EVIDENCE REVIEW: COVID-19 RECOVERY IN SOUTH ASIAN URBAN INFORMAL SETTLEMENTS

Social Science in Humanitarian Action Platform

The global pandemic has brought renewed attention toward the everyday challenges in informal settlements. COVID-19 reminds us that southern urban life is rooted in 'collective' experiences where toilets and kitchens are shared by multiple families; where the categories of work and home, private and public space overlap; and where the majority live in vulnerable conditions.[1] Despite these challenges, some of the most innovative and collective responses to COVID-19 have emerged from these areas. While informal settlements did face a host of risks and vulnerabilities during the pandemic, local responses have highlighted the resilience of informal settlement communities.[2] However, few informal settlements are actually 'resilient' and any local responses must be robustly supported by system-wide change including support from local and national governments, improvements to built infrastructure, and improved access to health care services, among other priorities. The category of 'informal settlements' also captures a wide range of settlement types, from a legal slum to an informal settlement with no legal status, with many other types in between. This underscores the need to address fundamental issues that 'perpetuate conditions of inequity, exclusion and vulnerability'[3] while also recognising the needs and contexts of different kinds of informal settlements. Whether COVID-19 helps governments recognise conditions of insecurity and vulnerability to address safe and secure housing and infrastructures remains to be seen.

This is an update to the previous SSHAP brief on 'COVID-19 in Informal Urban Settlements' (March 2020).[4] This evidence review highlights local responses, grassroots efforts, and challenges around COVID-19 recovery within urban informal settlements in South Asia. It focuses on specific examples from Karachi, Pakistan and Mumbai, India to inform policy responses for COVID-19 recovery and future epidemic preparedness and response. We show how local level responses are shaped in these cities where national and international responses have not reached communities at municipal and sub-municipal levels.

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SUMMARY CONSIDERATIONS

Overview

- **Informal settlements are often viewed as a 'problem,'** and this was exacerbated during the COVID-19 pandemic when informal settlements were seen as 'problem spaces.' While these were indeed spaces of vulnerability to COVID-19, this rhetoric may inadvertently provide additional rationale to policymakers who seek to pursue a 'cleaning up' of city spaces through policies that evict, displace, or eradicate informal settlements or attempts to relocate or rehabilitate in the name of a betterment of conditions.
- **There are different types of informal settlements and governance arrangements.** This may include informal settlements which are recognised by the government and receive support or various protections, or it may include those which are not recognised and are much less supported. These arrangements are crucial to residents' wellbeing, as communities and households with more secure land tenure, for example, would mean protection from eviction.
- **Informal settlements in South Asia have a long history of collective efforts** and community action. Responses to COVID-19 built on these histories, have enabled communities to work with NGOs, and local governments to prevent, track, and isolate cases of COVID-19. In other cases, informal settlements, particularly those on the periphery of urban areas, were less able to mount local responses. Understanding these nuances will be necessary for future recovery.
- **Transformative resilience.** Rather than returning to the previous 'normal', there is a need to transform urban informal settlements in partnership with local stakeholders and organisations. A resilience framing resists the idea that communities are passive recipients of assistance or aid, and instead emphasises their capacities and resources to prepare for and effectively respond to crises. However, 'resilience' has also been criticised as it does not mean that local communities can mount a response on their own. Instead, local responses must be paired with effective and robust support from local and national governments.
- **A systems approach.** COVID-19 recovery and future epidemic preparedness in South Asian informal settlements needs to avoid inadequate and narrow disaster responses. Narrow responses may overlook connected risks and vulnerabilities, which are driven by connected issues of poor access to water, sanitation, and health care.

Urban inequalities

- **Informal work and challenges to livelihood.** Informal and other low-wage workers faced multiple challenges from COVID-19 lockdowns, while limited access to social protections further compounded vulnerabilities. The urban poor are particularly vulnerable to exclusion from social protection measures, and creative ways of reaching them are needed for future crises.
- **Existing inequalities worsened the economic, social, and psychological burden of COVID-19 and response measures for women**. Women were disproportionately affected by market closures and the stoppage of work during lockdowns. During lockdowns, women faced additional burdens from unpaid care and labour within the household. This was especially true for women-headed households. Women faced higher rates of gender-based violence during the lockdowns.
- **Religious and social inequalities intersect with other inequalities to worsen vulnerabilities for minorities**. Minorities faced religiously motivated discrimination in informal settlements in Tamil Nadu and Karnataka states in India, reducing access to employment and public services. Muslims experienced worsening harassment and violence, while Dalits faced a loss of livelihood and 'distress and despair'. Religious minority groups in Pakistan were also denied healthcare and food support during the relief phase of the pandemic.
- **Mental health** is often ignored in informal settlements, where the policy focus has been on basic needs and infrastructure. During the pandemic informal settlement residents faced a higher burden of mental health problems.

Local responses and short-term considerations

- **Local responses and local knowledge are a key part of a systems-wide recovery effort.** The availability of public services and strong social and community networks is also key. While 'success stories' were touted as models, there were also less successful responses in more peripheral urban informal settlements that lack services and social infrastructure. Successful local responses often relied on infrastructures like community centres that could be repurposed for COVID-19 isolation or care. While local responses are vital to recovery, so are investments in public services and infrastructure in under-resourced peripheral areas.
- **Leverage alliances previously forged by community-based organisations.** These alliances laid the groundwork for other collaborations between city governments and local actors during COVID-19. In Mumbai, for example, previous mobilising around issues like the right to water laid the groundwork for COVID-19 responses. Collectivisation (e.g., bringing together people around a specific issue for increased negotiation power) and collaboration can take many years to build, and so leveraging these efforts for COVID-19 recovery will be critical. Civil society organisations also need to be critical about possible exclusions by organising direct forms of support (such as rations).
- **Rely on local knowledge and engage local leaders.** Key influencers include those who are well respected in a community and have a position of authority. This includes locally relevant stakeholders like religious leaders, NGO workers, and trade union leaders, among others. During the early stages of the pandemic, they played a critical role in identifying vulnerable people in informal settlements because of their network and relationships with communities. School principals and religious leaders have helped several NGOs in the distribution of rations, and raised awareness about people who were missed in the distribution of aid.
- **Bring vaccination centres closer to informal settlements**. COVID-19 vaccination access plays an important role in COVID-19 recovery. There is greater need to set up mobile vaccination centres at the local level such as union council offices which are likely to be in close proximity of informal settlements.

