Guidelines Against Involuntary Resettlement

(Adapted from the Report "Social Dimensions of Urban Flooding", see footnote 4.)

IFC: The benchmark for resettlement practice is defined by the IFC's Performance Standard 5 (PS5), which is included in the 2012 edition of IFC's Sustainability Framework and applies to all investors and advisors whose projects go through IFC's initial credit review process after January 1, 2012.

World Bank: In 1979, the Bank adopted operational guidelines on resettlement for its own staff and for borrowing governments. It outlined the first international standard on resettlement in 1980. In 1998 the Bank launched the first electronic "guidebook" on resettlement, which compiled best practice approaches and methods. In 2001, it issued its Operational Policy on Involuntary Resettlement (OP 4.12). Its New Environmental and Social Framework (ESF) approved in 2016 replaces the 2001 document and will apply to all new Bank investment projects after 2018 (World Bank 2017).

ADB: The current operational policies of the ADB released in 2009 include three prior safeguard policies: the Involuntary Resettlement Policy of 1995, the Policy on Indigenous Peoples of 1998 and the Environment Policy of 2002.

Private Banks: Have adopted the Equator Principles (EP) as formally launched in 2003 based on the IFC's Environmental and Social Framework. In 2013, the third revised version of the EPs was released. The EPs, currently adopted by 92 Financial Institutions in 37 countries, provide a minimum standard for due diligence and monitoring.

All the above policies and guidelines carry the following common features:

i)   Involuntary resettlement is to be avoided wherever possible, and where unavoidable, its impact is to be minimised through fair compensation and improvements in living conditions.

ii)   Compensation should cover replacement costs of affected assets in their existing condition.

iii) Displaced people must be assisted in the relocation process.

iv)   The livelihoods of displaced people (including living standards, capacity for income generation and production levels) should be restored or improved.

v)   Active community engagement and participation throughout the process is essential. Project-affected persons must be consulted at every stage.

vi)   Compensation and improvement requirements apply even to displaced households with no legal title or claim on land.

vii) Grievance redress mechanisms must be created for project affected persons.

2. *The Negotiated approach.*[3] This instrument, innovated in sustainable natural resource management projects, aims to enable communities to propose and negotiate viable long-term strategies to alleviate poverty, protect their rights and ensure healthy ecosystems. It envisions communities and community service organisations (CSOs) as full-fledged partners in natural resource management planning and implementation at all levels. The approach goes beyond merely creating a multi-stakeholder dialogue; it creates opportunities for local actors to actively develop, propose and negotiate policy and investment measures based on their own local knowledge, needs and realities. In 2011 a guide on the Negotiated Approach was published; it summarises 10 years of experience, setting out the principles, tools and strategies that CSOs can use to take the first step towards inclusive and sustainable natural resource management (Both Ends and Gomukh Environmental Trust, 2011).

3. *A comprehensive resettlement policy.* Resettlement of the urban poor should be based on a set of minimum principles drawn from the framework of adequate housing as defined above. Tamil Nadu does not have a resettlement policy. Elements of such a policy should include the following provisions:

   i.   Communities should not be resettled beyond 3 kilometres from their current place of habitation

   ii.   Resettlement should be carried out on smaller tracts of land and no site should comprise more than 1,000 houses. This will promote better integration of the settlement with the larger urban fabric and prevent ghettoization. Residents should be allowed a choice among available sites.

   iii. Offer options for subsidised rental accommodation, rather than just hire-purchase options.

   iv.   All infrastructure and services should be in place before resettlement begins.

   v.   All due process should be followed when relocating families, including adequate notice period, legal notices with time to respond and social impact assessment to mitigate adverse impacts.

   vi.   A Resettlement Action Plan should be developed, discussed and shared with the community that is to be resettled. The resettlement process should be humane, sensitive and transparent. This includes avoiding eviction during mid-academic year, monsoon or festival times.

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[3] Taken from ADB, 2017; see footnote 4.

vii. There should be community consultation at all stages of resettlement, from planning onwards.

viii. Secure tenure rights should be given.

ix. Effective grievance redressal mechanisms should be set up.

4. *Resettlement on the Sites and Services model.* Learning from the experiences and successful outcomes of the Sites and Services models implemented in Chennai, resettlement should create neighbourhoods with the following characteristics:

i. *Well integrated with urban amenities and opportunities.* Integration into the urban milieu is not only a function of location but also of the availability and the quality of infrastructure, amenities and governance. Many of Chennai's Sites and Services projects under the MUDP were located on what were then the peripheries of the city. However, they were planned from the start to be strongly integrated into the city, with arrangements for transport, roads, social infrastructure and other amenities provided in the planning and design.

ii. *Mixed class neighbourhoods.* Planned mixing of different income groups within a neighbourhood, as demonstrated in the S&S sites, aids social, cultural and economic integration of urban spaces, prevents ghettoisation and contributes to enhancing resilience and sustainability.

iii. *Flexible built form.* Vertical buildings are promoted as aspirational for low-income residents while also allowing for higher density rehousing. However, as IIHS (2014) shows, vertical housing (unless in very high buildings) does not match the densities that are possible on S&S-based incremental housing. The study demonstrates how, in a relocation project in Mysore, the land area used to build G+3 vertical housing blocks, can accommodate a larger number of units (along with adequate open space) if redistributed into plots rather than flats. This would also allow for the built space to be expanded and customised as needed. The study concludes that "giving slightly smaller plot sizes to households allows the same number of families to be settled in the same land parcel with more open spaces and green areas and, critically, the ability to build a second floor as and when families decide that they can use for rental income (thereby also creating more housing stock) or for livelihood and income-generating opportunities. S&S based incremental housing also allows the personalization of housing stock, the choice of design, colour and aesthetic that may seem superficial but, in fact, is often critical for public, subsidized housing to not be marked by different and second-class status and to instil a sense of ownership and investment in residents" (ibid., p 36)

iv. Provision for livelihood spaces and activities (such as industrial workshops and commercial vending spaces and markets) should be included in the site design along with community spaces such as community halls, parks, and playgrounds.

v. Strong investment in creation of self-sustaining associations in resettlement sites, including empowering them with financial support and dues collection powers.

Challenges

Approaches to affordable housing have hitherto focused on ownership models and on single family units. However, as suggested under DQ1 above, urban shelter needs are actually much more diverse.

