Case Study Report

The people without power: Exploring the governance within informal settlements of Surat city, India

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Abstract

Urban resilience discourse emphasizes the need for multi-stakeholder collaboration, including the state and citizens, formal and informal processes, and top-down and bottom-up efforts during disaster. Effective collaboration requires pre-disaster engagement through participatory governance and collective decision-making. A proactive, inclusive and equitable decision-making process is the core agenda of sustainable urban governance. The dynamics of urban governance dictates the decisions and actions of city administrations, thereby shaping the trajectory of development. Informal dwellers face reduced impact over administrative decisions, with state interventions often marginalizing them, increasing their vulnerability to livelihood insecurities, limited access to education and healthcare, and increased risk of disaster. This study aims to explore the duality of formal-informal governance processes within informal settlements of Surat city, India pre- and post- hazard conditions. Using Surat city, India, as a case study, it explores urban governance patterns within informal settlements, aiming to provide insights for inclusive and sustainable urban governance in the Global South.

Keywords

Urban governance, informal settlements, Inclusive and sustainable governance, Urban resilience, Global South

1. Introduction

The world is witnessing a rapid urban expansion mostly centred in the cities of the Global South. The demographic transition of the late 20th and early 21st centuries has moved the locus of urban growth from the Global North to the Global South (Parnell & Robinson, 2013; WRI, 2021). The whole spectrum of changes triggering and facilitating this rapid urbanization in the Global South is worth mentioning. The industrial and infrastructural development in the post-colonial Global South provided a momentum to the urbanization initially. Later, the liberalization and globalization of the economies across the developing world initiated multiple changes in industrialization and manufacturing patterns around globe. The global market's expansion led to a rise and expansion of the global competitive manufacturing, resulting in the growth of small-scale industries and workshops, particularly in developing countries like China, India, Indonesia, and Philippines due to supply of the 'cheap labour'. The rapid demand for low-cost housing for

this cheap labour and the state's failure to tackle the whole situation were among the primary reasons giving rise to informal settlements among these countries (Bhan, 2013). Nearly one billion urban dwellers are living within informal settlements without access to basic and emergency infrastructure (UN-Habitat, 2020).

However, the World Social Report 2020 by UN-DESA highlights that urbanization in the Global South expands opportunities on one hand while exacerbating the economic, spatial and social disparities on the other (UNDESA, 2018). The aspect of climate change is adding complexity within the particular context of urbanization in the GS (Shukla, et al., 2023). According to a report by World Bank, 77 million urban dwellers may be pushed below poverty line due to climate change (World Bank, 2015). The Intergovernmental Panel on Climate Change (IPCC) reported that melting glaciers and thawing permafrost will most severely impact populations in cities across the Global South (Sullivan, 2022). Nations such as India, Bangladesh, and Indonesia are facing heightened flood risks amid the growing challenges of climate change (Bera, et al., 2022).

Complex Adaptive Systems (CASs) thinking has proved to be an effective approach to visualize and analyse cities. It provides a holistic understanding of its underlying structures, identify stakeholders, processes, issues, and relationships of the urban system (McGee & Edson, 2014). Governance is simultaneously the cause and the outcome of these processes in SESs (May, 2022). Multiple studies have approached urban governance with CASs thinking considering cities as Socio-Ecological Systems (SESs). Governance refers to the institutions, organizations, communities, and individuals involved in and affected by practices including planning, research, design, management, construction, restoration, and conservation (May, 2022). CASs thinking is helpful in analysing the multi-stakeholders and multilevel governance frameworks, involving different institutions, associations, and individuals (Xiang, 2021).