Longer-term considerations

- **Advocate for strengthened investments in the public health system.** As a region, South Asia lags behind other governments in health expenditure, with government health expenditure less than 1% of GDP. This means that private and informal health providers fill gaps, and many low-income households face high out-of-pocket expenditures, which limit access health care and may push people deeper into poverty.
- **Consider improving data collection at various scales.** Scant demographic data and capacity constraints relating to data management are some of the fundamental issues that need to be addressed for urban authorities to tackle everyday crisis in low-income urban settlements. Data collection is often led by urban authorities and can be politicised, but more collaborative and community-based approaches would help to improve equity and representation of marginalised groups. This further applies to information about new diseases and infections relating to COVID-19, which need to be channelled to all kinds of health facilities as well as health providers. Robust documentation, updated records of comorbidities of COVID-19 patients, and improved awareness about novel infections among medical staff are essential steps to prevent complications relating to COVID.
- **Governments need to ensure universality in social protection programmes.** While innovative practices of social protection during COVID-19 have created an opportunity for universalisation of rights, there is a need to systematise this progress. Informal, home-based, domestic, sanitary, migrant and other workers living in informal dwellings and their families should be prioritised in the longer term.
- **Prioritise information provision to settlements that are located in peripheral areas of the city**. These sites often have limited information about the pandemic and other emergencies or

disasters. These areas need to be urgently prioritised by local and provincial governments so that information relating to future disasters could be made available in settlements located far off from the city centre.

BACKGROUND AND CONTEXT

Overview. In this brief, we bring together evidence to inform the recovery phase of COVID-19 in urban informal settlements. We select Karachi and Mumbai because like many other South Asian cities these have similar characteristics and challenges, as well as similar policy responses towards those living in informal settlements. India and Pakistan's major cities have also had the highest COVID-19 infection rates. This brief therefore includes a review of the published and emerging literature and information from our discussions with urban actors who have played a critical role in shaping local responses. These include urban authorities such as district level staff and administrators, district health officers, NGOs, and researchers whose work is in these sites. We also report relevant features of the pandemic that have not been featured in regional or national responses. We write this brief at a time (early 2022) when COVID-19 restrictions are being eased and both cities have undergone several stages of lockdown while vaccination programmes are scaled up, which will contribute to COVID-19 recovery. This evidence shows that these efforts, and local responses that emerged during the pandemic, will require new policy responses to health and urban governance in informal settlements.[3]

Legal status of informal settlements. There is a wide range of informal settlements in urban areas in South Asia, with categories such as 'regularised', 'non-regularised', 'irregular', 'notified', and 'non-notified' signifying a range of disparities. In Mumbai, for example, some settlements have notified status, that is, they are recognised by the government whereas others have non-notified status or are otherwise precarious, including pavement dwellers (informal housing on footpaths of city streets) and some *chawls* (housing historically built for migrant workers).[7] The regularisation status and land ownership of informal settlements determines who has access to land tenure and public services like water, sanitation, electricity, public transportation, and government-led slum improvement schemes.[8] Nearly half of Mumbai's low-income settlements are non-notified.

Box 1. Spatial inequalities in Karachi and Mumbai

Spatial inequalities in South Asian cities such as Karachi and Mumbai have been well documented. Sixty-two percent of Karachi's population that lives in informal settlements occupy only about 23% of the city's residential land.[9] The majority of Karachi's residential land is occupied by residents living in formal housing. In Mumbai, the percentage of people living in informal settlements is as high as 41.3%, or over 9 million.[10] Dharavi, which is India's largest informal settlement, has a population density of over 270,000 people/sq km. Access to affordable housing and secure tenure in these cities is based on economic, social, and political divisions.

Urban governance and evictions. In Mumbai, the Brihanmumbai Municipal Corporation (BMC) and the Mumbai Slum Improvement Board (MSIB) are responsible for providing basic civic and social amenities to informal settlements. Informal settlements on central government land are not entitled to tenure and are excluded from any municipal slum rehabilitation schemes.[11] Informal settlements on central government land are therefore often excluded from the provision of networked infrastructure and services and many do not have water or sanitation. In Karachi, the Sindh Katchi Abadi Authority is responsible for surveying, preparing cases for regularisation, and notifying the status of informal settlements.[12] The resultant nexus between the economic, social, spatial and political inequalities lacks priority among many national, municipal and local governments which often operate in silos. Policy responses by city governments have also not been favourable towards those living in precarious conditions. Between 2004-2005, the Mumbai city administration evicted and destroyed over 80,000 informal settlements and displaced 300,000 people.[13] In Karachi, evictions and demolitions have been historically rampant with recent events taking place during the pandemic. Eviction drives in Karachi have been rationalised under state driven 'infrastructure upgradation' and 'disaster risk reduction' schemes.[14]

Uncertainties and informality. Informal settlements in South Asia, as in other parts of the world, are 'in motion,' in that there are a range of changing practices that are not regulated by the state or formal institutions.[15] This may shape vulnerability (to, for instance, insecure housing, risk of evictions and related insecurities such as loss of livelihood) and it may create conditions of uncertainty, especially around access to public spaces and services; however, depending on the status of and conditions in a settlement, it may open up new possibilities and localised ways of managing everyday life as well as crises.[15]

Ecological risks. Ecological challenges are experienced in the form of heavy rainfall in coastal cities. In August 2020, Karachi experienced one of the worst spells of rainfall which put hundreds at risk particularly those living in informal sites and compounded existing challenges due to the COVID-19 pandemic.[16] For local actors, the flooding meant identifying and contacting residents who needed support in the form of food and shelter. In India meanwhile, in the summer of 2020, many parts of the country were warmer than usual and this made it difficult to remain indoors.[15] This had mixed effects, though it made it difficult for anyone to isolate once infected with COVID-19.