Initiatives and Interventions

1. Policy documents at national, state and city levels have begun to recognise the diversity of housing needs. In Tamil Nadu, The CM's Vision Document outlines a vision of housing in which the single-family unit is not the only form of housing envisaged: "The promotion of housing units may also take care of the needs of various target groups such as working women, students, night shelters, employees, pavement dwellers, etc., and it may also take into account the provision of infrastructure services as well as addressing livelihood considerations" (Government of Tamil Nadu, 2014).

2. Affordable housing plans and policies should incorporate a provision for a range of affordable non-family based housing forms, such as dormitories, hostels, communal housing and worker housing to cater to a rising demand for flexible, affordable and temporary housing for diverse sections of the urban population.

3. *Rental housing:* Rental housing is a significant sector in urban areas but has been neglected in housing policies until recently. Across India's urban centres, roughly a third of slum households are estimated to be tenants. However, the failure to recognise and regulate rental housing renders rental arrangements typically insecure, short-term and often unduly costly. As IIHS (2014) points out, with appropriate regulatory frameworks, rental housing can represent a valuable and secure tenure option for all urban residents, but especially for low-income urban residents. It expands the range of formal housing options for new migrants moving to the city for work or education, as well as for older urban residents who cannot afford to own a home. It can improve the mobility and economic productivity of workers by allowing them flexibility of location. Rentals are also a significant source of income for landlords in low-income communities, who may be as or more vulnerable than their tenants.

   So far, the public sector has kept out of rental housing except in the case of its own employees. However, recent policy reports from both the state and central levels recognise the importance of rental housing as a sustainable housing option for low-income households and migrants. There is an increasing trend toward encouraging publicly-built rental housing. At the national level, a Model Rental Housing Act has been passed. In Tamil Nadu, tenancy reforms are being implemented through the "Tamil Nadu Regulations of Rights and Responsibilities of Landlord and Tenants Act, 2017.".

4. *Worker housing* should form an integrated part of urban planning. Housing for workers could be linked to industrial sectors that are dominated by temporary labour, such as construction. Where worksites are temporary and shifting, as in construction, modular

housing units that can be readily relocated should be considered. Care should be taken to ensure that decent infrastructure facilities (water, sanitation, electricity and waste management) are provided at the site. As IIHS (2014) suggests, the responsibility of building this housing (including land acquisition, financing and operation of the housing scheme) could be shared across employers and public agencies already tasked to build affordable housing stock under central and state policies. Such arrangements help ensure integration of adequate housing norms into other schemes and policies such as the National Urban Livelihoods Mission, the Unorganised Workers Social Security Act and the National Manufacturing Policy (NMP). IIHS (2014) points out how manufacturing policies in China, Singapore and Hong Kong effectively use workplace entitlements to housing as a way to increase real rather than nominal wages. State support for such initiatives includes free land for the construction of dormitories for migrant workers by employers. An example closer to home is the Tiruppur garment exporters' association, which has sought to co-operate with local government to provide subsidized housing for workers. IIHS (2014) suggests that inter-state competition for investment could be harnessed by state governments to advertise the availability of "good and subsidized housing for workers" in addition to SEZ facilities of infrastructure and electricity as a positive factor.

5. *Worker-led cooperative housing*. The town of Solapur in Maharashtra hosts one of the largest worker-led cooperative housing initiatives which has provided 10,000 houses and is constructing another 30,000 houses in India. The Women Beedi Workers Cooperative was formed in 1992 with the support of Centre for Indian Trade Unions (CITU). It was primarily an association of home-based working women to regulate their work and improve their bargaining power. As housing was an important issue for the workers, CITU helped organize a cooperative housing society. Through prolonged but effective advocacy, the union was able to obtain land from the government, obtain sanction for the project, and persuade the government to share the financial cost. Houses are 550 sq. ft in size, on a total land area of 182 ha. As the site was located 8 km from Solapur town, there were initial problems with transport and access to urban infrastructure. However, sustained political mobilisation over the years has brought beedi sheds, bus services, schools and hospitals to the area. Workers paid their share in instalments, and the funds for this purpose were drawn from their personal savings and their social security funds. The central government's share for the scheme came from the Beedi Workers Welfare Fund, which consists of the tax collected on manufactured beedis (Transformative Cities, retrieved from https://transformativecities.org/atlas-of-utopias/atlas-34/; Dennis, 2018).

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Box 5: Interstate migrants in Chennai

A recent survey commissioned by the Tamil Nadu Department of Labour found 10.67 lakh interstate migrants in Tamil Nadu, of which over 51 percent (or around 5.75 lakh) work in Chennai, Kancheepuram and Thiruvallur districts, and are concentrated in the Chennai Metropolitan Area (CMA). These migrants work predominantly in the manufacturing, garments, construction and hotel sectors. Other recent studies of interstate migrant workers include a 2013 sample survey of 310 workers across all sectors conducted by the Institute for Development Alternatives, Chennai, and one conducted in 2017 by Loyola Institute of Social Science Training and Research (LISSTAR), Loyola College, of 730 workers in the manufacturing sector.

These studies find a preponderance of migrants coming from India's eastern and north eastern states, with those from southern states constituting a very low proportion. This means cultural and linguistic barriers become a significant source of vulnerability for these workers. Both studies also record a high percentage of Scheduled Caste/Scheduled Tribe (SC/ST) populations: 52 percent in the 2013 study, and 35 percent in the 2017 study. Other Backward Castes (OBCs) form the bulk of the remaining workers.

Both studies capture the long working hours and the low wages that define many migrants' experience. The 2013 study found that nearly 80 percent worked over 8 hours a day, 6 days a week, with nearly 35 percent working more than 12 hour days, for an average of around Rs.7000 per month. The 2017 study found an average daily wage of 400/- (or 10500/- per month). They also note how precarious migrants' employment can be, in the absence of written contracts.

Housing conditions and vulnerabilities:

Housing arrangements for migrants in the districts of Chennai, Kancheepuram and Thiruvallur, were found to be of three broad types:

a) Squatter colonies established by migrant workers in vacant lands, especially in outer suburbs of Chennai;
b) Temporary shelters provided by employers as mandated by the Interstate Migrant Workers Act. This is mostly found in the construction industry; and
c) Rental accommodation in residential areas, primarily in informal settlements.

