

Knowledge and participation: Empowering Indian urban poor to access public services

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The paper focusses on three aspects of our work with the urban poor: utilization of participatory research methodologies to elicit local knowledge in forms that do not require traditional education; building capacities to create active organized citizenry through catalysing Settlement Improvement Committees, which are representative bodies (involving youth, women and men) of the urban poor aimed at advocating interests of the community, and planning for collective positive action; and enabling communities and their organizations to utilize technology-enabled mobile surveys to collect their own data, leading to the demystification of technology and allowing for utilization of data for planning (for individual and community-level action), monitoring the implementation of these plans, as well as seeking access to services from state actors. This paper was presented in an International Research Symposium on “Other ways of knowing and doing”, organized by the O.P Jindal Global University. The symposium was an opportunity to discuss the utilization of technology combined with participatory methods for the production of knowledge, and catalyzing social change actions by the urban poor in selected Indian cities.

Keywords: participatory research; urban poor; participatory settlement enumeration; local development

INTRODUCTION¹

In the post-World War II period, developing countries experienced an “expert”-driven, top-down development model based on the imported concepts of centralized planning. This model resulted in schemes and policies that were often found to be irrelevant to the needs of people. Importantly, these schemes were dependant on huge external funding and failed to connect with the requirements of local communities, who took no ownership for interventions. In the 1970s, a plethora of experiments began in which people were put at the centre of development planning, implementation and monitoring

¹ The authors wish to acknowledge the valuable comments and guidance of Dr Rajesh Tandon, founder-president, PRIA. Dr Anshuman Karol, Ms Nilanjana Bhattacharjee, and PRIA field teams, who have worked extensively to make the ECRC project a success and allowed us to use the key lessons and learnings in this paper.

(Chambers, 1983; Cohen & Uphoff, 1974). At the same time, a number of adult educators began to question the relevance of dominant social research methodologies and argued that traditional researchers, by treating people as passive objects of research, ignored the significance of popular knowledge. This reinforced the role of knowledge as an instrument of power and control. Soon, it became evident that the development practice, which thought of the local community as ignorant and incompetent, often missed out using local knowledge, experience and creativity. A new framework began to take shape that propagated people-centred participatory development (Fals-Borda, 1988; Tandon, 1993, 2002).

As participatory approaches took centre-stage, civil society organizations gained traction in their work with the poor towards the alleviation of poverty. For many organisations, the meaning of poverty underwent a fundamental change. Writing about the Human Settlements Programme at the IIED, Satterthwaite and Mitlin (2013) observed:

Until 1995, the term poverty was not associated with ways of improving housing and living conditions, or with infrastructure and service provisions for the poor. Till the 1990s, the addressal of poverty meant understanding civil and political rights, encouraging the formation of community organizations, and stressing on strong, accountable and democratic governments and legal systems that supported the needs of low-income groups. (p. xii)

For developing countries in the global South, this shift represented a nuanced understanding of informal settlements. According to recent data, these settlements, comprising of slums, unauthorized colonies, urban villages, and resettlement colonies, are home to between 36 and 47 per cent of India's urban population. Residents of these settlements typically either lack access to infrastructure services or make do with substandard facilities, such as dirty, dysfunctional and overburdened community toilets, overflowing and uncovered drainage systems, limited waste collection facilities, and erratic street lighting. Such abysmal infrastructure also creates additional expenses related to health care and generates additional, time-consuming work for residents, especially for women.

In the quintessentially weak tenure security of these settlements, governments have found a reason to abstain from the provision of basic infrastructure services. This is exacerbated by the lack of social security available to these residents. Local governments often lack authentic up-to-date data on the status of infrastructures and services in informal settlements. The lack of trained human resources is an additional issue that persists. There is also an overlap in agencies that are responsible for implementation and maintenance, thereby creating a lack of accountability and responsibility. The urban poor have also remained vulnerable due to a lack of organizational leadership and intermediation capacities as well as inadequate access to information and resources to become active and independent agents of change.

The Society for Participatory Research in Asia (PRIA)² used citizen-centric approaches to address these gaps through the “Engaged Citizens, Responsive City” (ECRC) project supported by the European Union (EU). The ECRC was a four-year intervention,

² Established in 1982, Society for Participatory Research in Asia (PRIA) is the global centre for participatory research and learning. It is based in New Delhi, India.

