

# Karachi's urban flooding

Looking for solutions



Human  
Rights  
Commission  
of Pakistan

# **Karachi’s Urban Flooding: Looking for Solutions**

## **An HRCP Fact-Finding Report**

### **Members of fact-finding mission**

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### **Introduction**

The rains in Karachi started causing havoc in July 2020, but the city witnessed its worst rains in August. Unprecedented rains and urban flooding in the last week of August brought life to a grinding halt. At least 20 people died by drowning in overflowing drains, under collapsed walls and roofs, and through electrocution. Businesses were closed, causing an economic loss worth billions of rupees.

A two-member consultative fact-finding mission from the Human Rights Commission of Pakistan visited Karachi for two days on 3 and 4 September 2020. Aimed primarily at gauging the losses incurred after the record-breaking torrential rains in August 2020, the mission also wanted to get a sense of why damage at this scale had occurred, and possible solutions to avoiding such devastation in the future.

Karachi’s story can be told from many different perspectives. It is important that one recognize that some of the problems are certainly unique to Karachi—urban density, the size of the city, ethnic tensions, a lopsided jurisdictional structure, to mention a few. At the same time, Karachi’s problems reflect the larger macro issues afflicting Pakistan in general. In a way, ‘fixing’ Karachi is tantamount to reordering Pakistan.

This sounds like a call to a revolution, one that is certainly beyond the mandate of this consultative mission. From HRCP’s standpoint, Karachi is important because of the state of its marginalized people—from stateless citizens to informal settlements and businesses to katchi abadis. Although true for most places in the country, it is a city that most comfortably uses the term ‘marginalized majority’ for its vulnerable people. This concern determined the kind of people the mission wanted to consult—ordinary citizens, representatives of different non-government organizations, urban planners, academics, journalists, and lawyers. It is ironic that there is no dearth of expertise and knowledge in a city that carries the trope of a ‘broken’ city.

This report does not include the perspectives of the political parties active in the city, nor does it attempt to focus on the federal or provincial government's point of view. We understand that all Karachi's problems are inherently political. At the same time, we also feel that political parties and governments have numerous forums available to them to voice their opinions and concerns.

Urban flooding is not unrelated to other issues afflicting the city that come to the fore every time there is heavy rain. There are obvious problems—clogged drains, inadequate solid waste disposal, poor infrastructure, inadequate housing, katchi abadis as encroachments, elitist housing societies built on illegally reclaimed land, turf wars, lack of resources for a mega-city, and so on. But one question forms a larger backdrop to all these issues: Who has legitimate authority to 'fix' Karachi with its peculiar political geography, where various jurisdictions—local, provincial, federal, and cantonment—stand at cross-purposes to each other? Add to this the weight of the Supreme Court intervening in development decisions for the city, and matters become even more complicated. There is a tussle between the desire to centralize authority at one end and to decentralize the administrative setup on the other.

Apart from meeting concerned citizens and experts at their offices for exclusive interviews and at roundtable consultations at HRCP's office in Karachi, the mission was able to meet at least one family in Abbas Town that had lost a 19-year-old son, who drowned in an overflowing drain next to his house while trying to save a neighbour and his son. This case study forms part of this report. The mission also visited Zia Colony, where three men had died reportedly after drowning in a drain.

In Karachi's case, identifying real problems—the key issues—becomes crucial in looking for the right solutions, which, in a way, becomes the purpose of this fact-finding mission. This study begins by identifying issues on the ground. It looks at the top-down urban governance model, followed by an insight into narrative creation, and then talks about an empowered local government as a consensus solution. In the end, there are recommendations for mending the 'broken' city and its restive inhabitants, as suggested or implied through the fact-finding exercise.