   Given their low wages, most migrants rent housing in low-income neighbourhoods with inadequate infrastructure. As migrants aim to keep their living expenses as low as possible so they can remit most of their wages to families at home, they are forced to tolerate very poor living conditions. The studies highlighted the following findings:

a. Migrants lived in very cramped accommodations, whether as families or individuals. They suffered a lack of privacy and space for prolonged periods of time.
b. Migrants had minimal access to civic facilities such as drinking water or sanitation. As these facilities were in short supply in informal settlements, there were also conflicts with host communities over access.
c. Day care for children was a major concern for migrant families, with numerous cases of children getting lost, trafficked or abused.
d. Education for children is another problem as very few schools are willing to take in migrant children due to language barriers.
e. Access to health care is costly, as they lack identification documents to avail free services.
f. The threat of violence in the neighbourhood remains significant especially for those from eastern and north-eastern states, with many facing incidents of xenophobic violence. This also creates insecurity of tenure, as owners turn them away or police evict them.

A migrant worker from Assam working in a southern Chennai suburb said, "We have plenty of jobs here, getting a job is not our concern. Finding a place to stay is our problem."

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According to the Inter-State Migrant Workers Act 1979, employers and contractors are responsible for providing 'adequate' housing with provision for day care for children. This becomes feasible only when the size of the group employed is large enough. Increasingly, migrants are employed in small groups, particularly in the service and manufacturing sectors. Thus, provisions of the Act are rarely followed by employers or enforced by the Labour Department, which has scant resources for monitoring. It is only in the medium - to large-scale construction sector where some employer-provided housing is found, and these are very poor in quality.

As the State and Central government have made concerted effort to ensure that the Sarva Siksha Abhiyan (SSA) program is implemented, schooling opportunities for children over 5 years are often found in the vicinity. However, day care for infants remains an issue, with problems accessing Integrated Child Development Services (ICDS) day care systems in the region. ICDS is taking steps to address this. There have also been attempts to establish larger residential hostels for children above 5 years, as tried in Maharashtra.

Interventions

1. The Tamil Nadu Department of Labour has mooted the idea of setting up a resource centre to monitor migration trends and offer policy and programme ideas to the state government. One of the ideas discussed was to reserve houses for migrants on a rental basis in proposed large low-income housing projects.

2. Construction workers welfare boards across India remain flush with money that has not been utilised for worker welfare. These funds can be used to construct houses for migrants in regions where they are present in large numbers. Such an investment would produce substantial returns in the form of rent.

DQ 6: How can vulnerabilities in disaster prone areas be reduced?

Chennai's main disaster risks are flooding (on a routine basis – due to poor drainage management – as well as on an episodic basis), storm surges, cyclones and drought.[4] A recurring pattern of severe flooding followed by severe drought is evident since the mid-2000s (see DA Report on Water Systems for more details). The 2004 tsunami was a landmark event. Climate change is projected to exacerbate existing risks, leading to greater intensity of cyclones, declining rainfall trends and sea level rise, all of which will expose vulnerable populations to more erratic and extreme rainfall and temperature.

The two prominent disasters to hit Chennai over the past decade impacted two distinct sets of landscapes and their occupants. The tsunami was a coastal disaster, primarily affecting fisher communities and other coastal residents, while floods affected low-lying lands, the edges of water bodies and rivers within the city.

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[4] This section draws heavily from Jain, et al. (2017)

1. *Inadequate understanding of disaster vulnerability.* The government defines vulnerability in the context of Chennai disasters in predominantly technical terms, including physical submergence levels of land and housing. However, disaster risk and vulnerability are in fact constituted through the interaction of socioeconomic, institutional and biophysical factors (such as the availability of good drainage systems).

   A historical and ongoing shortage of affordable shelter in Indian cities has resulted in the dwellings of the urban poor being concentrated in hazardous locations on river floodplains, low-lying areas or coastal areas. Not only does this expose them to more severe impacts of flooding, cyclones and tsunami than other urban residents, the set of quotidian risks they face aggravates these impacts, creating a highly unequal landscape of disaster impacts. Disaster vulnerability for the urban poor is constituted and exacerbated by socioeconomic conditions such as poverty, precarious livelihoods, insecure housing, dependence on state services and chronic neglect by the state. As flood, drought and cyclone events increase in frequency and intensity in Chennai, this acute vulnerability turns chronic (Jain, et al., 2017).

2. *Approaches to relief:* Providing relief to Chennai's vulnerable communities proved to be a challenge during major disasters such as the 2015 floods and the 2004 tsunami. Innovative systems for organising and distributing relief and rescue assistance were deployed by some state agencies and NGOs. However, these were not replicated across state agencies, nor were they incorporated into ongoing protocols for future response or mitigation efforts. Consequently, effective work done by innovative individuals or groups, whether in state or civil society domains, remained isolated in those moments and spaces. The failure to develop systematic learning or standard protocols for disaster management makes every episode a crisis. As one government official confessed, *"standard operating procedures (SOPs) do not exist – we should have manuals for people – for floods, droughts, earthquakes, cyclones. What to do when there is no current, no water, whom to approach. After the floods, how to prevent diseases. What to do if sewage has got mixed with water".*

3. *Challenges in relief distribution:* Many NGOs note that the manner of disbursing humanitarian assistance to vulnerable populations in the aftermath of disasters undermines their dignity and creates a heavily dependence on external assistance, often reducing communities to passive recipients. The 'pathology of giving' following a largescale disaster also produces pathologies of receiving. There are reports of fights, scuffles and truckloads of relief supplies being hijacked by groups of villagers en route to their destinations. As one local NGO respondent noted, "people lived dignified lives before the disaster struck. They are not asking for handouts. They can be helped while keeping their dignity intact". An important ongoing challenge, then, is to devise modes of relief distribution that maintain or even enhance the dignity of vulnerable people.