Urban governance plays a vital role in shaping city's trajectory of development. Cities in the Global South are shaped by formal and informal processes acting simultaneously within urban space. Informal settlements, lacking the land tenure, regulatory and legal status, are reduced to lower position and influence within the hierarchy of governance framework. This issue impacts their claim on state's responsibilities including state's obligation to provide basic and emergency infrastructure and services to its citizens. The governance framework is structured and evolved in such a way that informal settlers are at the most vulnerable end exposed to the worst impacts of climate change (Anguelovski, et al., 2016; WIlllams, et al., 2019). As UN-Habitat underscores, urban governance systems in these cities are unfit for purpose and need critical reforms for an inclusive and sustainable urban development (UN-Habitat, 2021).

The above situation leads to emergence of various survival mechanisms within informal settlements during normal time as well as during emergence situations. The citizens deprived of access to formal means of governance self-organize, develop mechanism, and adapt to bridge the gap between the level of services required for survival and actual level of services. These bottom-up efforts and responses along with top-down interventions parallelly exist and interact within the urban space. How different actors and processes shape the governance and development in the informal settlements is a crucial inquiry to understand the formal-informal duality within the cities of the GS. This study aims to explore the governance within the flood affected informal settlements of Surat city, India.

2. Materials and Methods

The study does a cross-sectional analysis of the formal and informal entities and processes shaping the governance of the cities in the Global South.

The study employs Complex Adaptive Systems (CASs) thinking as the main approach to view and analyse urban system. CASs thinking views urban systems as dynamic, interconnected, and continuously evolving system. It involves interaction of different elements such as individuals, communities, government, public and private, space, infrastructure, technology, nature etc. CASs are open systems, continuously interacting with environment which permits feedback in the form of energy, material, or information. They have the capacity to self-organise and change under influence of such feedbacks or memory (learn from experiences) and thus evolve through adaptation. Fig. 2 shows the three vital characteristics of CASs and the conceptual framework of the study.

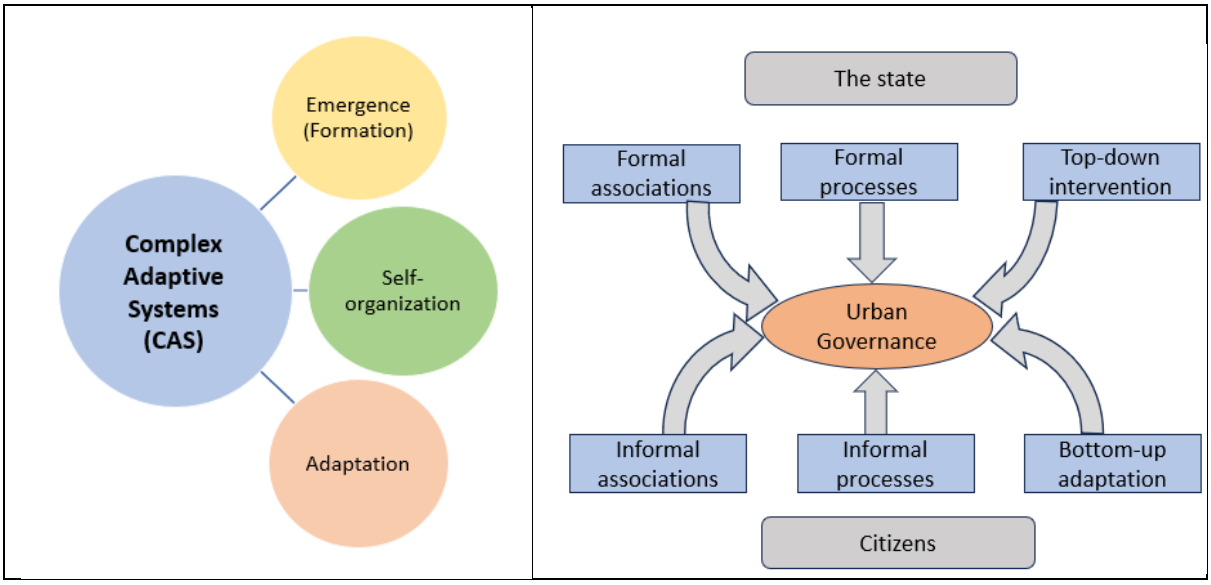

Figure 1: The framework of the study

Within the complex system of informal settlements, various informal associations and processes emerge and interact alongside their formal counterparts. The study explores the patterns of these associations, processes and their adaptive interventions within urban system. It includes investigation of three queries given as,