## **Issues on the ground**

### *Current rains and the scale of disaster*

The rain spell that started on 27 August 2020 produced up to 223 mm of rainfall in a 12-hour period—the highest ever recorded. The city

received more than 484 mm of rain in August, which is said to be more than 10 times the monthly average. Major roads were submerged and infrastructure strained, making it difficult for people to even reach hospitals. There was a prolonged power breakdown: in some areas, the power companies shut down the power supply to prevent cases of electrocution; in other areas, the power supply remained switched off for as long as five to six days. Landlines and cellular phone networks, too, were affected. Houses were destroyed and so were livelihoods. On 29 August, six districts of Karachi were declared ‘calamity-hit areas’ by the relief commissioner, Government of Sindh, under the National Calamities (P&R) Act 1958. The two districts most affected were Karachi East and Malir.

Rains in Karachi often spell disaster. What was different this time was the scale of disaster, which did not spare hitherto protected and untouched posh areas. It would not be incorrect to state that the rains exposed the city’s fractured governance like never before.

At one of the consultations organized at HRCP’s office as part of the mission, senior journalist and Council member Ghazi Salahuddin said the myth that the rich could do things themselves—build their own schools and hospitals— if the government and system failed them, was broken [after the flooding of DHA] ‘because you can’t build your own structures.’ He was referring to the angry protests by DHA residents that went viral on social media. Senior journalist Mahim Maher resented the apathy of residents who had come out without ever knowing that there were no stormwater drains in the areas they lived. Design researcher and strategist Gulraiz Khan was not convinced that such long power outages were due to poor infrastructure alone. It was worth investigating why this had happened, he suggested.

### *Clogged nullahs and drains, and solid waste*

Every time there is rain in Karachi, there is a hue and cry about the cleaning of stormwater drains and heaps of garbage in nullahs. In an exclusive interview for this fact-finding mission, architect and town-planner Arif Hasan suggested that the issue was not of nullahs alone—even if these were cleaned, the problem would remain. Journalist and former administrator of Karachi Faheem Zaman shared the view that, unless sewage was separated from nullahs, cleaning them would not matter because they would become clogged in a week.

Arif Hasan recommended that the major outfall drains to the sea be cleaned first. He mentioned Mehmoodabad Nullah, which used to flow

into the Gizri Creek. DHA Phase 7 created plots on the outfall of this creek, reducing the size of the nullah considerably. 'While the sewage can pass through it, rainwater—especially after heavy rains and at high tide—can't. Due to this, the water flows inwards rather than having room to properly pass through the nullah. That is how Mehmoodabad, PECHS Block 6 Extension, and Chanisar Goth get submerged. The other Mai Kolachi Bypass and KPT Officers Colony also block the outlets to the Petchard Nullah, Soldier Bazaar Drain and the Railway Drain, causing flooding in Saddar and other areas of District South.'

He and many others referred to architect and social activist Parween Rahman, who had rightly warned developers about the Mai Kolachi Bypass and its potential for flooding while it was being made.

At a separate consultation with the Karachi Urban Lab (KUL) team at HRCP's office, Muhammed Toheed noted that, instead of issuing notifications about clearing the nullahs, the city's solid waste management system should be addressed. Both Arif Hasan and KUL were of the view that, in the absence of an efficient solid waste management system, those in charge of disposing of solid waste in the couple of far-flung landfill sites that existed, threw it along the drains, thereby blocking them.

Hasan mentioned a huge informal recycling industry, which could be much better managed than it currently was, in order to solve the solid waste issue. There were around 100,000 families working in this industry, from contractors to children of Afghan origin, who could all move to the landfill sites, but that had not happened. According to him, solid waste had another curious dimension. In Machar Colony, the Karachi Municipal Corporation (KMC) trucks disposed of leftover solid waste in sewage drains every morning. These waste marshes were then sold off as land. These marshes and mangroves in Machar Colony, Sultanabad, and Kemari, deter the flow of water, especially in the aforementioned areas. Around 17 square kilometres of land reclaimed through municipal garbage is in these areas; even a major part of DHA Phase 8 has areas that have been reclaimed from municipal solid waste. This practice needs to stop immediately.