COVID-19 vulnerabilities. There are COVID-19 disparities across income groups within informal settlements, and the nature of risks and vulnerabilities faced by their residents are multidimensional and gendered.[17] Informal settlements typically lack adequate, affordable and safe infrastructure for basic needs such as housing, water, energy and sanitation.[2] These and other social determinants of health were major determining factors in the severity and numbers of COVID-19 cases.[18] Formal healthcare services are of poor quality as government clinics are understaffed or under-supplied and while private clinics are preferred; quality of care is patchy and services are costly.[19] Many residents work in informal, unregulated, and high-risk occupations such as waste recycling, and waste-related industries, which were duly recognised as 'essential work' during the pandemic.[13]

COVID-19 measures and their impact. Other briefings by SSHAP highlight the social and economic impact of COVID-19 measures.[20,21] In South Asia, the pandemic has highlighted the unevenness in the provision of relief and support to those living in informal settlements while the containment of COVID-19 through lockdowns has compounded multiple burdens for individuals living in these settlements.[4] 'Everyday' life was disrupted for domestic workers, rickshaw drivers, street vendors, waste recyclers, construction workers, migrant workers, and many other individuals who form the backbone of these cities.[1] However, while there were strict containment measures, there was limited outreach of welfare schemes for the urban poor.[1] With limited data, sub-national and city governments have responded in piecemeal ways instead of comprehensive longer term strategies.

COVID-19 and urban inequalities

Population and density. Throughout the pandemic we have seen higher rates of infection in urban areas due to concentration and density of economic activities, movement of people, and goods. Even though containment measures such as social distancing, handwashing, and quarantine were implemented in some cities, it is nearly impossible to replicate in informal settlements because of overcrowding, and lack of basic services.[1] Karachi's informal settlements, for example, have undergone significant spatial changes and per room occupancy has increased, which has led to overcrowding.[22] Households have rented out portions of their housing to other families and people have constructed floors on top of existing houses.[22] More information, however, is needed on the scale of densification at a city level.

Livelihoods and informal work. Informal workers are particularly vulnerable to loss of livelihood as wages and saving may be low, and many lost work due to COVID-19 control measures.[20] Informal work is not protected under labour laws and may be more hazardous than formal work, without worker protections. Further, informal work tends to be under-recognised, and this contributes to inadequate data and policy responses. The informal sector accounts for 71% of employment (outside agriculture) in Pakistan and 80% in India.[23] In India, the urban poor are vulnerable to exclusion from social protection systems, and many were unable to benefit from the special relief provisions announced in the wake of COVID as well.[20] However, the central government introduced a scheme called SVAnidhi for street vendors to ensure recognition, access to micro-credit and linkages to social protection.[24] Informal work in Karachi is closely linked with large-scale enterprises and during

lockdown, when large-scale enterprises closed, daily wage workers faced huge losses.[12] These restrictions left a significant impact on informal workers and their families and industry workers. In Karachi, daily wage workers as well as contractual employees were laid off from formal work places such as factories.[25] The majority of informal workers in Pakistan earn less than the mandated minimum wage.[26]

Women and children. Existing inequalities worsened the economic, social, and psychological burden of COVID-19 and responses measures for women.[13] Eviction drives in Karachi's settlements led to high levels of anxiety and mental distress among residents, particularly for women and girls.[27] Closure of markets also affected the families of those who lost livelihoods. Women in India were disproportionately affected by these closures; though most working women are employed in informal sectors and data is missing on the full extent of the problem.[13] During lockdowns, women faced additional burdens from unpaid care and labour within the household.[15] This was especially true for women-headed households. Women further faced higher rates of gender-based violence during the lockdowns.[28,29] In Indian cities, women involved in providing essential services also had the challenge of walking miles to and from work as public transportation was stopped or running less frequently due to COVID restrictions. On the other hand, men fared better as usually they are ones who own and drive two-wheelers and these vehicles were not stopped. In India, many children from informal households had to quit their education to support their families.[30] A lack of resources (e.g., smart phone, internet connectivity) to attend online classes was one of the key reasons behind quitting the formal education.[30]

Caste and religious minorities. Religious and other social inequalities intersected with existing inequalities which exacerbated COVID-19 vulnerabilities for minority groups. Preceded by protests around the Citizenship Amendment Act and the rising atmosphere of distrust in India, the pandemic and restrictions were seen by several minority groups as another state-sponsored act against them. The Bebaak Collective, a group of Muslim advocates, published a recent report on discrimination and violence faced by Muslims due to the 'communalisation' of the pandemic and incitement of violence.[31,32] Minorities also faced discrimination in informal settlements in Tamil Nadu and Karnataka states in India.[5] Muslims experienced worsening harassment and violence, while Dalits faced a loss of livelihood and 'distress and despair.'[5] Many therefore resisted preventive actions, including vaccination in later months. In Pakistan, there have been hate speeches and attacks directed toward Shia and Ahmadi Muslim minority groups during the pandemic.[33] Religious minority groups in Pakistan have also been denied healthcare and food support.[33] Large numbers of Dalits in India are involved as sanitation workers and waste collectors. During COVID-19 waves, Dalits were often the frontline workers responsible for door-to-door collection of waste from COVID patients' households, which increased their vulnerability for the diseases. Sanitation workers in Pakistan who are largely from the Christian minority group in Pakistan have experienced stigmatisation; they have had to work longer hours and without COVID-19 personal protective equipment.[33]

Access to water. Vulnerability to COVID-19 is related to spatial constraints in infrastructures such as housing, water, sanitation and energy.[4] In Mumbai, informal settlements without legal access to WASH rely on a complex informal system of water procurement involving unmetered municipal stand posts and illegally dug wells, usually controlled by water mafias.[10] In India's informal settlements, the use of public communal toilets, water collection points, and interactions with water vendors have intensified the risk of human-human transmission.[34] Settlements that are not yet regularised have also received little attention from municipal authorities. In Mumbai, politicians and political parties play a large role in access to resources and access is often political.[11] In 2014 in Mumbai, an organisation called *Pani Haq Samiti* (Right to Water) succeeded in pressuring the city's government to provide water to non-notified slums after a Bombay High Court ruling.[35] In Karachi's Machar colony where a majority of people spend exorbitant amounts purchasing water, access to water also requires long waiting lines, high transportation costs, but also the need to navigate through many different water arrangements.[36]

Non-communicable diseases (NCDs). Health risks and the burden of NCDs in particular are often undocumented and under-recognised[15,37] and the factors which contribute to these chronic conditions need to be better understood. In Indian informal settlements, residents are more likely to be

hypertensive or have Type 2 Diabetes compared to rural counterparts.[38] However, the burden of hypertension, cancer, and diabetes is estimated to be less compared to non-informal settlement urban residents.[38]