(i) The pattern of associations formed

(ii) The patterns of pre- and post-hazard process and activities

(iii) The pattern of informal adaptive response mechanism within urban space

For this purpose, a primary survey was conducted among flood affected wards of Surat city, India. The survey covered five flood affected wards of Surat city to collect quantitative and photographic data. Total 118 responses of individuals, shop owners, society representatives, community leaders/members were collected (Adajan-13, Rander-27, Umara-8, Limbayat-37, Parvat-33). Photographs were taken for the adaptive mechanisms at top-down as well as bottom-up levels. The data was analysed to infer insights of emerging governance within informal settlements shaping the urban space and activities through adaptive actions.

3. Urban Governance in the Global South

According to UN Habitat, governance refers to the structures and processes established to ensure accountability, transparency, responsiveness, adherence to the rule of law, stability, equity, inclusiveness, empowerment, and wide-ranging participation. It also represents the norms, values, and guiding principles

by which public affairs are managed. Urban governance is collective representation of the many ways in which individuals and institutions, public or private, plan and manage the common affairs of the city in a continuing process such that conflicting or diverse interests may be accommodated, and cooperative action can be taken (UN-Habitat, 2021). Urban politics and governance structures influence the character, form, and function of cities, shaping the planning strategies aimed at promoting justice, equity, and sustainability. The SDGs 11, 16, and 17 align themselves towards participatory governance.

Governance in the cities of the GS is simultaneously the cause and the outcome of the specific urbanization patterns of these cities. Urbanization in the GS is characterised by intermeshed formal and informal processes, conflicting public and private entities, and top-down and bottom-up interventions. One of the factors influencing and transforming urban governance in the Global South in the age of neo-liberalization and globalization, is the endeavour of cities to compete for Global capital (Korah, 2020). Informal labour market facilitates the harvest of the cheap labour but on the other hand leads to rise of informal settlements. Two of the interrelated problems associated with governance in informal settlements which exacerbate their vulnerability are:

A. Land tenure: Mostly these informal settlers are not the legal owners of the land (Fig. 3). It creates a bilateral impact. It reduces their status and influence in overall governance hierarchy (Alzamil, 2018). On the other hand, it creates a policy and regulatory hurdle for local administration to not provide basic services to these settlements to stop further growth of informal settlements. Fig.3 shows the land ownership scenario of informal slums in Surat.

B. Provision of basic infrastructure: As UN Habitat recognize it, the poor governance frameworks within the GS lead to poor service delivery, which results in citizens turning to costly, unsafe informal alternatives (UN-Habitat, 2021). The provision of partial services such as water supply, drainage at later stages is outcome of negotiations of local community or their leaders with the formal administration. The high density also restricts the provision of these services at later stage.

C. Informal labour policies

The informal labour practices are widely popular in the GS, especially within South Asian countries. It constitutes around 85% of the total workforce in Indian cities (Desai, 2020). Informal labour can either be working in totally informal economy or in formal sector with informal work status. In both cases they are underpaid and cannot afford formal means of survival. These informal labours, mostly migrants, form the major proportion of informal settlements.

4. Case Study: Surat City

Surat city is located in the state of Gujarat on the Western Ghats of India, known as the hub of textile and diamond cutting and polishing. The city lies between latitudes 21˚03 N to 21˚18 N and longitudes 72˚42 E to 72˚55 E. It is one of the fastest growing cities in the world with population 4.46 million as per Census 2011. The current population estimate is 6.94 million spread within the total area of 326.515 km2. Surat faces threefold threat from river Tapi flowing through the city, extreme precipitation, and coastal or creek flood. The major floods occurred in the year 1968, 1994, 1998, 2006, and 2013 (Bhat, et al., 2013). The 2006 flood was the most disastrous with more than 95% city's area submerged under water, over 15 lakh people affected and more than 150 people died (Joshi, et al., 2012). The low-lying areas of the city are flooded almost every year due to extreme rainfall or creek flood.