Waheed Noor, a Lyari-based lawyer, said that the nullahs in Lyari were choked by the waste that second-hand cloth businesses disposed of from their warehouses. 'Every time there is a cleaning drive, we only hear of Gujjar Nullah and two or three others. Who is going to clean the 26 nullahs that run through Karachi?' he asked.

### *Human resource constraints*

Karachi floods because of its topography—this is the argument floated most often. But in the past 40 years, as director of KUL Dr Nausheen H. Anwar indicated, builders, private developers, municipal authorities, provincial authorities, and federal government authorities have all arbitrarily, and without any call for accountability, violated the basic edicts of planning codes. She brought in the important question of quality or its lack thereof—of designers, planners and engineers assigned to infrastructural and upgrade management of drainage systems, and also of their training, outlook and perspective. Social scientist and former director general of the Sindh Katchi Abadis Authority Tasneem Siddiqui was of the view that engineers and planners who had graduated from NED or any other engineering college were not taught about ‘social engineering’ and human costs such as evictions.

Arif Hasan underscored the importance of trained human resources, without which it was impossible to run a city government—this included specialized people such as traffic engineers and transport planners. This was why even the most powerful former mayors of Karachi, such as Mustafa Kamal of the Muttahida Qaumi Movement (MQM) and Naimatullah Khan of the Jamaat e Islami (JI), could not implement their plans. Consultants cannot run a city because their work is essentially short-term, he said, referring to a municipal training institute set up during Zulfikar Ali Bhutto’s time, whose purpose was to conduct research on the city and train people in municipal functions. It was shut down after his tenure and the building was taken over by the army.

### *Land ownership, population undercounting, and political divisions*

As per a 2012 study, *Karachi: The Land Issue*,<sup>1</sup> the city had 13 land control and management authorities. This figure has now risen to at least 19. The study states that ‘these authorities enjoy various levels of powers to plan, develop and maintain land under their jurisdictions, and have varying standards and sets of by-laws, resulting in conflicts of interests and issues in overall planning and functioning of the city.’ Even today, these 19 authorities have no coordination, adding to the city’s woes.

In a fast-urbanizing mega-city, the demand and supply gap in housing has made land even more contentious. The economic potential of the industrial metropolis for the government, and local and international

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<sup>1</sup> A. Hasan et al. (2012). *Karachi: The land issue*. Oxford University Press: Karachi.

powerbrokers, has enhanced its worth, often to the detriment of the city's people. On top of this, the country's establishment does not just wish to control and administer the city through political engineering, it has actually been doing so. Citizens told the fact-finding team that the latest development in this regard came in the form of undercounting its population in the last census [2017] in order to reap certain political outcomes in the election.

Citizens and experts view this with concern because no one believes the census figures. Toheed of KUL brought in the role of judiciary. At one hearing, the chief justice of Pakistan claimed that Karachi's population was 35 million, then said it was 20 million, whereas the census states that it is 16 million. Toheed's view was that, without the correct population figures, resources cannot be allocated nor can planning be effective. Faheem Zaman explained how undercounting helps the political agenda: a larger population means more National Assembly and provincial assembly seats, which could benefit just one party.

Karachi is unique because, here, the migrant population far outweighs the native Sindhi and Baloch communities. Now, it is also the biggest Pashtun city. Citizens shared their concerns about political divisions especially along ethnic lines in the last four decades, causing more harm than the city deserved.

## **Urban governance**

### *A top-down model*

Karachi's worth is measured both in terms of the revenue it potentially carries and actually generates. Most people that help realize this potential exist on the margins, left to their own devices, fending for themselves. Every time urban governance comes onto the radar, a top-down model is used, often with an anti-poor bias.

Dr Nausheen H Anwar and the KUL team's insights were valuable in this context. Among other things, they are looking at the role of law and the Supreme Court's extensive involvement in Karachi's urban planning. They consider this hugely problematic because [the threat of] contempt-of-court orders engender a different kind of violence in the form of anti-encroachment drives. After the recent rains, they were worried that the Supreme Court might take a similar position vis-a-vis the anti-encroachment drives and target the urban poor, working class communities, low-income communities, and informal businesses.