Mental health. While mental health is an important part of health and well-being, it is often ignored in informal settlements.[39] Informal settlement residents in Dhaka, Bangladesh, for example, faced elevated anxiety and insomnia during COVID-19, often rooted in a lack of access to WASH facilities or food.[39] Among Mumbai's informal settlement residents, mental health issues resurfaced and worsened during the pandemic, though when basic needs were at least partially met, mental health improved.[40] Social support is also key to mitigating mental health issues.[40] Depression and mental health problems were reported to be experienced as part of the everyday life in Karachi and were more salient than COVID-19 prevention measures to some people's lives.[41]

COVID-19 RECOVERY

Frameworks for COVID-19 'resilience' and recovery

Transformative resilience. Efforts at the community level should be supported by local and national governments in South Asia. Governments at various levels can build on community successes while also seeking 'transformative resilience.'[42] Rather than returning to the previous 'normal,' there is a need to transform urban informal settlements in partnership with local stakeholders and organisations.[42] This 'transformative' approach recognises the inequalities within informal settlements and that structural changes may be needed. A resilience framing resists the idea that communities are passive recipients of assistance or aid, and instead emphasises their capacities and resources to prepare for and effectively respond to crises.[43] It also proactively prevents and reduces drivers of shocks and systemic issues that drive vulnerability.[43] Finally, learning from mistakes made during the COVID-19 pandemic, it is urgent that vulnerable people in informal settlements and the organisations representing them are included in governance and planning processes for COVID-19 recovery.[44] Rather than celebrating a spirit of 'mutuality and resilience,' local responses should be broadly and equitably supported by the state.[45]

A systems approach. A systems approach provides a framework for COVID-19 recovery that is based on an understanding of complex systems, or how the relationship between parts of these systems contribute to the operation of the whole system.[46] This recognises the interconnectedness of key sectors in supporting health and well-being of informal settlement residents through development across sectors (government, non-government) and at multiple scales (individual, household, community).[43] To address the complex challenges of informal settlement residents, 'systems thinking' will be needed for COVID-19 recovery.

Longer-term recovery. As efforts focus on longer-term recovery from COVID-19, urban areas are in need of clear recovery plans to tackle ongoing impacts of the virus and the inequalities that deepened the impact of the pandemic on informal settlements.[47] These plans should incorporate lessons learned from local responses, which have been particularly effective in mobilising and responding to the pandemic and reducing transmission. They must also incorporate multiple pathways out of the pandemic, including a flexible approach that supports recovery while considering transformations needed to address longstanding structural inequalities and uncertainties.

Implementation of recovery plans will require collaboration between civil society organisations, key stakeholders and urban policymakers, urban residents, and local and national government. The International Institute for Environment and Development (IIED), Women in Informal Employment: Globalizing and Organizing (WIEGO), Slum Dwellers International (SDI), ICLEI – Local Governments for Sustainability, and Cities Alliance co-created one framework for a 'transformative urban recovery process' in urban informal settlements in South Asia.[48] This framework is modified and presented below.[48]

National and local government processes:

- **Support local governance processes** that promote transformative resilience to multiple risks. Local governance that builds on local knowledge and processes can improve access to shelter, infrastructure, and emergency response.
- **Increase buy-in for transformative green recovery** processes that recognise and manage trade-offs. Responses that promote equitable green recovery processes should also respond to local political realities and centre low-income communities' perspectives and needs.
- **Create and expand mechanisms to decentralise urban development finance**. Sustainable funding streams can help to reduce inequalities and offer longer-term relief measures in cities.
- **Promote evidence-based responses** that are non-discriminatory, protect the rights of minorities, and uphold the human rights of informal settlement residents. These rights include a right to housing, food, education, water, and decent and dignified work.

Include marginalised groups:

- **Support informal workers' livelihoods** and create mechanisms to co-produce basic services. The informal economy often fills gaps in the provision of housing and basic services.
- **Support inclusive, gender transformative responses** that include women and girls and trans people, people with disabilities, youth, and religious and other minorities.
- **Include migrants, refugees, and other 'people on the move' in pandemic assistance, and short- and long-term recovery.**

Interventions and programming:

- **Implement systems-wide interventions** to improve the wellbeing and flourishing of residents, through strengthened livelihoods, upgraded informal settlements, and adaptive social protection measures.

Local action and partnerships for COVID-19 recovery

Local action, community mobilisation, and partnerships were critical during the initial waves of COVID-19 in urban informal settlements in South Asia, demonstrating the importance of both 'bottom-up' and 'top-down' approaches to COVID prevention and control. This has included partnerships across government sectors and between local, state/provincial, and national governments. Locally-led action helps with adapting pandemic response to local contexts, which is important given the wide variation in conditions across and within informal settlements. However, local responses were more limited in informal settlements that lacked physical and supportive social infrastructures.

Relying on local leaders and relationships. During the early stages of the pandemic, local leaders played a critical role in identifying vulnerable people because of their network and relationships with communities. School principals and religious leaders helped NGOs in the distribution of rations. They also bring community knowledge about people who were missed in the distribution of aid.[49] Through our meetings with social influencers in Karachi, contributors to this brief found that healthcare workers including nurses, female community health workers, and support staff in healthcare facilities were missed in ration distribution drives organised by private charities and groups. NGOs have been able to deliver support (such as food rations) through strong networks and longstanding engagement in informal settlements. According to one respondent, a local development worker, "*You need to be rooted in a community for a longer period of time.*

Community data collection to inform response measures and targeting. Data collected by community organisations captured nuance and 'left behind' groups, facilitating action during emergencies. Vulnerability assessments, more commonly known as 'beneficiary assessments/needs-based assessments surveys,' led by NGOs have been key sources of data for provision of support such as ration bags in Karachi's informal settlements.[49] During the relief phase of the pandemic, this data was also shared with district administration and health departments.[50] Door-to-door visits, community meetings, and surveys conducted on a regular basis were vital to the relief phase of

COVID-19. Grassroot organisations in Karachi also approached collectives such as an association of transgender people and another that represents people with disabilities to identify vulnerable groups that were being excluded in the provision of food support. Institutional databases in these associations can often be key sources of data during emergencies. In Maharashtra, similar mapping was done and information on essential services – cooked food packets, dry rations, vegetable venders, public and private health volunteers was shared through WhatsApp groups.