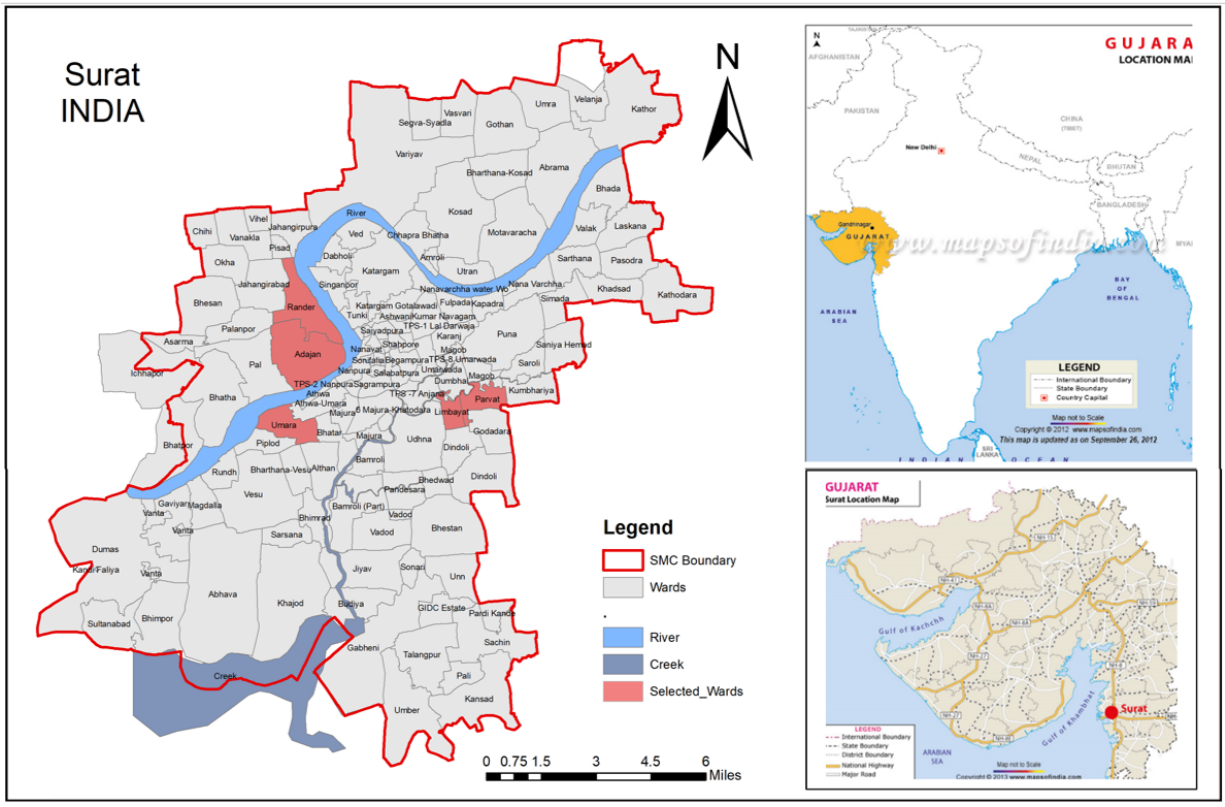

Figure 2: The selected wards on Surat city map (Source: www.mapsofindia.com and (Shukla, et al., 2025))

The primary survey and photographic data were collected in five flood affected wards of Surat city namely Rander, Adajan, Umara, Limbayat, and Parvat. The first three wards are on the banks of river Tapi, while Limbayat and Parvat wards lie on the banks of the Parvat-Dumbhal creek.