4. *Disaster vulnerability of resettlement colonies*: It is important to note that most factors that contribute to disaster vulnerability among informal settlements also apply to Chennai's state-built resettlement colonies. In 2015 and 2016, resettlement colonies proved to be almost as badly affected by the floods and cyclone as informal settlements. This is not just because they are sited on low-lying or ecologically fragile lands such as marshes or floodplains, but also because of the poor quality of their infrastructure and

services and because of neglect by the state. Resettlement colonies face especially harsh impacts both during and after disasters, as their routine set of vulnerabilities get exacerbated during episodes of stress.

i. Siting: Chennai's three large resettlement colonies are all located on marshlands or wetlands. This renders them susceptible to flooding even during routine rains. For some, like Semmencherry, the risk of flooding is accentuated by the fact that they are surrounded by elite residences or commercial buildings which have raised their plinths or constructed walls to insulate themselves against flooding. These measures block water drainage and lower the level of the resettlement colony relative to the surrounding areas.

ii. Inadequacies in infrastructure and service: Because units are small in size, it is difficult for families to offer shelter to each other during the floods. Kannaginagar and Semmencherry do not have community halls which can be used for shelter or relief supply. Since electricity wires are exposed and poorly connected, they get promptly disconnected and take much longer to be restored than in the rest of the city. Lack of electricity means that households receive no water for several days as there are no overhead water storage tanks in these colonies. Broken sewage lines mean that the floodwater entering ground floor houses is filled with sewage. Health facilities are limited to poorly-equipped part-time public health care centres (PHCs).

iii. Neglect: The distance of these resettlement sites from the centre of the city turned into isolation during the 2015 floods. State agency offices in these colonies were unattended for several days and no officials visited. The colonies were also unreachable by relief volunteers for several days. Relief supplies were dropped by helicopter onto the main roads, and there were scuffles and fights to access them. Without social mechanisms for equitable distribution, those who did not have the capacity to struggle for access to relief supplies in this situation went without aid.

iv. Concentration of vulnerable populations: Resettlement colonies have very large concentrations of low-income and socioeconomically vulnerable families, most of whom depend on casual or informal employment for livelihoods. Even small disruptions in their routine order can spell employment loss for many, with few resources in the neighbourhood to provide assistance.

v. Acute need: The above factors often render the distribution of relief supplies disorganised and undignified, as volunteers face a rush of people vying to obtain material before it runs out. There are either skirmishes or the quiet appropriation of benefits by powerful local actors who prevent materials from reaching inner areas.

vi. Lack of effective community-based organisations (CBOs): Much of the above is due to the lack of functioning CBOs that can liaise with relief providers to ensure effective distribution and ensure a match between materials supplied and needed. While Chennai's resettlement colonies have a large NGO presence, there are few CBOs.

5. *In terms of post-disaster rehabilitation*, a common tendency is to use the aftermath of extreme events as an entry point for reshaping agendas related to land and development. The tsunami and the floods in Chennai were used to justify relocating fisher folk from coastal areas and informal settlements from river banks, freeing these lands for the state to allocate to more lucrative purposes. The government was enabled to present forced

eviction from these settlements, which had long been part of a dominant agenda of urban renewal, as a post-flood rescue and rehabilitation measure.

6. *Disaster prevention*: Post-flood governance discourses in Chennai pushed towards a formalisation of urbanisation processes including stricter implementation of building codes and regulations, and action against encroachments. Encroachment became a key focus after the floods. The term is commonly used (by both the government and the larger public) to refer almost exclusively to informal settlements of the poor. However, after the 2015 floods, discussions in the press and in civil society platforms pointed to large numbers of elite and state encroachments that had actually had more damaging impacts on city flood ecologies than informal settlements on river banks. Government officials also acknowledged that several river bank encroachments were in fact large elite institutions, however claimed that these encroachments were difficult to evict as they had legal title (or '*patta*') for their lands.

7. Despite the lessons articulated after the 2015 floods, most state agencies soon returned to business as usual, with a selective removal of encroachments by the poor and a continued failure to act against elite encroachments.

8. There are important disconnects between the Chennai Metropolitan Development Authority (CMDA)'s planning guidelines and developments occurring in smaller towns and municipalities in the urbanising peripheries of Chennai that come under the planning jurisdiction of the Directorate of Town and Country Planning (DTCP). The DTCP lacks adequate expertise and capacity to develop ecologically sensitive plans. In addition, local bodies within the metropolitan area, which are tasked with developing local development plans and issuing building permissions, lack the capacity to develop and enforce such plans. Local bodies often grant building permissions that violate the provisions of the plan.

Insights and Interventions

1. *Build on existing local-level strategies:* In Chennai, vulnerable communities are typically housed in low-lying or flood-prone areas and have routinely coped with and managed flood risk for decades. Any intervention to enhance disaster preparedness must recognise the strategies they have designed for themselves, and build on them in a consultative mode.

2. *Restoration of ID documents to vulnerable families:* After Chennai's 2015 floods, one of the most devastating outcomes for many victims was the loss of productive and non-productive assets, livelihoods and identity documents, including children's school records. The Government of Tamil Nadu made concerted efforts to restore these documents to affected people. Also, resettlement efforts after the floods were delinked from possession of ID or other entitlement papers, since surveys of households living along the banks had already been carried out.

3. *Appropriate compensation for loss:* The loss of livelihoods among the unorganised sector due to natural disasters is rarely accounted for or compensated. The state government's lack of capacity and data for assessing disaster impacts on the population, and the inflexibility of its institutional architecture for providing relief were evidenced by the compensation scheme implemented after Chennai's 2015 floods, where compensation was provided in the form of a standard cash amount of Rs. 5,000 per household across the board.

4. *Arrangements for dignified relief provision*. During the 2015 floods, NGOs developed systems for equitable and dignified distribution of relief supplies. Citizen volunteers who took relief supplies to affected areas often did not know how to reach interior parts of the neighbourhood. One NGO devised a system where an individual, usually an educated woman, was selected from each of the severely affected streets within the neighbourhood. The woman visited each home to record the numbers of residents, their age and gender on a form. Each family was then given a token: "The token was a psychological thing. When they received a token, they felt reassured, they did not have to worry about not receiving relief material. We issued tokens to everyone. Once we got the forms back, we knew how many people, infants, women, or elderly members there were, and used that to categorise our relief material into different packs. It went absolutely smoothly… People were taking things in a dignified manner" (Interview with an activist from Arappor Iyakkam, December, 2016).

5. *Institutionalising effective disaster response innovations*: During the 2015 floods, successful health outreach efforts by the state health department in partnership with NGOs averted the dangers of cholera and other communicable diseases outbreaks in the aftermath. A special consultation was also held by the State Planning Commission in the post-disaster phase to institutionalise outreach for patients with chronic and special ailments such as HIV/AIDS, TB and diabetes who face unique vulnerabilities during floods because they lose their medicines and are often unable to reach government dispensaries to replace them. The state resolved that during disasters, emergency ad hoc groups would be set up to carry out special outreach for these patients, to administer their medications at their doorsteps. Since these patients are registered with the health department, the government would have the information necessary to reach them. This initiative illustrates the proactive role played by some state agencies to identify special vulnerabilities, learn from experiences, consult with a range of stakeholders and devise solutions for the future.