Arsam Saleem of KUL explained that judges did not understand the nuances and complexities of the planning process; once they delivered an edict, even government agencies had little power to manoeuvre, making planning only a performative matter with little result.

Dr Anwar talked about the need to bring Karachi's hinterlands into the conversation, and about participatory planning and the co-production of knowledge with people—slum-dwellers, for instance—regarding whom decisions were made. She referred to international financial institutions coming to the city to help produce data 'which has its own problems.' Mahim Maher was also wary of bringing in external donors, even if it was to improve the city's ranking in ease of doing business so that there was more foreign investment. 'For the KMC to be effective, you have to have local government elections, people coming out to vote, have inhouse experts and town planners, etc.', she said. Such 'gentrification projects' from above are executed by people who know nothing about Karachi: this was the collective sense conveyed to the mission.

Citizens expressed reservations about the National Disaster Management Authority (NDMA), which is considered 'a military thing'. Arsam Saleem of KUL talked about his conversations with relief agency workers, regarding how coercive NDMA could be in order to preserve its position as the sole provider of emergency relief 'because that position was tied to resources, finances and external funding.'

### *Stateless citizens and the frustrating 'process'*

There are layers upon layers of powerless and vulnerable people in the city. While those who exist in informal settlements and their frequent evictions do get a mention, there are virtually stateless citizens too, mostly among the Bengali and Burmese populations in Karachi, who do not even have computerized national identity cards (CNICs) and therefore do not make it to the lists of relief efforts. Tahira Hasan, who works with these stateless citizens in Machar Colony, raised these concerns at the HRCP consultation. She said there was no education among this community and hence no possibility of government jobs. There was no legal bar [on their citizenship]; they had been naturalized and had birth rights, but at the departmental level, there was discrimination against the Bengali and Burmese populations. Shockingly, she said, their CNICs were made just before the election—only to be blocked later on; her organization was dealing with hundreds of such cases.



Civil society activist Zeenia Shaukat discussed the futility and frustration of engaging with ‘processes’. As citizens of Karachi and as part of civil society, if one tried to engage with processes or resist them, at the end of the day, it was costly and led nowhere. ‘For instance, when these nuclear power plants were being set up, we as PILER representatives tried to engage with them; we even went to the public hearing. But there were structural problems. All their replies were verbal. You can’t do anything about it; nothing changes.’

### **Manufactured narratives**

Manufactured narratives afflict the polity as a whole. In Karachi, these false narratives are crystallized and endlessly projected on the media in order to benefit vested interests and prevent democratic and equitable solutions.

To start with was the paradoxical question as to whether this year’s urban flooding was a natural or manmade disaster. Undoubtedly, the rain was excessive and may well have been a consequence of climate change, or so the narrative went. But, for Dr Nausheen Anwar, it could have been easily mitigated if the city’s ecology and land systems were respected and if its drainage systems had been put in place long ago.

For the poor and lower-middle classes, disasters come in various shapes and forms. The anti-encroachment drives and evictions are also a disaster, but that is not what the peddled narrative says. It is part of the gentrification of the city—about *reclaiming* ‘public’ land, with everything happening allegedly in the interest of the public. However, people are made homeless, their livelihoods are destroyed, their lives become more precarious, and they are left without compensation as a consequence. Disasters need to be redefined. According to Dr Anwar, they are no longer ‘one-time events’: whether they happen in the context of urban flooding, caused by arbitrary urban planning systems or corruption, these are now dovetailing with all kinds of other mini-crises that are scaling up to become mega-disasters. When an anti-encroachment drive happens, there is greater inequality, leading to more poverty, she said. Of course, encroachment by the rich and powerful is often ignored. The scale of disaster this time was such that many participants mentioned buildings, houses, car parks and whole neighbourhoods that had been constructed illegally on drains or illegally reclaimed land.