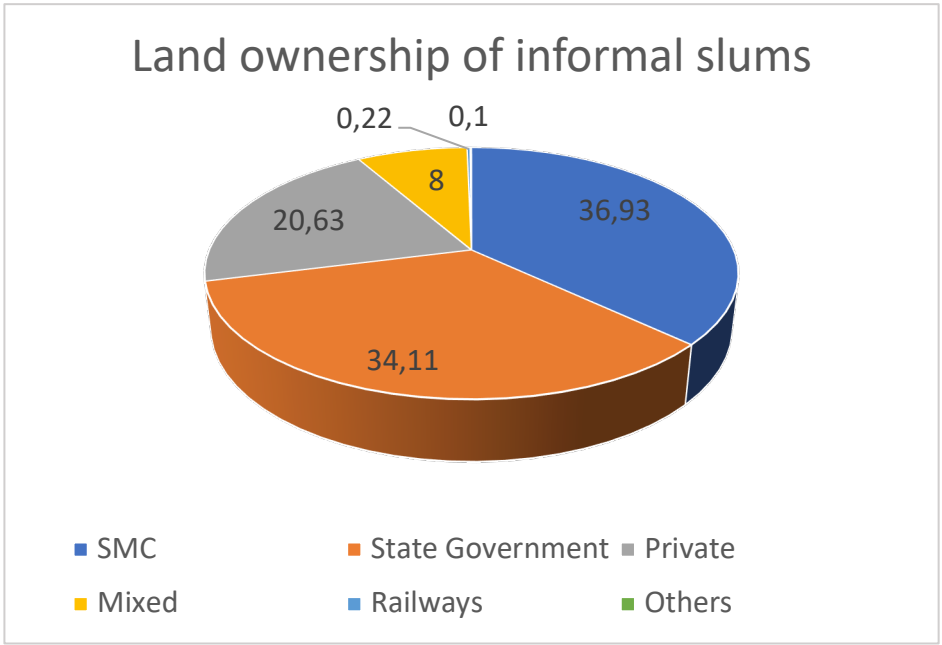

Figure 3: Land ownership pattern of informal settlements in Surat city

The survey was conducted within flood affected informal areas of these five wards. The respondents include individual households, shop owners, community group or society representatives, institute representatives. The questions related to (i) their association to any formal/informal group, (ii) access to formal/informal basic and emergency services such as waste management, bank debt, disaster rescue, shelter and (iii) adaptive response taken by them against flood were asked in the survey and photographs were collected for the adaptive responses. Total 118 responses were collected from Adajan (13), Rander (27), Umara (8), Limbayat (37), Parvat (33).

5. Results and Discussion

5.1. Formal and informal entities

State itself is fundamentally a formal organization, an organized concentration of power and resources (Acemoglu, et al., 2020). The formal entities are the channels through which state collect resources, delivers services, enforces rule of law and takes validation.

Within informal settlements local administration, political representatives and state administration are entities to practice formal governance. The inadequacy and inefficiency of administration lead to the necessity of informal entities to survive and grow. These Informal entities include religious groups, profession-based unions, community organizations, and social groups. They are not necessarily formed as a governance entity but they generally evolve to accommodate such functions. The observations of citizens' associations in formal/informal entities are presented in the following chart in Fig. 4. It shows that 32% of the respondents are associated to some formal or informal group.