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focussed on strengthening urban poor civil society to participate in planning and monitoring infrastructure, especially, sanitation services. The project spanned three cities in India (Ajmer in Rajasthan, Jhansi in Uttar Pradesh, and Muzaffarpur in Bihar) and engaged with low-income residents, middle-class citizens, elected councillors, related government departments and bodies, traders and market associations, civil society, academia, sanitation workers, and the media. The intertwining of diverse stakeholders was an attempt to holistically improve sanitation in the city.

The core tenet of the project was to promote decentralized participatory planning and empower communities with critical data concerning their settlements. Data is a critical requirement when seeking interventions from urban local bodies (ULBs), government agencies and parastatals, but is usually scantily available at the granular level. Data sources like the Census of India are difficult to utilize for local planning because the collection is decennial, and information at the level of the ward, colony, and slum is not easily available. Thus, the project attempted to create a set of data that was owned by the community and utilizable for monitoring the availability and quality of infrastructures and services at the local level as well as highlighting shortcomings in the prevalence of social security identity for residents.

The ECRC used participatory research methodologies to design instruments for data collection and analysis and dissemination of findings. The urban poor communities in various informal settlements were organized, trained and provided with support to engage in the planning and monitoring sanitation infrastructure and services, as well as with the ULBs and other state institutions.

USING PARTICIPATORY RESEARCH AS A STRATEGY TO AMPLIFY THE VOICES OF URBAN POOR

PRIA conducted two surveys in each city. The first survey, referred to as “Participatory Settlement Enumeration” (PSE), was administered to all houses in informal settlements, allowing for the creation of settlement and household specific data. In the three cities of Jhansi, Ajmer, and Muzaffarpur, 250 settlements were surveyed. Apart from a strong focus on sanitation and infrastructure services, the surveys focussed on individual social security entitlements, such as possession of birth certificates, electoral identity cards, Aadhaar³ cards, educational data, and occupation. The PSE utilized community-based participatory research approaches, which strengthened organizations of the urban poor and helped these local organizations collect their own data. These surveys empowered communities with data that could be used to inform authorities which services and infrastructures had limitations, and the status of social security. The data could also be used to monitor and reflect upon improvements. This paper restricts itself to experiences derived from this process.

To create a holistic understanding of the sanitation infrastructure in the city, PRIA also rolled out a more detailed city-wide sample survey, inclusive of all the municipal wards in the city. Referred to as the Participatory City Sanitation Survey, it was administered

³ Aadhaar is a verifiable 12-digit identification number issued by Unique Identification Authority of India (UIDAI) to the resident of India and used for accessing all the entitlements.

to 100 households in each ward. The households were systematically sampled and represented a mix of informal settlements and colonies. PRIA believes that municipalities alone cannot solve the ever-increasing problems of Indian cities. The project thus aimed to transcend highlighted deficiencies in sanitation services and engage with multiple stakeholders, including Resident Welfare Associations (RWAs) in colonies, market committees, professional associations, media, and academia to explore solutions to problems of urban sanitation services.

Both survey initiatives were also in line with the objectives of the Swachh Bharat Mission-Urban (SBM-U)⁴ and acted as an assessment of the ground realities in the three cities. Findings provided critical feedback and played an essential role in the monitoring and evaluation of government schemes as well as the implementation of plans.

The government's focus on cities and the belief that these provide a higher quality of life is often confused with improvement in the conditions of the urban poor. While it is true that our knowledge about cities has increased, our knowledge of urban poverty and the living conditions of the residents of informal settlements is severely lacking, especially outside of Tier I cities⁵ in India. Invisibility renders a large chunk of India's urban population powerless across the numerous (largely under-enumerated) informal settlements in India. Counting and estimation is often the first step of public policy, yet, many urban informal settlements and their inhabitants remain unaccounted for in urban planning and governance.

The approach of "development through people's participation" is rarely utilized by ULBs in India. Urban poor are the most affected because illiteracy is incorrectly assumed to indicate a lack of knowledge. Caste and class barriers play a role as well. For informal settlements, especially, it is usually inferred that planning priorities (if any) can be set without consulting residents, or taking note of housing and work, and infrastructure services.