Geographical targeting. In Karachi's Gadap town where a large proportion of working-class groups reside, geographical targeting and door-to-door ration distribution was used as a strategy by NGOs to improve equitable distribution of resources. They ensured that essential workers like food hawkers, newspaper hawkers, daily wage workers, and those working in service industries such as hotels and restaurants were provided with rations.[49]

Collaborations across local organisations, government, and informal settlements in Karachi. Localised action and agency of local actors and community organisations contributed to an improved COVID-19 response in Karachi.[17] Informal connections have also created potential for collaborations between city governments and local actors in the future. In Pakistan, humanitarian actors such as UN OCHA have a history of working with federal government agencies during emergencies through partner NGOs, though these partnerships are less often connected to informal settlement organisations and residents. Creating partnerships with urban authorities that are embedded *within* low-income communities can address short-term challenges.

Box 2. Dharavi's response in Mumbai, India

In Dharavi (Mumbai) which is one of the biggest urban informal settlements in Asia (with 850,000 residents), NGOs took a lead in responding to the unique needs of residents. Dharavi, one of many 'Containment Zones' in Mumbai during the pandemic, was widely acclaimed to be a role model for curbing the spread of COVID-19.[51,52] Much of this acclaim was due to collaboration between local residents, organisations, volunteers, the Municipal Corporation, and local health care providers. Muslim clerics, for example, went door-to-door to speak to residents about taking preventive measures like wearing masks. Dharavi leaders adopted a 4-Ts model to 'chase the virus' through Tracing, Tracking, Testing, and Treating.[52] Dharavi's response was successful also because of its vast social and physical infrastructures that could be leveraged, for example, where community centres were transformed into COVID-19 isolation and care wards.

The Society for Nutrition, Education and Health Action (SNEHA), a Mumbai-based NGO, started the Mission Dharavi project from 2020-2021. They adapted their longstanding programs on women and children's health in the slum to incorporate activities such as COVID-19 awareness, provision of food and essentials, and close coordination with public systems to ensure continuity of services.[53] They also employed their community-based volunteers (COVID *Yoddhas* (warriors)) and trained them in COVID-19 prevention and other measures. Their findings are published here.

In addition to community outreach, the borders of Dharavi were controlled with 24-hour screening at entry points; shops, small factories, and markets were closed, and movements were limited by authorities. Cases were referred to local clinics for isolation and supportive treatment. However, the use of police to enforce COVID prevention and isolation was not welcomed by everyone and many faced police brutality. Reports of disproportionate targeting of religious minorities, in particular, emerged during the height of the pandemic.[54]

Collaborations across local organisations, government, and informal settlements in Mumbai. Localised action in Mumbai's informal settlements in response to COVID-19 built on decades of organising, collectivising, and activism by residents and allied organisations. In Mumbai, many NGOs are involved in supporting informal settlement needs and have advocated for policy change. While government-led 'slum improvement' schemes have typically focused on physical improvements to informal settlements, local organising and action by civil society since the 1990s has helped to improve collective awareness among residents, organising, and advocacy, including among women.[11] However, there are still major sites of tension between informal settlements and local government as access to policymakers and resources is political.[3]

Collective organising in Mumbai. The National Slum Dwellers Federation (NSDF) is an umbrella organisation that mobilises residents and works with them to secure basic needs, including land

tenure.[55] The NSDF and the Indian Alliance of the Society for the Promotion of Area Resource Centres (SPARC), as well as Mahila Milan ('women together'), for example, worked together to secure shelter for Mumbai's pavement dwellers. This 'alliance' is one successful model that has developed through 30 years of organising and it has bolstered the wellbeing of over 36,000 pavement dweller households.[56]

Charitable organisations' efforts during Karachi's lockdowns. In Karachi, many charitable organisations and private individuals provide generous donations during emergencies. During the first lockdown, while the response from charity organisations was quick and at scale, some alleged that religious minority groups were left out.[57] A large proportion of charitable organisations operating in Pakistan are premised on Islamic ideology, which can generate exclusions. Some NGOs, for example, have designed tools and surveys to identify what income groups will receive what kind of charity (*zakat* or *sadaqah*) under the Islamic framework.[49] *Zakat* is a type of obligatory charity for Muslims under the Islamic framework and is one of the five pillars of Islam. *Sadaqah* is also an act of charity, but it is voluntary rather than obligatory.

Coordination between residents, NGOs, and local government in Karachi. Coordination between NGOs and district authorities also helped identify and serve vulnerable people who were missed during ration drives.[49] Karachi's Korangi district administration maintained records of the areas in which communities were receiving ration support.[50] Administration staff recorded settlements from where people were registering and visiting district offices to collect ration support. This process ensured that every household that was provided rations was listed in their database. District staff also sought information on households from community health workers.[50] Although this process may not be exhaustive nor systematic, local knowledge during the pandemic coupled with real time data did ensure some degree of inclusion in the response.

Formal partnerships with big utility stores. Some NGOs whose offered ration support to the poor in Karachi's informal settlements mobilised their partnerships with government-run utility stores to distribute ration bags during lockdown.

Local complaint mechanisms. District administrations in Karachi set up complaint centres to encourage communities to register complaints if they had not received ration support, or cash support from federal government's relief programme.[50]

Box 3. Urban observatories for linking data to action

'Urban observatories' are local urban knowledge institutions that focus on producing urban knowledge about informal settlements, including in a monitoring capacity.[58] They have emerged across a number of global South contexts to collect, analyse, and present urban data. The Indian Institute for Human Settlements (IIHS) based in Bangalore, for example, is a research and teaching institution that works in and on several Indian cities. They recently started one urban observatory and builds on existing work with communities and governments at all levels, positioning it to address complex challenges during a crisis like COVID-19. For example, in Delhi, their work led to the success of an experimental social protection intervention and the creation of specialised isolation facilities. This filled an important gap in state capacity. IIHS recently published a report on key priorities for post-COVID economic recovery.