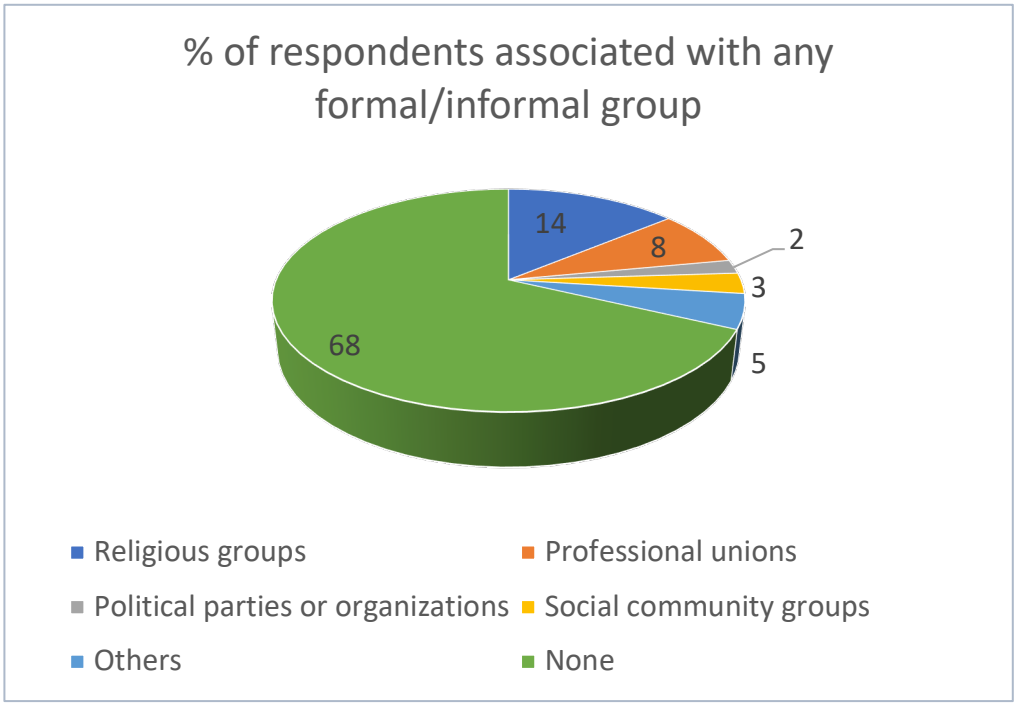

Figure 4: The pattern of formal/informal associations

5.2. Formal and informal processes

Formal process of governance includes regulatory processes and infrastructure development and management. Informal settlements are not created with regulatory process but they are maintained and

controlled by regulatory process. The land tenure and unregulated status not only affect the development permissions within informal settlements but also the right and access to basic infrastructure, formal banking, and formal decision making. The problem of regulation overall reduces the identity of the citizen having low participation and influence over urban governance.

The informal processes are outcome of the above gap. They are need based and generally involve individuals, private enterprises, NGOs and community groups. The observed process includes informal water supply, informal sewage discharge, informal waste picking and disposal, informal credit and saving mechanisms. During flood hazard, apart from formal disaster response, informal rescue, shelter and relief also co-function.