6. *Stronger inter-departmental coordination both for relief and preventative action*, among the Corporation, Public Works, Highways and Revenue Departments, Slum Clearance Board and Chennai Metropolitan Water Supply and Sewerage Board. Periodic consultations are needed to ensure that agencies maintain linkages on ongoing flood prevention measures. The government has built and, since 2015, further strengthened its inter-departmental zonal disaster monitoring and response teams. Each team for Chennai's 15 zones is headed by an Indian Administrative Services (IAS) officer who serves as a zonal commissioner and is to be supported by a team of 'first responders' comprising mostly young community volunteers. The first responders are to be mobilised to carry out ground assessments at the moment a disaster hits, and alert the zone-level team to activate evacuation or relief measures. In 2016, the Corporation of Chennai issued a call for volunteers on its website. It also created a window for Resident Welfare Associations (RWAs) to liaise with the zonal commissioners. Across the state, district collectors have been advised to rope in civil society and NGOs in building early warning and disaster preparedness systems. Many NGOs have also proactively come forward to help develop plans with the government.

7. *Flood prevention*: Following the 2015 floods, a concerted inter-departmental flood-prevention drive was also launched, involving the de-silting, cleaning and clearing of encroachments along water bodies and waterways, as well as, for the first time, along inlet and outlet channels. Numerous state departments, including highways, PWD, corporations and local bodies were directed to clear bridges and culverts under their jurisdiction. Official

figures claimed that 15,800 bridges and 1,43,500 culverts were cleared across the state in 2016. There were also plans to redesign culverts from pipe to box type and to change the size of vents.

8. *Training volunteers for rescue and relief efforts:* Chennai's 35 fire and rescue stations and all police stations should be equipped with adequate infrastructure and be able to mobilise and deploy young volunteers for rescue activities in times of disaster. Fisher communities are usually mobilised, but with some training, the pool of rescue volunteers can be vastly expanded. In 2016, the Corporation of Chennai announced plans to rope in the Red Cross to provide training for its first responder volunteers.

9. *Careful planning of long-term rehabilitation:* Rehabilitation must be undertaken as part of a long-term recovery process following detailed socioeconomic and risk assessments, with relevant monitoring frameworks in place. Resettlement implemented in urgent timeframes risks accentuating the underlying inequalities or vulnerabilities that may have caused the losses, resulting in poor developmental outcomes. The severity of Chennai's 2015 floods made many families anxious to move away from river banks, and many accepted tokens for re-housing in peripheral resettlement colonies as they had little other choice. In that sense, this resettlement was the result of a forced eviction. It is important to understand that interventions in housing during times of crisis, if carried out without adequate planning and consultation, can have significant long-term implications for the socioeconomic, political and environmental conditions of the people as well as the city at large, and can create irreversible risks for the future.

10. *Fuller and stricter implementation of the Master Plan* which prohibits development in eco-sensitive zones, is critically needed. This includes creating detailed development plans (DPs) and action plans for each area, particularly for flood-prone areas, drawing from the Master Plan and supported by annual budgets. There is also a need to articulate area-specific development regulations, for instance, to disallow ground-floor construction (even for a generator room) in flood-prone areas, where the ground floor should be kept only as a stilt floor for parking, play areas or open spaces.

11. *Disaster management plans should be mainstreamed into housing and urban development plans* and projects, not just to prevent future risk, but also to reduce current risk. For example, while drainage canals are typically desilted in preparation for the monsoon, disaster-proofing the city and protecting fisher folk and other vulnerable communities from flooding would require removing major installations from creeks, estuaries, inlet and outlet channels and strictly observing no-development policies in vulnerable areas.

   After the 2015 floods, the highly publicised clean-up of the Buckingham Canal in its northern reaches near the Ennore Creek was the result of a sustained campaign spearheaded by environmental activists and fisher communities from the Ennore region who pointed to serious floods threats during the 2016 monsoons. However, once this threat passed, by February 2017, the cleaned sections of the canal had returned to their original polluted state. Thus, the state undertakes actions in the short term to demonstrate responsiveness to disaster risk, while the medium and longer terms typically see a return to business as usual.

12. *Ecological protection in urban areas must recognize existing socioeconomic contours of the ecology:* Currently, ecological restoration in Chennai emerges as a social tragedy, causing mass demolition of thousands of low-income homes on river and canal banks,

followed by mass resettlement to urban peripheries. It is important to find solutions that address both the social and natural vulnerabilities of urban ecologies. Where possible, settlements should not be removed if they are not directly on the water courses, or for aesthetic interventions. Settlements that are removed should be resettled close by.

13. *Training and sensitising engineers to the realities of vulnerable settlements*. Managing and mitigating disaster risk in vulnerable areas requires state agencies to have a more complete understanding of social realities as well as technical conditions.

Box 6: Sensitising Public Works engineers in Manila (from ADB, 2017)

An important initiative along these lines is the training program organised in Metro Manila, Philippines in 2012 to train civil engineers from the Philippines' Department of Public Works and Highways (DPWH), who were tasked with flood management under the Metro Manila Integrated Flood Management Master Plan. Funded by the ADB, the three-day, experiential training program for 80 DPWH engineers and other key staff included field visits in groups of 10 to four informal settler communities that were most threatened and devastated by floods. They were instructed about issues and experiences shared by the people's organization (PO) and discussed these further with the leaders—mostly women—and members. The capacity building program aimed to instil in participants the following facts about how urban poor informal settlers approach the prospects of resettlement and their experiences:

  i. Urban poor informal settlers prefer to stay in their current neighbourhoods even in the face of flooding and other disaster risk to retain their livelihoods, social networks and other support systems.
  ii. Relocation to distant resettlement sites poses challenges for employment, affordable transportation to the city and disrupted social networks, leading to increased poverty. These effects are most strongly experienced by women.
  iii. Informal settlers are important contributors to the urban economy, providing cheap labour, both in the formal and informal sectors.
  iv. Urban poor informal settlers who manage to stay onsite continue to face challenges with onsite upgrading, secure tenure, improved infrastructure and access to social services – although community efforts are ongoing with support from CBOs.