It is not the governments alone that are at fault. Many non-government organizations (NGOs) working with marginalized communities exclude them from research processes, and, therefore, conduct research about the people and not with people (Bergold & Thomas, 2012). As a result, despite often being well-intentioned, strategies and objectives identified by external experts fail because their plans and methods are overly ambitious, miscalculated, and do not meet the needs of the people. Repeated exposure to such experiences leads to the disillusionment of residents and a feeling of betrayal by external organizations.

Resilient communities cannot be built without considering the needs and preferences of the community. A fundamental aspect of participatory research is to ensure that it is conducted directly with the immediately affected persons. The aim is to reconstruct (in ways the modern state deems useable) their knowledge and ability while moving towards a goal of empowerment. It is thus important to deem these individuals as co-

⁴ Swachh Bharat Mission (SBM) is one of the flagship national programmes of Government of India. It was launched in 2014 to improve the sanitation infrastructure and service in India. Swachh Bharat Mission – Grameen is implemented by the Department of Drinking Water and Sanitation under Ministry of Jal Shakti and Swachh Bharat Mission – Urban is implemented by the Ministry of Housing and Urban Affairs.

⁵ Indian cities are classified in six size-class categories based on population size.

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researchers and ensure that the tools and methods utilized are considerate and represent the marginalized whose views are seldom sought, and whose voices are rarely heard.

In this scenario, organized collective action is an important prerequisite for facilitating people-centred and people-controlled development. Community organization is the foundation on which further activities are based that help increase people's capacities to participate fully and gain a degree of control over their lives. This is possible only if research methods are made a part of the process.

Participatory research believes in the role of local knowledge of which a pivotal step is community buy-in. When a community surveys, evaluates, and monitors itself, ownership is built and data is authentic. Unlike in third party data collection, there is a reduced sense of fear since surveyors are not only inhabitants of such informal settlements but are also aware of local contexts, formal and informal arrangements, as well as the quality of services and infrastructure. Communities gain confidence when they generate their own data and utilize it to seek services from the state.

A STEP BY STEP APPROACH TO EMPOWER THE URBAN POOR

The tools used to organize and empower communities are touched upon here. These were utilized in conjunction with the survey process.

1) Citywide identification and mapping of informal settlements

A process of mapping and listing of informal settlements was organized in each city, through which settlements were physically identified and plotted on a map. Basic information regarding the legal status of the settlement was acquired as well. This exercise began with gathering secondary data and records but PRIA's team did not restrict this process to settlements that were recognized by governments and state authorities.

This decision was taken to ensure citywide coverage. Listings made by government authorities are often incomplete, dated, and end up missing those in the most precarious of conditions. For example, in Jhansi, District Urban Development Authority (DUDA) records suggest the presence of 57 informal settlements whereas PRIA's mapping process identified 75 such settlements. In Ajmer, PRIA worked with 125 informal settlements whereas the official listing mentions 87 settlements.

Discrepancies are due to a number of reasons. First, data is collected and updated infrequently, as per the government's requirements. Second, scholars have noted that, throughout Indian cities, Census 2011 suggests reduced presence of slum households in cities. The census placed slums into three categories: "notified slums" and "recognised slums" form the first two categories; and the third category, "identified slums" required at "least 300 residents or about 60–70 households of poorly built congested tenements, in an unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities". By comparison, the National Sample Survey 65th Round defined slums as a cluster of 20 or more households, a third of the definition provided by the Census 2011. This "cut off" is rather significant. It suggests that the slums that are "missed out" are likely to be the most vulnerable and formed through repeated cycles of eviction, which break large slum clusters. These evictions

see particularly low levels of state resettlement. As a result, the likelihood of them being spatially clustered in the city (as either homeless residents or in deeply vulnerable, scattered accommodations such as clusters of households along a railway line, behind a stadium, in open spaces) is very high. These smaller, less organized clusters have lowered abilities to mobilize political or other patronage to gain access to services (Bhan & Jana, 2013).