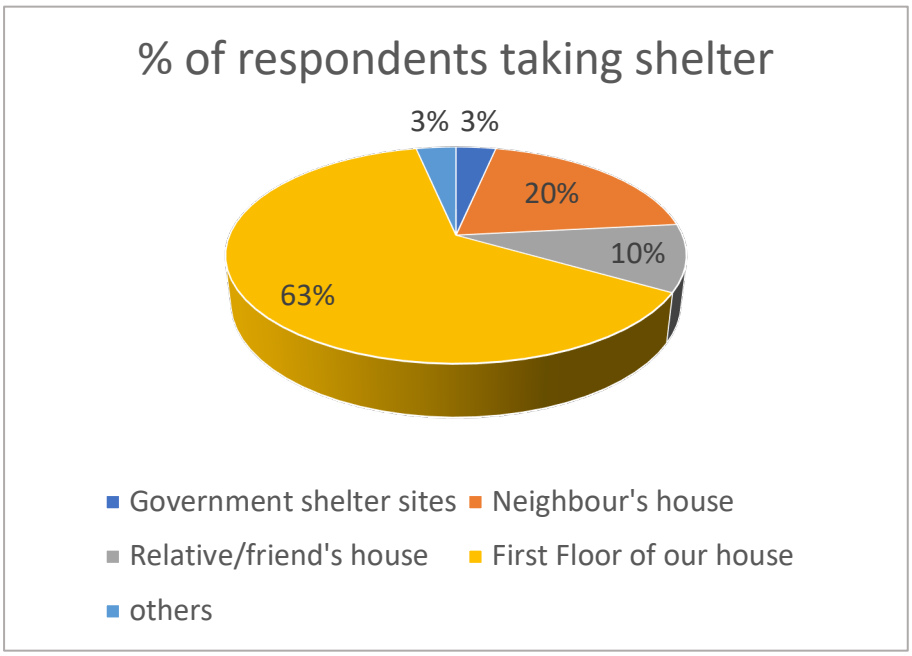

Figure 5: The pattern of taking shelter after flood hazard

The chart shows that taking informal shelter at neighbours, friends or relatives' houses is dominant behaviour with only 3% respondents taking shelter at government sites. Similar trend is observed in the access to credit mechanism, where only 13% respondents have access to formal banking for debt. Rest of the respondents took it from informal alternatives at significantly higher interest rates.

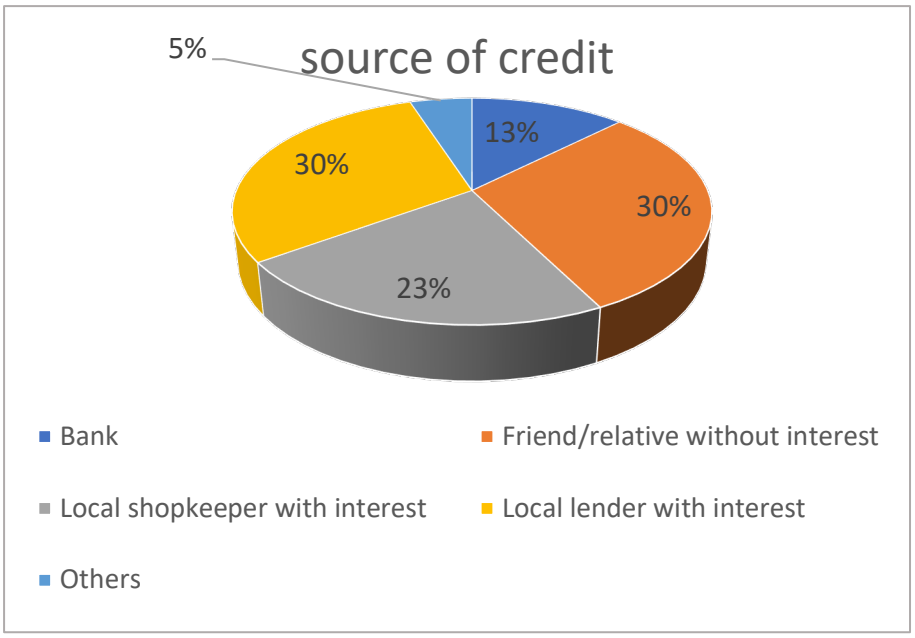

Figure 6: Access to source of credit

5.3. Top-down and bottom-up interventions

Top-down interventions are characterised by planned, long term, and informed actions. It includes road upgradation, sewage provision, SWD, slum upgradation, and development of protective measures against hazards. Conversely, bottom-up interventions within informal settlements are generally short term, need based make shift arrangements. The observed adaptive responses include individual adaptation in the private space, collective adaptation in the public space, and adaptations by institutes/private enterprises. The survey captures how bottom-up interventions are taken up by majority of flood affected communities.