Coordinated action in Mumbai's informal settlements. In Mumbai, coordination between communities and local government enabled informal settlement residents to better identify and articulate their needs. During the first waves of COVID-19, informal settlement residents raised issues with local government, including the lack of food and water for migrant workers without ration cards, people who needed cash transfers, and vital health services.[59] In Shivaji Nagar, mobilised residents and civic action groups worked with an NGO Apnalaya to call for improvements to public food distribution during lockdown.[59]

Another example is Mahila Milan's ('Women Together') work. Prior to the pandemic, its leaders in Indian slums worked with Slum Dwellers International (SDI) to profile and collect data on community toilets.[60] Based on these data, in Pimpri (Pune, India) they approached local councillors about fixing some of the issues, like drainage problems. This laid the foundation for collaboration with local

government during the pandemic. Collaborative agreements, like these, between Mahila Milan in other cities and local governments can be reached so that local problems can be fixed locally.[60]

Collectivised action to obtain microloan moratoriums. While incomes were lost and the economy came to a halt, women workers faced microloan repayment issues in Mumbai. In Chembur, creditors solicited loan repayments despite the loss of income due to the pandemic.[61] Microloans are often given to groups of women, but many migrant workers had left the city and the burden of repayment fell to women who had stayed behind. Some organised and visited the Mumbai Suburban Collector's office, where they advocated for and succeeded in stopping lenders from trying to collect these debts during the pandemic.

Box 4. The need to bring 'local' to the centre of pandemic response

The National Disaster Management Authority (NDMA) is a centralised, federal level governing body for preparing emergency plans and managing emergencies in Pakistan.[62] Provincial governments are required to establish a provincial level authority called the Provincial Disaster Management Authority (PDMA) to carry out these plans. This governance structure trickles down at the district level in every province. The NDMA has been the leading operational agency for planning COVID response with several other federal and provincial bodies.[63] During the early stages of the pandemic, a National Command and Operation Centre (NCOC) was established by the NDMA with the objective of improving coordination between federal and provincial governments. In the case of Karachi, which is divided into six districts, every district administration was given the power to exercise governance functions of a District Disaster Management Authority during the pandemic. While formal documents and plans stress the need to have strong links between the federal and provincial governments, the existing relationship between the provincial governments and local urban authorities needs to be acknowledged for effective strategies and responses in marginalised communities. In Karachi, direct forms of support such as ration distribution were outsourced to welfare organisations by the Sindh provincial government because it did not have contacts and resources to scale up relief efforts.[14] This is not to say there were not gaps in coordination between district administrations and the Sindh provincial government. International agencies through their strategic plans reported that coordination links between federal and provincial agencies were weak and needed to be strengthened, particularly with respect to disease surveillance, as well as facilities and human resources required for infection prevention and control. What remains unaccounted for in these plans and proposed mechanisms of coordination are data-driven solutions and response strategies at the local levels. Scant demographic data and related capacity constraints are some of the fundamental issues that need to be addressed for urban authorities to tackle everyday crisis in low-income urban settlements.

Longer-term considerations to address key inequalities

COVID-19 recovery in South Asian informal settlements should help to mitigate long-standing inequalities and vulnerabilities. In this section, we report emerging priorities for recovery in informal settlements.

Improve data on informal settlement residents' needs. A lack of sufficient data during the COVID-19 pandemic has meant that government schemes suffered from a lack of targeting, and many vulnerable people were not reached with assistance.[3] Migrant workers are usually registered to vote in their home districts, and so they are classified as residents of those home districts (rather than their place of work), which deprives them of claims and benefits like food rations that other city residents are entitled to.[13] Among the vulnerable fishing community of the Kolis in Mumbai, young people coordinated with neighbouring fishing villages to obtain data and organise supplies for migrants or others with limited access to support.[64] Support for migrant workers was 'inclusive and collectivised,' building on longstanding collective action among the Kolis.[64] Data on Karachi's informal settlements is limited. Disaggregated data at the settlement level on social indicators such as health is rarely collected which makes it difficult for urban authorities to plan response in catchment areas (such as in district and ward levels) during emergencies.[36]

Consider linking social protection to other types of documentation and understandings of vulnerability to tackle exclusions. Lack of citizenship documents (such as identity cards) or ration cards have prevented specific communities in Karachi (e.g., refugees) and Mumbai (e.g., migrant workers) from accessing basic services such as education and employment and social protections.

- **Pakistan's EHSAAS programme and identity documentation.** Pakistan's social protection programme which is globally celebrated for its outreach to women beneficiaries was expanded, for example, to provide emergency relief to poor households during the relief phase.[65] Pakistan's federal government announced an emergency cash transfer under the EHSAAS programme (an existing unconditional cash transfer programme), though access was linked to a person's identity document.[65] Civil society actors heavily advocated against this measure and there was also significant resistance from vulnerable communities.
- **Exclusion of salaried persons.** Salaried persons, for example, were excluded from the EHSAAS programme.[49] Our respondents highlighted the need to consider number of people dependent on salaried individuals, their existing status of work during the roll-out of cash transfer (such as daily wage earners), as well as type of employment (e.g., seasonal).
- **Ration cards.** NGO workers strongly suggest that there is a need to revive ration cards in Pakistan. These could then be linked with local grocery stores at the neighbourhood level to tackle longer-term challenges in the recovery phase.[41] In Pune, India, temporary 'ration cards' were provided to more than 80,000 people in Zilla Parishad, so that they could receive food under the Public Distribution System (PDS).[66] In India, the central government launched the 'One Nation One Ration Card' scheme during the first wave of COVID-19 to ensure that the inter-state migrants can get the ration support even if they do not possess a state's ration card.
- **Gaps in Aadhaar.** In India, migrant workers without identity cards (ration card or biometric Aadhaar identification) had to be enrolled under a particular government scheme at the start of the pandemic.[67] Without those cards, they were unable to access support.[67] Only 18% of eligible workers, for example, registered through the Building and Other Construction Workers (BOCW) scheme.[67] Although internal migrant workers are afforded other rights, like a minimum wage and free travel home, many migrants are not registered by their employers.

Consider supporting urban unemployment subsidies in India. In India, subsidies have been proposed to build on the successes of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGA). An urban unemployment subsidy, such as the proposed Decentralised Urban Employment and Training (DUET) scheme in India, would involve issuing 'job stamps' which can be distributed to approved institutions like schools, colleges, and government departments.[68] Each stamp constitutes one day of work. However, this scheme may be more relevant to small towns rather than large cities. Other models for improving community infrastructure like MUKTA could be scaled up based on experiences in Odisha and Tamil Nadu.