The mapping process also provided for a first level interaction with communities. It helped with the identification of active citizens and leaders in the community along with other Community-Based Organizations (CBOs) and social institutions operating or active in the settlements. In addition, field teams interacted with relevant stakeholders in the city, such as ward councillors and other elected representatives. This provided an understanding of the socio-political, economic and institutional contexts in which the programme was being implemented. By interacting with a host of stakeholders and using the Rietbergen-McCracken and Narayan (1997) Stakeholder Analysis tool, it was also possible to gain information about who would be affected (positively or negatively) by the outcomes of the project or programme, who could influence the achievements of the programme outcomes, and which individuals, groups, or agencies need to be involved to achieve these outcomes.

2) Facilitating Participatory Urban Appraisals (PUA)

Bringing people to the centre of development by incorporating the element of participation in development projects recognizes the fact that social reality is a complex phenomenon with multiple interpretations possible. Therefore, the interpretation of people about their own reality is to be treated as the most authentic interpretation. This also becomes the foundation for privileging local knowledge (Chambers, 1992, 1997).

PRIA adapted and used PUAs⁶ as a methodology for community organizing, although it was often used for research purposes. One of the foremost methods utilized is the transect walk, which helps form a spatial understanding of the settlement by identifying its location, geographical spread, housing conditions, and availability of services. These walks help build rapport with the community and allow observation through the eyes of local people. The empowering aspect of the walk lies in the fact that control lies with the community. Field teams in the ECRC often conducted multiple transect walks in each settlement. Depending on the group, who the walk was conducted with, and the time of the day, teams were able to explore varied regions of the settlement and create individual narratives as well as gauge community perspectives. This is essential since single transect walks are limited to a single time and can only showcase situations and features that are thought of as essential or important by those with whom the walk is being conducted. However, conducting such walks repeatedly often provides contradictory or contested information which is important to correlate with other methods.

The second type of PUA utilized is Participatory Social and Resource Mapping. This process allows teams to work with community members to generate a social and resource map to gather information on the spatial layout, locations of houses, and infrastructural facilities. This process also mapped landmarks, roads, intersecting railway tracks, as well as places of local importance, such as mosques and temples.

⁶ Methods derived from PRAs but titled PUAs because of the focus on urban.

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Public areas, such as parks, service points, such as hand pumps and ration shops, are also accounted for. The first significant difference between a social map and a regular map lies in the fact that it is made by local people and not by “experts”. PRIA teams facilitated the process of mapping by requesting inputs from community members and ensuring close coordination between them. As community members often differed in their opinions, it was easiest to use a pencil so that divergent factors could be taken into account. As a larger number of individuals got involved, maps were often re-drawn.

A social map depicts aspects that are important for the community. An effective mapping process would help teams understand social stratification, demographics, settlement patterns, and infrastructure. Additionally, the process laid the stepping stone to the establishment of a forum for community members (NIRD, n.d.).

The third method used was the timeline, which provided a historical perspective and helped understand the nature of changes that took place in the settlement. This method captures the chronology of events as recalled by local people and is a useful tool to bring on board diverse opinions. The tool often highlights events, which are perceived as important by the community. It can be used to generate discussions on issues that pertain to the project and develop a rapport with the community. PRIA team used timeline tool to explore the history of the informal settlements – when did it come to existence, who were the early settlers, incidents of evictions threats, and other socio-political dynamics over the years.

3) Organizing Settlement Improvement Committees (SICs)

The methods and processes described above were aimed at the creation of a community-based organization (CBOs). These steps are pivotal because communities are organized around day-to-day issues that create hindrances in their lives.

In this case, we refer to community organizations as non-statutory organizations that are initiated through the project and driven by the community. Project initiated committees have specified norms for formation and membership to ensure greater representation of the community (Tandon & Jaitli, 1998). In the ECRC, these organizations are known as Settlement Improvement Committees (SICs). These are local organizations that advocate for the interests and needs of the urban poor. SICs act as bridges between the service providers and the community. They speak in unison about the communities’ needs and rights. They are the focal points through which external stakeholders can connect with the communities.

The project facilitated the formation of 250 SICs in three cities. These SICs were developed and managed by nominated residents of the settlements with each SIC having a total of 8-15 members as the core members. The project consciously emphasized a larger involvement of youth and women as member of these committees.