Importantly, each time there is a *disaster*, it must be followed by *relief*. When one speaks of ‘relief’, people start looking at one institution. There was a discussion about the role of citizen liaison committees—

understood as a cover for an educated, professional middle class that does not actually take part in politics. ‘Whom do these committees represent?’ is then a logical question.

*The fact-finding team spoke to a family in Abbas Town who had lost their son; he drowned trying to save a father and his child. His father explained what had happened:*

“It happened on the 7th of Muharram. It began as a light drizzle that turned into heavy rain. In a matter of a few hours, some people in our neighbourhood started removing their furniture and other household items from their ground-floor rooms. Then, they started shouting for help. My 19-year-old son went to help them. Suddenly, there was a noise—the wall of the adjoining drain had collapsed. My son first saved a woman, her two-month-old baby and a six-year-old. The water level in our street was rising and had reached neck-level. There was another woman in the neighbourhood along with her husband, who was holding his ten-year-old son’s hand. His foot slipped and he fell into the naddi along with his son. The woman was ready to jump after her husband when my son, Hasan Raza, told her to stay back and jumped into the naddi to rescue the man and his son. Unfortunately, all three of them got caught in the flow of water. Another boy standing alongside too was pushed into the gushing water, but he got stuck somewhere in the bushes nearby and people managed to rescue him. The ten-year old’s body was found in Lasbela on the 9th of Muharram. My son’s body was also recovered from Lasbela on the 10th of Muharram. The father’s body was found on the 10th in Machar Colony, near the sea. So, in all, three people from my street drowned.”

*His mother had this to say:*

“If there were no illegal encroachments, this could have been avoided. The drain flows on two sides. They have made a shopping mall on the drain, which has stopped the flow of water. Why was permission given to build that mall? It is illegal. It stopped the flow of water—that is why the walls collapsed, people drowned, they lost their property in Abbas Town.

I lost my son. God has given me the courage to bear that loss. I had sent my son to rescue the neighbours in trouble. There was a couple that doesn’t have a child and there was water inside their house. I tried to use my cell-phone torch to direct some light onto the street so that my son could see.

I have this courage. God has given me patience because I had sent him myself since he had also done his scout's training. If this happens to another mother, I am afraid I won't be able to tolerate that. What was done with the drain is criminal. Water that was supposed to flow in two directions flowed on one side. Some rich man made this shopping mall recently; he might get insurance claims for his damages. How will I get my son back? What has happened is terrible; it should not happen again."

Dr Nausheen Anwar explained how the term 'land mafia' was another manufactured narrative that excluded the collusion of the state. Parween Rahman exposed the network of land mafias in Karachi and its nexus with patrons; she was murdered in 2013 for doing so. Rahman talked about the construction of the Mai Kolachi Bypass as a 'state-backed' creation of the land mafia. Anwar was of the view that, when the state, municipal authorities, planning boards and bureaucratic officials look the other way, they are essentially complicit. It is this land mafia that encroached on the nullahs and drainage systems in the city to bring it to its current sorry state—the state cannot therefore be absolved of its responsibility.

### **Empowered local governments: How and when**

Experts and concerned citizens were united in their view that a city the size of Karachi needed an empowered, functional, elected local government. They recounted the uses of one metropolitan corporation to which everyone, including all boards, must be answerable. However, evolving a consensus among stakeholders on what to decentralize, what model to follow, how to allocate resources, powers to levy taxes, and trained human resource, are all valid questions that need answers. Also, whether an ideal local government can become functional in Karachi without it being operative in the rest of the country is a question that needs a comprehensive policy response.

There are inherent flaws in the existing structures and laws. The Local Government Ordinance 2001, introduced by General Pervez Musharraf, did not leave any powers with the provincial tier. When the PPP had a chance to bring in their own local government law (the Sindh Local Government Act 2013), they took back powers that were in the municipality's domain.