Findings and lessons for DPWH staff: Discussions following these visits established that the DPWH and its staff could contribute to greater social awareness and approaches through the following actions:

  i. Improving understanding of the legal rights of informal settlers. This knowledge would enable better applications of various principles and requirements of relevant national laws and regulations.
  ii. Improve communication channels and engage in frequent interaction with communities to build mutual trust.
  iii. Conduct periodic capacity-building programs with support from local NGOs or CSOs working with communities potentially affected by a DPWH project.
  iv. Establish a database of lessons from field consultations and successful interactions between engineers and informal settlers.
  v. Encourage women engineers to lead interactions between DPWH and informal settlers.
  vi. Support from top management builds staff confidence.
  vii. Institutionalize capacity building on social dimensions into engineer's induction program.

14. *Developing disaster-responsive physical infrastructure for vulnerable communities.* The provision of durable housing which is safe and dignified can reduce future disaster risk, provide security and allow low-income families to focus on other priorities. A range of building designs are available to provide disaster protection, including locating assets on elevated plinth, while using lower level land for open space uses. However, it is imperative that user communities are consulted in the design of such housing.

All vulnerable neighbourhoods should have access to protected community shelters that can serve as community halls outside of disaster periods. They should also have access to open spaces and parks. Settlements and buildings should be designed to provide easy access and egress for rescue and relief operations as well as for evacuation. Energy saving features such as natural ventilation, rainwater harvesting and vertical gardens, as well as alternative energy, water and food sources such as urban farms will build community resilience. Attention to the quality of basic infrastructure can go a long way in withstanding everyday and episodic disasters. Good quality drainage pipes, properly connected and protected electric lines, protected water supplies, covered manholes are minimum requirements. Natural drainage systems should also be protected, with construction on these systems prohibited, as well construction of walls and other structures that put informal settlements in the line of flood also prohibited.

15. *Disaster responsive social infrastructure should be proactively built up in vulnerable neighbourhoods such as informal settlements and resettlement colonies:*
    i. Cadre of first responders from within the community, trained in disaster-response and mitigation.
    ii. Community organisations that serve as liaisons for distribution of relief and identification of needs.
    iii. State-subsidised food canteens along the lines of Chennai's Amma canteens, which produced mass amounts of food during the cyclone.

16. *Resettlement Policy to address disaster preparedness.* Resettlement and rehabilitation (R&R) policies should outline clear criteria for the selection of sites for resettlement housing project to avoid siting on ecologically hazard zones. They should also lay out clear guidelines and responsibilities for state action plans in responding to disasters in these sites.

Vulnerable Communities

OPPORTUNITY ASSESSMENT SESSION

Date: 23rd October 2018

Place: Anna Institute of Management

Time: 10 AM – 1 PM

Background

Over the past six months, Resilient Chennai team has worked with multiple stakeholders from government, industries, academia, and civil society to understand the city's context and identify the key resilience challenges. Based on this stakeholder-driven process in Phase I, six broad areas have been prioritized for deeper engagement in the next phase of strategy development. These six discovery areas are: *WATER, METROGOVERNANCE, CIVIC ENGAGEMENT, INFORMAL SETTLEMENTS, HEALTHY & PLANNED URBANIZATION and URBAN FINANCE.*

Resilient Chennai's Phase I work and pre-existing knowledge offers a strong basis for understanding the current state of affairs and key problems around each of these discovery areas. In Phase II the focus is more on the relevant interventions and strategies that can help address the current challenges these discovery areas face.

Therefore, on the 23rd of October an OPPORTUNITY ASSESSMENT SESSION WAS organized to call upon the 'INFORMAL SETTLEMENTS AND VULNERABLE URBAN GROUPS' working group to come together to brainstorm around actions and interventions that present opportunities to make our city more resilient with respect to its vulnerable population and their basic needs for housing, water, sanitation etc. (Please refer Appendix 1 for list of participants). Experts on informal settlements and vulnerable groups from civil society, academia and private institutions were invited to -

- Map the current state of Chennai's vulnerable communities and informal settlements.
- Discuss ways of addressing the challenges that characterize the informal settlements and vulnerabilities through technical, research-based, regulatory, and/or infrastructural interventions.
- Develop a priority list based on their understanding of what is relevant, feasible, and necessary to reduce vulnerabilities.

Session 1: Problem Mapping

The discovery area was broken down in to six pertinent thematic areas and the participants engaged in a brain-storming exercise to map out the relevant challenges for each of the questions. Based on the secondary research, some challenges were identified and were provided to the participants for reference.

Thematic Area 1: DIVERSITY OF CITY'S INFORMAL SETTLEMENTS AND VULNERABLE POPULATION-VARIOUS TYPES OF VULENRABILITY

- Different ways of classifying slums with different implications for vulnerabilities of residents (e.g. tenable vs untenable or by land ownership).

- Deeper vulnerability among unrecognized/invisible groups (e.g. migrants, sex workers, sexual minorities, destitute elderly, traditional settlements like fishing communities, street vendors, domestic maids, construction workers, people with HIV/AIDS, vanishing occupations such as station porters etc.)

- Lack of disaggregated data on different types of vulnerable groups.

- Lack of awareness amongst the vulnerable groups on existing government programs/facilities.

- Poor co-ordination among various government departments dealing with different groups and different schemes.

Thematic Area 2: **PATHWAYS TO FORMALIZATION OF HOUSING FOR LOW INCOME RESIDENTS**

- Current methods of formalization are executed without consultation with beneficiaries. They exacerbate existing vulnerabilities and creates new risks.
- Exclusive model of formalization is creation of new housing units. This models is restrictive.
- Providing housing subsidies often end up putting people at immense financial risk as they must return their debts.
- Providing rentals, hostels etc could be one way of encouraging people to live in formalized housing.
- Yet, state cannot provide affordable housing at the scale required.
- Mixed neighbourhood schemes are there is in theory but not put into practice.
- Absence of tenure security even after resettlement.
- Private sector is not forthcoming in producing housing at affordable price despite incentives from the government. E.g. additional FSI

Thematic Area 3: PRIORITIZATION OF IN-SITU UPGRDATION AND REHABILITATION

- No on-ground implementation, despite policy recommendations advocating for in-situ developments

- Primary cited constraint is scarcity of land

- Unavailability of data on government owned lands

- Location of large number of slums on ecologically vulnerable lands.