The formation of these organizations was aimed at providing a safe space for discussion and reflection on the settlement’s problems; these entities helped identify and prioritize community needs and find solutions for the needs through close coordination and by working with other institutions. The need for a “safe space” is an important prerequisite for participatory research methods since they require a great willingness on the part of the participants to disclose their personal views of the situation, their own opinions and experiences. SICs aim to create spaces where individuals can voice their dissenting

views. These spaces are essential for the process of knowledge production as they show a new and different (often unique) take on the subject and enable the discovery of new aspects. The aim of this safe space is not to create a conflict free space but rather to ensure that conflicts can be viewed as adding to knowledge. It is important to keep in mind that social responses to problems by a group of people are not necessarily the same as the total of individual responses of people acting singularly or alone (Hall, 1975). The provision of these spaces and the collectivization of individuals bring different capacities, knowledge, beliefs, and ideas that strengthen the SIC and the idea of unity.

For organizational entities like SICs to function well (and beyond the project), trust must be allowed to develop. The goal is to create long-term, honest relationships (Bergold & Thomas, 2012). When facilitating the formation of SICs, it is vital to ensure the engagement of all households in the settlement. To ensure the sustainability of the organization, barriers of caste, class, gender, and age must be broken.

Post formation of SICs, field teams provided support through a series of handholding activities. Regular meetings were held with each SIC to understand the nature of their problems and priorities as well as ideas on how to solve these issues. In parallel, PRIA prepared profiles of each SIC member to assess the level of capacity building required. Based on this, training programmes were designed to create an understanding of the role of the SIC as well as the rights of residents inhabiting these informal settlements. As SICs advanced, core members were nominated to participate in orientations held by PRIA. These orientations furthered their understanding and built on their knowledge while providing for leadership development, articulation of problems, and role of state agencies.

4) House listing

One of the first requirements of a large-scale survey was house numbering or house listing. This process acts as a stepping stone to surveying. PRIA's teams found that a large number of houses in informal settlements were not provided addresses by state agencies. The house numbering process needs to ensure each household bears a systematically assigned number. Additionally, the process needs to be collaboratively executed with SIC members. To ensure proper participation, training was provided to them and the process explained. House numbering instilled a sense of ownership in the community and residents since many had never had house addresses before. Numbering houses in a systematic manner also granted a sense of importance and fulfilment.

5) Co-designing the survey questionnaire

Questionnaires designed without the community's involvement are one-sided in nature. Participatory research regards people as sources of information and as having bits of isolated knowledge. In traditional research methods, the community are neither expected nor assumed to be able to analyse a given social reality (Hall, 1975).

Alienated research, which treats respondents as sources of information, has little likelihood of creating the active and supportive environment essential for change. Research under the ECRC wanted to ensure that those familiar with the problem, and whose lives are affected by it are not taken out of the process of change. It was therefore important to ensure that research provided easy links to the subsequent action.

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After preparing a draft questionnaire, PRIA’s team held multiple interactions with SIC members to ensure all parameters were covered. PRIA was keen to involve communities from the design stage and, based on these exchanges, questions were modified and options added.

The administered questionnaire was divided into the sections (see Figure 1) for ease of filling out and analysis. While the thrust of the questionnaire was to gauge the level of sanitation facilities in the city, it has also captured basic information about households, which is often important for correlation analysis.

The Participatory Settlement Enumeration (PSE) survey contained five forms. As depicted in Figure 1. The first form was the registration form and allowed enumerators to choose from a list of settlements categorized by wards. Considering the similarity in the names of settlements, this step made sure the correct ward and “slum” were being chosen. The form was also used to capture basic details of the respondent. The second form focussed on the structure of the household, ownership, income, religion, and caste. The third form captured information about members living in the household. For each member, age, gender, education, and occupation were captured. This form also noted the availability of Aadhaar, Voter ID, Ration Card, and birth certificates. The fourth form captured information regarding sanitation facilities, namely toilets, drainage, bathroom, sewerage, as well as grievance redressal. A fifth form was used to capture pictures, GPS coordinate, and to end the survey.