Increase informal workers' workplace protections and livelihoods. Informal workers often lack social protection benefits and savings in comparison to their formal counterparts.[69] Although those working in formal work places as factory workers, cleaners and guards[70] are recognised as essential workers, the nature of work has meant higher disease transmissibility. A range of workers have also lost livelihoods (such as daily wagers, street food hawkers, newspaper hawkers) in big cities like Karachi; meanwhile, cities have been kept in motion through sanitary workers, garbage pickers, domestic workers during lockdown restrictions. In India, the Deendayal Antyodaya Yojana - National Urban Livelihoods Mission promotes federations of urban vulnerable populations. We can suggest further self-help group (SHGs) formations in urban areas and linking with livelihoods support. SHGs were affected by lockdowns and also played a role in providing support during crisis.[71]

Consider ways to improve recognition of unpaid care work. Paid care work also came to a halt, while the amount of time spent in unpaid care work increased, dramatically affecting women and girls. Accessing relief support from government authorities in India was however difficult, as many were not aware of their entitlements to cash grants and other benefits.[72]

Mitigate limited information and uncertainties in peri-urban and coastal areas. Settlements located in peri-urban areas often lack updated information about the pandemic. Fisherfolk communities of Karachi which reside in peri-urban settlements such as Baba Island, Mauripur, and Ibrahim Hyderi, for example, were initially in denial about the occurrence of the virus. These sites also indicate misperceptions about COVID vaccine. Community organisations who work in these

sites reported the need to tackle misperceptions about not just the implications of contracting the virus, but also vaccination drives, and other types of relief measures.[73]

Recognise connections between informality, space, and gendered violence with tailored policy responses. In some of our interviews with community organisations, we found that lockdown in Karachi's informal sites have led to experiences of intimate partner violence, depression, and compromised mental health, particularly for women and young people. In Mumbai, older adults were more vulnerable to mental health issues.[39] Gender-based violence and depression were also linked with ongoing processes of eviction and demolitions of 'illegal' settlements.[27] In Mumbai, the Society for Nutrition, Education & Health Action (SNEHA) runs a programme on Prevention of Violence against Women and Children, which promotes a coordinated response with state actors to crimes against women.[74] It runs community- and hospital-based counselling centres.[74]

Invest in young people's future and reduce youth precarity. Young people faced a range of challenges, such as losing out on education and career opportunities. For those reliant on school feeding programmes, this also meant losing out on regular daily meals.[66] For working youth who relied on daily wages to supplement their household income, many were reported to increasingly use drugs in Karachi's informal settlements.[73] Police and local groups reported increased charges against drug users, including police harassment.[73] Local NGOs in Karachi have responded by setting up community centres to engage young people in learning new skills and games.[73] Counselling sessions were provided to improve residents' mental health and well-being.[73] These efforts could be scaled up at district levels in partnership with district administrations to improve well-being.

Longer-term considerations for public health measures, including vaccination

Improve investments in public health infrastructure. During the first and second waves of the pandemic in Karachi, the immediate response by the health sector focused on infection prevention and control.[49] This was seen as a challenge as many primary health facilities were not well equipped. Medical staff in healthcare facilities often lacked adequate training whereas basic equipment was reported to be in short supply even in big cities such as Karachi and Mumbai. CSOs that manage some public health facilities in Karachi (through a public-private partnership arrangement) ensured that equipment such as oxygen cylinders and personal protective equipment remained in stock.[49] This points to a need for further investments in public health infrastructures that can be rapidly deployed during an outbreak. This should include, for example, planned surge capacity in secondary and tertiary care, an improved and more robust and integrated disease surveillance system, and domestic manufacturing capabilities to produce medical supplies.[75]

Strengthen investments in the public health system. As a region, South Asia lags behind other governments in health expenditure, with government health expenditure less than 1% of GDP.[6] In India, insufficient budget allocation to the health sector, reliance on private care, and insurance-based models of health care provision hinder equitable access to health care.[6,76] Low-income households face high out-of-pocket expenditures, which can limit access to health care and push people deeper into poverty.[6] Any funding for future pandemic preparedness should also be coupled with broader investments in the public health system, which for example could be funded through improvements to progressive taxation.[6]

Gather additional data on non-communicable diseases (NCDs). Many diseases, but particularly non-communicable, remain undetected and poorly managed in informal settlements.[4] Data on NCDs and other disease burdens is also limited as residents rely on informal healthcare providers.[4] Information about new diseases and infections related to COVID-19 needs to be channelled to health facilities as well as public health systems. During its second wave, India reported an outbreak of a deadly infection, black fungus (*mucormycosis*), among COVID-19 patients. While this disease is linked with underlying health conditions such as diabetes, it was also contracted due to overdosage and 'injudicious' usage of corticosteroids among COVID-19 patients.[77] Keeping documentation, updating records with co-morbidities, and improving health workers' awareness about novel infections are essential to prevent complications for COVID-19 patients with underlying chronic illnesses. The Swasth Foundation, for example, in Mumbai is working with informal settlements to identify patients with chronic conditions and provide consultation, telehealth, and medication.[59]

Improve inadequate public health infrastructure for COVID-19 vaccination. Local healthcare infrastructure (e.g., human and financial resources) is limited to achieve universal COVID-19 vaccination coverage in Pakistan's low income settlements.[78] Karachi, in particular, needs more health workers to reach distant catchment areas. Transportation cost incurred by vaccinators to reach these settlements is also high and the daily remuneration for COVID-19 vaccinators is insufficient to cover costs. District health focal persons in Karachi find that there is little incentive for health workers to vaccinate for COVID-19 compared to the country's massive polio campaign. There is a view that compensation is better in polio inoculation drives. Health staff in Korangi district (Karachi) suggest that there is inadequate funding for COVID-19 vaccination drive from the centre. There is also need for greater social mobilisation teams at district levels.

Improve informal settlement residents' access to COVID-19 vaccination. Access to COVID-19 vaccination has been patchwork for informal settlement residents and builds on existing health care inequalities. In Mumbai, access to health care inequalities based on privatisation of care surfaced during the pandemic as the poor lacked access to COVID-19 care.[79] In Karachi, accessing vaccination centres that are located far away from informal settlements has been cumbersome, particularly for workers who cannot afford to take time off from work. The opportunity cost of going to the vaccination centre and coming back is relatively higher (for a daily wage earner) in the form of loss of a day's income and intra-city transportation cost.[41] The majority of the workforce in informal settlements that are likely to get vaccinated are those who are mandated by their employers.[41] In Mumbai's informal settlements, employers may not see it as their responsibility to ensure workers are vaccinated.[80] In Karachi too, women who are engaged in home-based informal work operate in their homes through informal contractors are less likely to receive a vaccine.