- Ecological restoration at the cost of socially vulnerable groups.

- Uneven development of urban spaces crowding out the more vulnerable.

- Lack of engagement of residents and community consultations in all stages of upgrading planning and implementation of resettlement schemes.

- No convergence between housing needs and livelihood requirements.

- Lack of land ownership/tenure

- Lack of strong policy and specific guidelines for in-situ development

- In-situ redevelopment prioritized over in-situ upgrading.

Thematic Area 4: APPROACHES TO RESETTLEMENT

- The discourse on slums and associated negative connotation: public attitude while providing services, that "this is enough for you" needs to change.
- Predominant pattern of slum resettlement is peripheral, mass scale, state-built, high-rise tenements.

- Reproduces vulnerabilities and continuing cycle of poverty – disrupts livelihoods, offers poor services, and ghettoized. Communities lose access to established social networks built while living in the city.

- Pitching environment vs. people makes issue of resettlement challenging. Not all groups treated equally in resettlement associated with ecological protection. Low-income communities not treated the same way as industries, commercial establishments, high income housing communities.
- Groups are shifted from one ecologically vulnerable area to another-only saving one ecological resource at the cost of another.
- Social Impact assessment not carried out
- Lack of grievance redressal mechanism
- Lack of construction of basic amenities before resettlement.
- Inappropriate design of low-income housing: it does not suit patterns of the communities' usage – small sizes & no spill-over spaces, cultural needs not incorporated, no fire safety norms or disaster resilience standards adhered to during construction
- Lack of policy and operational guidelines on resettlement
- Forced eviction - lack of due process, consultation and choice.

Thematic Area 5: DIVERSIFICATION OF AFFORDABLE HOUSING MARKET TO CATER TO VARIED DEMANDS

- Dominant approach focuses on ownership models and single-family units.
- Unregulated and unrecognized rental market.
- Lack of supply of affordable and alternative forms of housing, e.g., worker accommodations, old age homes, working women's hostel, temporary housing etc.
- Lack of publicly built rental housing.
- Diversity across population groups – elderly, students, disabled etc. and differentiating needs of these groups not factored into housing designs. E.g. dormitory shelters for loaders, people working at night.
- Housing across population groups not adequately studied and addressed
- Disproportionate sizing of the house against the number of family members
- Support system and livelihood options are limited.
- Poor maintenance services.

Thematic Area 6: VULNERABLE COMMUNTIES IN DISASTER PRONE AREAS

- Most of the factors that shape the disaster vulnerability of informal settlements also apply to the state-built resettlement colonies in Chennai, which are particularly hard hit during floods and cyclones.
- While government indicator of disaster vulnerability is technical, socio-economic and institutional factors exacerbate the vulnerability of low-income groups.
- Disasters are used as entry points to relocate vulnerable communities and informal settlers to peripheral areas, freeing these lands for more highly valued urban development projects.

- Disaster response plans are not adequately sensitive to vulnerable communities' concerns.

- Reaching relief to vulnerable communities often proves to be a challenge during major disasters, and no clear procedures have been developed for effective and sensitive outreach.

Observations

Session 2: Interventions

This session comprised of a prioritization exercise to help identify stakeholder-driven preferences. This exercise was meant to capture possible solutions relevant to each thematic area. Based on the secondary research a list of possible interventions was provided to the participants for reference.

Please refer Appendix 2 for the initial list of interventions. Further, they were given the bandwidth to add other interventions/solutions of their choice. The interventions recommended by the participants are listed below:

S.No	Intervention
1	Amendments to the Slum Act 1971
2	Resettlement in places with job opportunities
3	Choice based resettlement according to the needs of the beneficiaries
4	Counter-urbanisation as a method to prevent acceleration if urbanisation and the associated challenges should be explored
5	Ensuring land along waterbodies from which people are evicted is not used for real estate development
6	Stop eviction till land mapping and nearby alternative is found
7	Government should provide all basic amenities in resettlement site before eviction
8	Social audit after construction, periodic assessments
9	MUDP in-situ with proper pattas and not conditional pattas
10	Extensive mapping of vulnerable communities
11	Ensuring legal safeguards (pro-poor amendments to the slum act 1971) for the defenseless

Following which, the participants identified the top interventions from the list, based on what they thought were absolutely necessary for building resilience within Chennai's vulnerable communities. From which, the following list of interventions (see below) were consistently ranked as high priority This prioritization will be crucial in identifying the interventions that should be shortlisted for Chennai's Resilience Strategy.

Top Ranked Interventions

S.No	INTERVENTIONS
1	Policy recommendation for mandatory reservation of land combined with inclusionary zoning to create mixed use and mixed class neighbourhoods. Declaring affordable housing as a priority urban land use for land acquisition purposes

S.No	INTERVENTIONS
2	Strengthening dedicated shelter and services programs for vulnerable communities
3	Co-ordination among relevant government agencies on schemes for vulnerable groups
4	Comprehensive policy on urban homeless
5	Special Disaster Response plan for vulnerable communities
6	Large-scale regularization and upgradation of informally built housing stock should be a key part of the affordable housing strategy
7	Adopt Sites and Services model for formalization of informal settlements
8	Restricting the resettlement radius to within 3 kms in case in-situ upgradation is not possible
9	Identify smaller tracts of land within the city for resettlement
10	Developing disaster resilient physical infrastructure
11	Strengthening basic infrastructure in vulnerable communities.
12	Regulation of Land pricing
13	Delinking provision of basic urban services from tenure.

Session 3: Opportunity Assessment

In this session, participants were tasked with justifying their selection for three high priority interventions chosen in the earlier exercise, based on the following parameters.

Funding, Immediate requirement for the city, Alignment with ongoing plans/visions, Public Support, Time required, Political will and Major Policy change.

Based on which the following list of interventions were scrutinised.

High priority interventions	Policy recommendation for mandatory reservation of land combined with inclusionary zoning to create mixed use and mixed class neighbourhoods. Declaring affordable housing as a priority urban land use for land acquisition purposes.
	Strengthening dedicated shelter and services programs for vulnerable communities.
	Conduct outreach and awareness programs for public and members of vulnerable groups on available schemes for these groups.
	Co-ordination among relevant government agencies on schemes for vulnerable groups.
	Comprehensive policy on urban homeless
	Community DPRs for housing projects.
	Mapping, consolidating and bringing back vacant land for affordable housing
	Restricting the resettlement radius to within 3 kms in case in-situ upgradation is not possible.
	Developing a comprehensive resettlement policy.