Figure 7: Top-down adaptive intervention

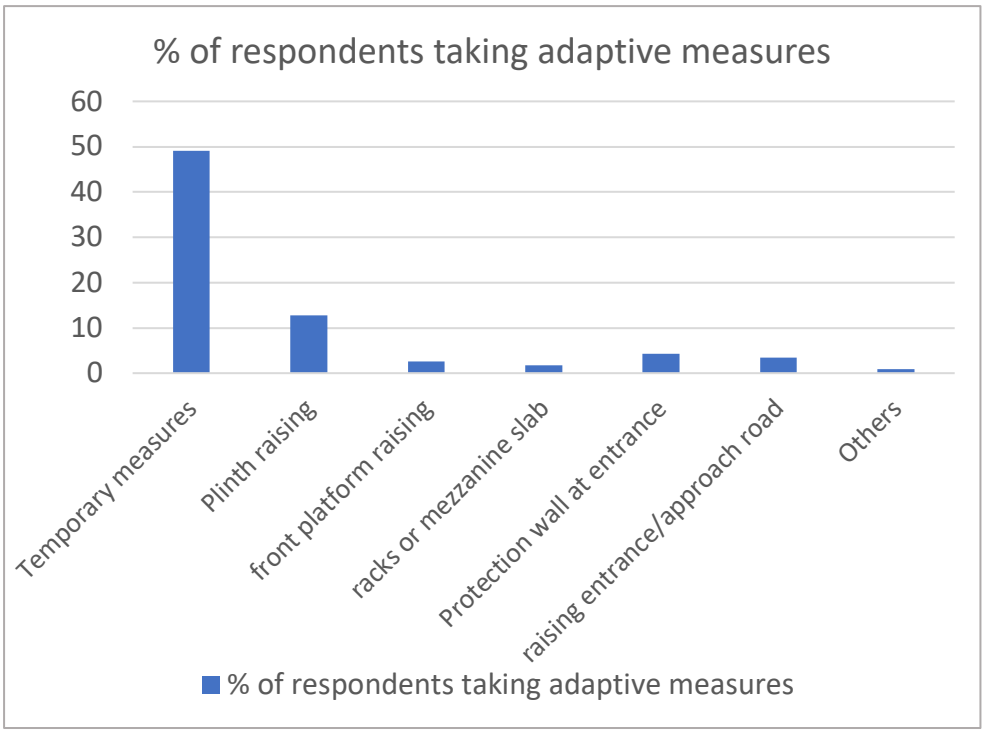

Figure 8: The pattern of bottom-up adaptive response

Bottom-up interventions are taken up by majority of flood affected communities with raising plinth level (12.7%) as the most popular adaptive response. These top-down and bottom-up adaptive actions create broader impacts. For example, raising plinth level creates pressure on other households to adapt. Similarly, the rising road level may increase the vulnerability of few households with lower plinth hight than the road.



Figure 9: Raising entrance or plinth level as an adaptive response against flood



Figure 10: Conflict of adaptive actions



Figure 11: Conflict of adaptive responses

6. Inferences

The study provides a cross-sectional view of how multiple formal/informal associations, processes, and interventions act within the informal urban space and shape the functioning and trajectory of urban development. Withing informal urban space both formal and informal entities interplay during normal times and in emergency situations. Informal entities and processes emerge out of the particular context of problems of land tenure, regulation, lack of infrastructure, waste management and access to formal banking. These informal process parallelly work along with the formal processes to provide shelter, relief, and financial support after a flood hazard.

The observations show that informal associations, mechanisms and processes dominate within informal areas. While 32% of the respondents are associated to some formal/informal entity, religious groups and informal profession-based organizations are the most popular forms of associations. People more rely on informal shelter during flood and informal credit sources for taking debt.

Bottom-up adaptive response against flood alters the physical form of the urban space. Raising plinth, or entrance or porch area is most popular adaptive response taken in the built form. In few cases, government intervention increases the vulnerability of individual households such as the case of raising road height, or road level increasing over repetitive constructions. In other instances, bottom-up intervention such as raising plinth hight creates pressure on other households to adapt.

The study recognizes the importance of informal associations, processes and adaptive responses in shaping and altering urban space. The endeavour of enhancing resilience and achieving sustainable governance in the GS may benefit from these aspects.

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