Faheem Zaman spoke in favour of an empowered local government—one metropolitan corporation—because there was 'potential for local

taxes from services like private healthcare’ while ‘the mayor’s office should be able to coordinate all municipal functions.’ Activist and HRCP vice-chairperson Asad Iqbal Butt also thought that the Karachi Metropolitan Corporation must be strengthened because only strong civic institutions could solve the city’s problems. Dr Nausheen Anwar too wanted to bring local bodies back to the foreground on an emergency basis. However, Gulraiz Khan seemed worried about the nearly atrophied local governments in the face of powerful players like the federal government and military cantonments. ‘Even if you revive them, they won’t start functioning immediately. How will the city manage in the transition?’ he asked pertinently.

### *A map for local government*

Tasneem Siddiqui’s view was that, with the mayor and local bodies’ tenures having ended, there should be immediate local government elections and the law must be reviewed. He has a blueprint of local government virtually ready for Karachi. Despite the fact that Musharraf’s law minimized the role of the Sindh government, he said, the structure at the local tier was right—there were 178 unions, 18 towns, and one city district. The city district had to deal with larger matters, but responsibility for infrastructure rested with the towns, while the unions were the feeding agency.

Maintaining infrastructure and designing planning structures should be the responsibility of the unions, he said. ‘If the union cannot solve its problems, it should inform the town; if the town cannot tackle it, it should go to the district. They [Musharraf’s team] did work hard on the system. Police reforms [the Police Order 2002] were appreciable but, after the election in 2002, the new government brought to an end independence and non-interference in the police force,’ he added.

He maintained that local taxes should remain with the local government. Earlier on, there was a tax called octroi, which was more than enough for the city’s needs, but it was discontinued. The local government was dependent on grants from the federal government. ‘Karachi does collect taxes, but it has to decide who will use them. For instance, property tax, motor vehicle tax, parking fees, and billboard fees can run the local government. Local taxes can be distributed among the city district government, towns, union councils, and finally wards,’ said Siddiqui.

As for the law, there is just a two-line amendment, Article 140A, in the Constitution. Siddiqui suggested the need for a whole chapter on the third tier. He feared that, in the interim period, the provincial

government would bring in an administrator [to run the city] who may be inefficient, corrupt, or politicized. Ideally, there should be election within 60 to 80 days. 'But here, the solution often proposed is two provinces, which is when the Sindhi Mohajir problem begins,' he said.

### *Roadblocks to local government*

Arif Hasan sees four foreseeable roadblocks in the way of an effective local government:

(a) Karachi is an extraordinarily rich city both in terms of revenue and educational institutions, health institutions, the media industry and jobs (78 percent of formal sector jobs are located here). The PPP cannot control this enormous wealth except through a highly centralized form of governance, though they have been unsuccessful in this over the years. On the contrary, the MQM (or whoever represents Karachi) cannot control this except through a high decentralized form of governance. A consensus among them has not happened nor is it likely.

(b) Without appropriate human resources, it is not possible to run a city government. Karachi simply does not have these trained human resources.

(c) Financial constraints: the money the districts and union councils should get, never reaches them from the federal government to the district and union level. It disappears, possibly due to corruption.

(d) Public sector academic institutions are the only ones working on documenting the issues of the city. Private institutions, on the other hand, have no relationship with the city and do not work on its grassroots development.

Hasan added that 'a major flaw of policymaking is that there is a very strong anti-poor bias; with this bias, no planning is possible. Then, there cannot be an empowered municipal government in Karachi, but not in Lahore. This will lead to a reaction. Even in Sindh, Larkana and Sukkur are in no better condition than Karachi. Perhaps Khairpur, the home ground of our previous chief minister Qaim Ali Shah, is a bit better.'