Set up mobile vaccination centres. These could be set up at union council offices which are in close proximity to informal settlements within city limits to enable better access for residents and avoid lost income. Mobile vaccination vans were deployed in states like Telangana (Hyderabad) and Assam (to cover inter-state & inter-district passengers) in India.

Address digital gaps for improved vaccine access. In Mumbai, the city has achieved a high level of COVID-19 vaccination with over 90% of city residents vaccinated with at least one dose.[81] This city currently has a vaccine mandate for passengers to ride on the local trains, which are vital to many people's daily lives. However, the city has faced problems with access to digital technology which is often required to make a booking through Co-WIN (a government-sponsored mobile app) for vaccination.[82] Local temples and other community organisations have organised vaccine drives, which has helped to improve access for informal settlement residents.[83]

Address data gaps in vaccination. Lack of local-level data is a key challenge for district administrations and health focal persons working at the district level in Karachi.

- Data provided to district health officials by NADRA (Pakistan's national database and registration authority) is aggregated at the town level instead of the union council level before it is shared with district administrations. There is a need to provide population statistics at the union council level to district administrations to facilitate their planning and execution which takes place at the union council level.[78]
- **Vaccination data at the district level is not representative.** District health officials also find that while vaccination drives are in full swing in Karachi's remote areas, vaccination data at the district level is not representative of their efforts. Location-based records need to be updated as families and communities have resettled to different locations within the city. District level vaccination data which is not representative of efforts by district teams can also lower the morale of teams who are working hard to improve inoculation rates in inaccessible locations.
- **Inadequate documentation of refugees** (such as ethnic Bengali and Afghan communities) has meant that vaccinators have to do manual data entry,[78] which is a time consuming process and requires more capacity and time from staff. In India, data on COVID-19 vaccination is not disaggregated, so data on transgender people and other marginalised groups is also fragmented.[80] In India, there is a lack of publicly available robust data on the number of deaths due to COVID-19 especially during the second wave.

Address vaccine equity through targeting vulnerable groups. Marginalised people in Karachi have faced discrimination in vaccination efforts due to systemic marginalisation based on migration and refugee status.[41] When vaccines were first made available in Pakistan, every 'citizen' was required to register for the first dose through a national identity card. In Karachi, where ethnic Bengalis, Beharis, and Pashtuns experience everyday life without citizenship documents, vaccination linked with identity cards became a bottleneck. Activists and CSOs demanded the removal of identity card requirement for all groups of people regardless of their citizenship status. Currently, Karachi has 3-4 public centres that can vaccinate individuals without citizenship documents. A door-to-door vaccination drive is also underway in many informal settlements.[50] In Mumbai, access to COVID-19 vaccination is more limited for disadvantaged urban populations including marginalised informal settlement residents.[82] Women have also lagged behind men in COVID-19 vaccination, likely due to restrictive social norms and limited ability to access vaccination services.[83] Community health workers have helped to bridge these gaps, providing crucial outreach to women.

Improve data on vaccine refusal and link to vaccine engagement strategies. Although there are gaps with respect to data, some district administrations in Karachi have collected their own data on reasons behind vaccine refusal in informal settlements.[78] Refusals included religious reasons and peoples' perception of side effects from any kind of vaccine. In India, some Muslim communities have low trust in the central government.[84] This may facilitate the uptake of rumours related to COVID-19 vaccination, for example, that the vaccine has alcohol or that it has adverse side effects. Public deaths, such as the death of the general secretary of the All India Muslim Personal Law Board due to COVID-19 after vaccination have further fuelled doubts.[84] More vaccine engagement is needed with religious and caste minorities in urban India, and refugees and other minorities in urban Pakistan.

Build trust and engagement with minority groups to mitigate vaccine hesitancy. There is a need to tackle vaccine hesitancy in ways that not only respond to community apprehension but also build trust in the process. Coercive, top-down approaches have led to increased mistrust and increased levels of suspicion in authorities in Pakistan. During the first phase of the pandemic when government authorities in Pakistan 'picked up' individuals who tested positive, there was a lot of fear and stigma among residents.

> *"What we often tend to do is that we don't take community buy in. We tell them what to do. It is almost like a colonial response to health. Because we don't adequately address their fears, and apprehensions, this will always be the challenge." - Karachi-based public health practitioner*

As vaccines were made available in Pakistan, apprehension relating to 'injections' grew. The announcement[85] of blocking mobile SIMs of unvaccinated individuals by the Sindh provincial government created a lot of distrust.[86] This trust is now being regained through mass public messaging campaigns. There is an urgent need to mobilise awareness-raising campaigns that address misinformation that is spreading through social media. In fact, these strategies should form part of the broader public health messaging response to a range of diseases. Many informal settlement communities are still hesitant, especially about getting their children vaccinated.[78]

Leverage local-level partnerships for COVID-19 vaccination. Individuals and groups who are dependent on informal work and daily wages are less likely to be in an environment supportive of vaccination.[41] Barriers might include a lack of paid time off, inability to miss a day's wage, or vaccination sites that are too difficult to access. There have been local partnerships with the private sector to vaccinate informal workers. For example, Korangi's district administration partnered with local factories to vaccinate factory workers.[50] Public health workers in Karachi's Korangi district have been visiting religious places such as churches and Hindu temples to vaccinate minority groups.[78] COVID-19 testing kits are also available for free at major government dispensaries. To scale up vaccination efforts, government authorities more recently have responded by initiating door-door vaccination in informal settlements. In other sites, mobile teams are also sent. Government authorities in Karachi are also working with social 'influencers' to vaccinate residents living in informal settlements. These influencers are rooted in the communities along the lines of authority, legitimacy, and religious leadership.

CONCLUSION

This evidence review briefing has discussed the range of COVID-19 recovery issues in urban informal settlements, with a focus on Karachi, Pakistan and Mumbai, India as comparative case studies. We highlight the importance of nuance and context-specific approaches for informal settlements, which encompass a wide range of physical infrastructures, governance arrangements, and legal statuses. We discuss a 'transformative' urban recovery process with key recommendations tailored to the South Asian context. While broad government investments are needed to reduce vulnerabilities and inequities, new kinds of collaborative arrangements and decision-making processes are needed to build on local responses that took place during the COVID-19 pandemic's acute phases. In short, while local responses and local knowledge contribute to the resilience of some urban informal settlements, vast amounts of support and investment are needed to transform the lives of the urban poor.

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