Observations:

High priority interventions

- Most of the interventions had high support from the public and were in alignment with ongoing plans/policies.
- All the interventions were deemed as immediate requirement for the city.
- Though most of the interventions did not warrant a major policy change, they required strong support from the political establishment.

- Most of the interventions required only a short time period for implementation.
- Ease in procurement of funding was observed for majority of the interventions.

Session 4: Call to Action

In the final session, with the problems and respective solutions marked and prioritized, participants provided open ended suggestions on how they as an individual or organization may support better implementation of the discussed interventions. Their modes of engagement could be related to the following:

Funding, Data, Knowledge, Technology, Training, Volunteer, Advisory, Design and Implementation

This exercise was positioned to understand if specific interventions have higher stakeholder support and interest. Participants chose to contribute to the following interventions :

Intervention	No. of stakeholders willing to partner
Strengthening dedicated shelter and services programs for vulnerable communities.	2
Conduct outreach and awareness programs for public and members of vulnerable groups on available schemes for these groups.	5
Comprehensive policy on urban homeless	3
Affordable Housing policy should spell out mechanisms for augmenting supply of land for low-income housing.	2
Developing a comprehensive resettlement policy.	4
Encourage and support worker-led co-op housing assisted by unions.	2
Community DPRs for housing projects.	2
Restricting the resettlement radius to within 3 kms in case in-situ upgradation is not possible.	4

Observations

- Most of the participants chose Volunteering, Implementation/Execution and Knowledge transfer as their preferred mode of engagement
- Other preferred modes of engagement were spread between Training, Advisory/Consulting and Project design

Conclusion

Based on the response from Sessions 2, 3 and 4, the following list of interventions are likely to make their way into Chennai's resilient strategy.

S.No	INTERVENTIONS
1	Policy recommendation for mandatory reservation of land combined with inclusionary zoning to create mixed use and mixed class neighbourhoods. Declaring affordable housing as a priority urban land use for land acquisition purposes
2	Strengthening dedicated shelter and services programs for vulnerable communities
3	Co-ordination among relevant government agencies on schemes for vulnerable groups
4	Comprehensive policy on urban homeless
5	Special Disaster Response plan for vulnerable communities

S.No	INTERVENTIONS
6	Large-scale regularization and upgradation of informally built housing stock should be a key part of the affordable housing strategy
7	Adopt Sites and Services model for formalization of informal settlements
8	Restricting the resettlement radius to within 3 kms in case in-situ upgradation is not possible
9	Identify smaller tracts of land within the city for resettlement
10	Developing disaster resilient physical infrastructure
11	Strengthening basic infrastructure in vulnerable communities.
12	Regulation of Land pricing
13	Delinking provision of basic urban services from tenure.
14	Conduct outreach and awareness programs for public and members of vulnerable groups on available schemes for these groups.
15	Community DPRs for housing projects.
16	Encourage and support worker-led co-op housing assisted by unions.
17	Developing a comprehensive resettlement policy.
18	Affordable Housing policy should spell out mechanisms for augmenting supply of land for low-income housing.
19	Mapping, consolidating and bringing back vacant land for affordable housing

Appendix 1a

List of Participants

S.No	NAME	ORGANIZATION	TITLE	EMAIL
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17	B. Kamala	Pennurimai Iyakkam	Chief Dist. Press	pennurimai@gmail.com
18	A. Antony Arun Vijay	Don Bosco	Student	ernasvijay217@gmail.com
19	Infant	Don Bosco	Student	yogiinfant@gmail.com

Appendix 1b

Initial List of Interventions

S.No	Interventions
1	Policy recommendation for mandatory reservation of land combined with inclusionary zoning to create mixed use and mixed class neighbourhoods. Declaring affordable housing as a priority urban land use for land acquisition purposes.
2	Strengthening dedicated shelter and services programs for vulnerable communities.
3	Conduct outreach and awareness programs for public and members of vulnerable groups on available schemes for these groups.
4	Co-ordination among relevant government agencies on schemes for vulnerable groups.
5	Comprehensive policy on urban homeless
6	Special Disaster Response plan for vulnerable communities.
7	Large-scale regularization and upgradation of informally built housing stock should be a key part of the affordable housing strategy.
8	Adopt Sites and Services model for formalization of informal settlements.
9	Affordable Housing policy should spell out mechanisms for augmenting supply of land for low-income housing.
10	Regulation of Land pricing.
11	Delinking provision of basic urban services from tenure.
12	Democratic, decentralized and dynamic planning.
13	Community DPRs for housing projects.
14	Creation of Slum Free Cities Action Plan based on strong component of in-situ upgradation
15	ULBs enable buy-back of private lands occupied by informal settlements and regularize the settlements.
16	Mapping, consolidating and bringing back vacant land for affordable housing
17	Facilitate the formation of city wide networks, federations of vulnerable communities to undertake housing upgradation, or create partnerships between ULBs, NGOs and community to implement slum upgradation projects.
18	Restricting the resettlement radius to within 3 kms in case in-situ upgradation is not possible.
19	Offering varied tenure security arrangements such as long term community leases, pattas, and no eviction guarantees, where formal title is difficult.
20	Developing a comprehensive resettlement policy.
21	Identify smaller tracts of land within the city for resettlement.
22	Apply international guidelines for resettlement policy.
23	Affordable housing plans and policies should offer a range of affordable non-family based housing options.
24	For worker housing, responsibility to be shared between the state (through free land, subsidies) and employers and integrated with other policies Eg: National Manufacturing Policy.
25	Encourage and support worker-led co-op housing assisted by unions.

S.No	Interventions
26	Making assessment of losses due to disaster more effective.
27	Offering swift and dignified relief efforts to vulnerable groups.
28	Strengthening the institutional capacity for disaster response.
29	Training of volunteers for disaster response, especially from vulnerable communities.
30	Training and sensitising engineers involved in flood protection to the realities of vulnerable settlements.
31	Developing disaster resilient physical infrastructure.
32	Strengthening basic infrastructure in vulnerable communities.
33	Ecological restoration to take into account social vulnerabilities.
34	Removal of encroachments should be prioritised based on ecological needs as opposed to legal status of the households.

Appendix 1c: Workshop photos

BIBLIOGRAPHY

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