### **Recommendations**

- The torrential rains and urban flooding in Karachi have thrown light on a plethora of problems that magnify the scale of disaster every time it happens. Identifying the real problems becomes crucial when looking for the right solutions, as much as deciding who gets to identify those problems. Elected representatives must bring stakeholders—including policy experts and marginalized

communities—together for participatory planning and the co-production of knowledge

- While proposals and recommendations are made continuously, the important thing to understand is the constraints to implementing these, and then the constraints to removing those constraints. Only then can we understand the city of Karachi better and identify what citizens and their organizations should aim to do or get their political parties to do.
- In a peculiar political geography where various jurisdictions—local, provincial, federal and cantonment—coexist, it is important to establish who has the legitimate authority to make decisions. There is no coordination between the 19 land-controlling and management authorities, making land the most contentious of commodities. These could either be made accountable to one central authority or left autonomous, as envisaged under the Karachi Development Plan 2000, which was never approved.
- The fact-finding exercise’s unanimous view was that a city like Karachi needs an empowered local government. The main challenge lies in resolving Karachi’s jurisdictional issues first. We recommend that a metropolitan corporation be placed under one administration. Ideally, this local government should be empowered the same way provincial governments were after the 7th National Finance Commission award and the 18th Amendment to the Constitution of Pakistan.
- Local government should have the power to levy local taxes such as octroi, property tax, motor vehicle tax, parking fees, and billboard fees. Local taxes can be distributed among the city district government, towns, union councils, and finally wards.
- A comprehensive plan should be devised to develop, train and hire appropriate human resources, without which it is impossible to run a city government.
- Instead of just one article, Article 140A, a whole chapter must be added to the Constitution of Pakistan on the third tier of government. This is not just important for Karachi but also for the rest of the country.
- The top-down urban development model must be reversed and Karachi’s hinterlands brought back into the conversation.
- As part of this top-down model, the Supreme Court’s extensive involvement in Karachi’s urban planning is considered hugely problematic because it inevitably leads to anti-encroachment drives targeting the urban poor, working class communities, low-income communities, and informal businesses. This only leads to more inequality and poverty.

- There is a conflict between law and justice—something that neither judges nor affected persons realize. This is a major issue that must be addressed. Judges too should have some training in participatory urban planning.
- Land has also become contentious because of the gap in demand and supply of housing units. It may seem impossible, but the government needs to make a correct assessment of the city’s housing needs, provide low-cost housing solutions, and coordinate with urban planners who have done this successfully on a smaller scale.
- No one knows how many people live in Karachi. No one believes the official estimate of 16 million. All the experts the fact-finding team met estimated Karachi’s population to be at least 20 million. It is imperative that Karachi’s true population size is known in order to address its myriad infrastructural and service delivery issues, and to allocate resources to proper planning.
- Most of Karachi’s natural drains (nullahs) are blocked, either because they have been encroached on or have filled up with solid waste. A proper survey/study must be carried out by independent experts, involving residents who know the drains’ choking points. Many settlements also have mapping expertise to ascertain the scale of the drainage problem.
- Karachi’s nullahs and land have been encroached on by many different agents, including the DHA, the KPT Officers Housing Society and private ‘builders’ with the connivance of state functionaries. Yet, each time Karachi is flooded, encroachments by the poor on Gujjar Nullah or Lyari Naddi are talked about. This anti-poor bias in highlighting encroached land in Karachi must end. The city needs an immediate assessment of all the encroached land by different agents. Once the assessment is complete, a ‘master plan’ should be developed to address encroachment as well as blocked nullahs.
- The practice of dumping Karachi’s sewage in its nullahs and drains has contributed to the latter’s blockage. Developing a sewerage system is a mammoth task that requires time and resources. A plan for a city-wide sewerage system must be developed and implemented in various phases.
- Karachi’s solid waste management system is tied to a homegrown/organic, informal recycling industry. This sector needs to be upgraded and systematized in order to realize its full potential of generating money and employment both at the lower and upper ends in the short and long term.
- Development in Karachi has happened with a complete disregard of the city’s ecology and of how different areas/zones relate to each

other. We recommend that the city's universities—particularly those in the public sector—establish research centres that can produce knowledge that will help city planners.

- The anti-poor bias in policymaking, planning and execution must end.