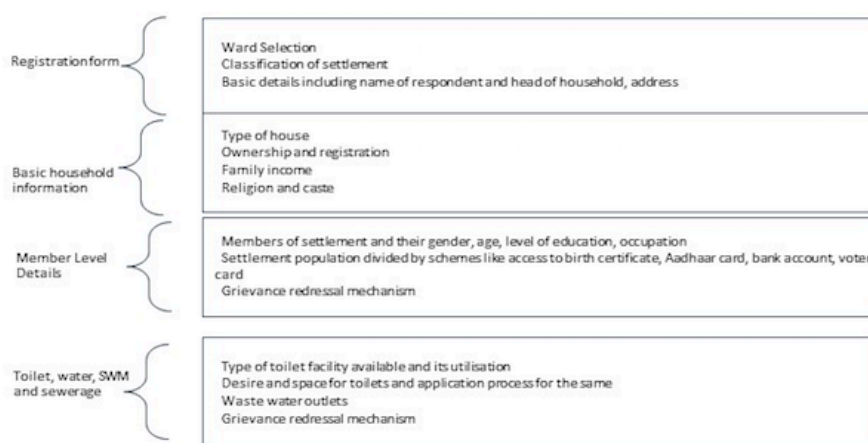


Figure 1: Flow of Participatory Settlement Enumeration Survey

6) Selecting and training the enumeration team

A semi-structured training was hosted for the community enumerators selected from the youth residing in various informal settlements. These youth, identified through PUAs, played a crucial role in the SIC formation process. As the project advanced, all settlements covered in the city were divided within these community enumerators. They became part of PRIA’s field team, and their presence made communities feel more

comfortable. That apart, as co-researchers, they contributed to the formulation of questions and, later, to interpretation of data.

A major advantage of involving these enumerators in data collection processes is that they have first-hand knowledge of the field. Since they belong to the settlements being surveyed, they understood the way people thought and could obtain higher quality responses.

However, their involvement also meant divergent levels of understanding and knowledge. Choice of data collection method was critical. A comprehensively developed mobile application allowed the use of visual aids, inbuilt checks to complement their knowledge and ensure authentic data (Bergold & Thomas, 2012).

The training session introduced the participants to the questionnaire, followed by an intensive discussion on the rationale and logical flow of various questions. Once an understanding of the questionnaire had developed, the participants were taken through the customized mobile application designed to capture the enumerations. Following this, the key areas of monitoring and verification of the enumeration were discussed. Additionally, understanding of smartphone-based enumeration was discussed. This focused on basic aspects, such as the use of GPS, power management, and data connections.

These trained enumerators and the PRIA team hosted a half-day orientation session for some SIC members who were keen to work along with enumerators to conduct enumerations in their own settlements. Many enumerators and SIC members had never utilized a smartphone before, and an additional step was, thus, to demystify the technology.

7) Validating and using the survey findings

Once data was verified to the satisfaction of the survey coordinator and administrator, it was validated by the SIC. For each settlement, generated charts and tables were discussed with the SIC, which was asked to indicate anomalies. Dated and incorrect information was modified as per changes on the ground. This process kept the community engaged and participating in ensuring that the data reflected the status of their settlements. The validation process allowed various perspectives to flow into the possible interpretation and allowed communities to get a holistic understanding of their settlements. This serves as the second round of verification, post which the data file is finalized.

These processes are important for multiple reasons. First, relevant interpretations emerge when research is embedded in social contexts where community voices get prominence. Second, despite being rigorous and thorough, one-time surveys can oversimplify social realities. To some extent, constant verification, validation and updating allowed for better depiction of social change.

Survey results become the backbone on which SICs can approach municipalities for service provisioning and infrastructural improvement. Once the data is available, SICs discuss the findings and decide what areas to prioritize. The ability and opportunity to analyse their own realities, stimulated residents and brought forth creative solutions and ideas. Using this data, SICs have been able to request for the building of toilets (both

community and individual), construction of drainage and sewerage, as well as the provision of Aadhaar and electoral identity card.

The SIC members, with support from PRIA's field teams, shared a copy of each settlement's data with the municipality and ward councillor. These findings represent the settlement as a whole and showcase service deficiencies, which councillors are able to use to pitch for improvements. In addition, individual settlement reports are consolidated and analysed for a citywide picture.

LESSONS LEARNT

The invisibility of a large section of urban poor in the governance of Indian cities is primarily reinforced by their undercounting in the official census and surveys. These surveys are often undertaken by the government officials or third party contractors who are oblivious to the existence of many informal settlements or many households within the informal settlements. The restrictive definitions of slums contribute to the exclusion of urban poor, thereby making them ineligible for entitlements, therefore: "Approaches to inclusive and resilient urban development that utilize data from profiling and enumerations led by the urban poor, will be more inclusive and integrated—and, if they take into account the priorities identified by these processes, are likely to be more resourceful as well" (Dobson, Nyamweru, & Dodman, 2015).

When the urban poor themselves undertake the enumeration of their own settlements and households, chances of exclusion are far less. The ECRC initiative of PRIA demonstrates that this deliberate or erroneous exclusion of the urban poor can be tackled effectively by involving the urban poor in the enumeration process. Livengood and Kunte (2012) observed that the fact that the mapping is undertaken by community-based organizations does not mean it is inherently participatory. Participation of all is achieved by bringing all interested stakeholders into the project through the grassroots network and allowing them to ask questions, contribute ideas, and make decisions.

This participatory self-enumeration process is best done by the organized communities. The natural leaders from within the community—women, men, and youth—lead the process. The inclusive nature of the organization ensures that interests and concerns of all sections of the community are taken on board while designing the survey. The organized community and its leadership equipped with findings from the survey engages with state authorities and other stakeholders to access services and entitlements that are due to them.

The self-enumeration approach is an effective alternative to professionally administered surveys. Not only does self-enumeration build the capacities of the poor, but it also builds new knowledge controlled by the community, and upsets "the prevalent knowledge hierarchy, putting communities in a better position to negotiate with governments and outside agencies" (Livengood & Kunte, 2012, p. 83).

The ECRC initiative was designed to create SICs, which would lead the enumeration processes. However, often, it would be the enumeration process itself that would strengthen these bodies that played a vital role in co-designing the questionnaire, house listing, collecting and analysing data, and preparing settlement level service improvement plans. The plans were then shared, and negotiations were held with the

elected councillors and officials of municipalities. The commitments received from the municipalities were then followed through by the SIC leadership. The entire process helped the communities elevate their confidence and exact accountability from the elected and non-elected officials. This contributed to enhanced access to services and entitlements at the individual and community levels.

Introduction of technology can be a great help in a large-scale enumeration process. It can bring, over time, efficiency as well as dramatically reduce the chances of error and omissions if it is conducted by trained people. However, it also risks exclusion of community-led initiatives and might lead to the appropriation of data and community's knowledge. This is particularly relevant in situations in which the digital divide is pronounced. Nevertheless, if the facilitating agency demystifies the technology and creates opportunities for training of community members, it can be an empowering experience for the community. The ECRC initiative deliberately invested in building capacities of the community members, particularly the young women and men, to utilize mobile-based survey tools. It enhanced the inclusivity and quality of data collected from the community households. More importantly, young people developed digital skills which they could use for the rest of their lives. Livengood & Kunte (2012) had similar observations where projects that enable the urban poor to adopt advanced mapping techniques and GIS technology have been shown to create more transparent processes and facilitate participatory decision-making. The municipalities in these three cities, where the ECRC project was implemented, can engage these trained young people in future surveys and enumerations.

CONCLUSION

Although the draft of this paper was written in the pre-Covid 19 time, the pandemic alerts us again to the importance of ground-generated data and empowered local committees. As governments struggle with limited and outdated data, the requirement for committees, such as SICs, along with rich data is heightened. These factors could play a pivotal role in highlighting the needs of the most vulnerable and deprived groups, which are often left out of the safety net cast by the government.

By building collective capacities of the urban poor and generating data to create partnerships between communities and local governments, the activities described in this paper set the stage for a more participatory approach to building urban resilience. Resilience cannot be built by one actor alone—neither the government nor NGOs—but through working actively with marginalized communities who actively define vulnerabilities and collectively strategize to reduce exposure to hazards and stratagem their capacity to adapt (Dobson et al, 2015).

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