Rapid Need Assessment
Urban Flooding Karachi
July 2020
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1. Introduction

1.1. Background

On Sunday 26th July-2020 weather system brought heavy rains in Karachi. According to data provided by the MET Office, the highest rainfall was recorded in Gulistan-e-Johar, at 66 millimeters (mm), while 55 mm was registered at Old Airport, 55 mm in Pehlwan Goth, 42 mm in Malir, Saddar 43 millimeters (mm), while 26 mm was registered at Pakistan Air Force (PAF) Faisal Base, 22mm in Nazimabad, 12mm at PAF Masroor Base, 8.8mm at Karachi’s Jinnah International Airport, 3.1mm in Landhi, and 1.2mm in Surjani Town.

According to the Pakistan Meteorological Department (PMD), city received more than 80 mm rainfall in the third spell of the monsoon and more rain is expected in this season. The heavy to moderate rainfall caused flooding in low lying areas of the city and inundated several key roads, causing problems for the commuters as administration remained helpless and even absent at some locations despite a prior warning from the met officials. Nipa Chowrangi, Gurumandir Chowrangi, Shahrai-e-Faisal, Hassan Square turned into large water pools, as motorcyclists and four-wheelers could be witnessed trapped in water high up to knee-level. According to the initial reports from media and local communities, in many areas there is still stagnant water in streets and houses that overflowed from Nullahs. Those areas included Orangi Town, Khairabad Police Ground area, Ali Garh Market, Disco Mor, Islam Chowk, Bangla Bazar, Neepa Chowrangi, Gulshan-e- Iqbal, and Hyderi in North Nazimabad.

1.2. Root causes for the urban flooding in Karachi

In the last fourty years, Karachi city has been facing severe problems due to heavy rains in monsoon season as there are serious issues with the drainage system in Karachi. Despite accepting the brutal reality of the situation, one can not blame any institution but the responsibility lied with the Provincial government, Karachi Metropolitan Corporation (KMC) and District Municipal Corporations (DMCs) and private housing societies to keep clean the drains of Karachi and to drain out all the rainwater from the city.

In the city, as visible to all, width of many rain water drains and Nullah have been reduced, on many construction have been done, and most of them are choked with garbage. Information collected through different sources revealed that there are many structures and building have been constructed over the drain of Soldier bazar including two banks, gold shops / market, one section of girls high school, Shaheen complex, car parking area of supreme court, district NAB office, KMC market and Aurganzeb market. In Lyari, on Muhammad Shah road, part of Kakri ground, meat market and two masjids are constructed on one of the drain1.

The width of the drainage of Manzoor colony on Korangi road has been reduced and near Qayoomabad, Defence Housing Authority (DHA) has constructed bungalows over the same drainage. Drain that starts from Cantt station to Clifton has a 50 feet width but due to construction

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1 KARACHI RAINS AND THE DRAINAGE CHANNELS ISSUES AND SOLUTIONS by Prepared by the OPP Research and Training Institute (Page -21)
of Jamat Khana, its width has been reduced to 36 ft, which drain out in Nahar e Khayam. Drain of Madina colony and Singer chowrang are also in the same condition.

Width of the largest drain Nullah of Oragni town, has been reduced due to encroachment on both sides, that’s why there was a flood in recent days because of heavy rains of monsoon. Width of Mianwali drainage has been reduced by soil pipe instaltions by KDA into it and now very little amount of rain water flows through it.

Gujjar Nallah is 13.5 km long, passed through many residential areas. It is a natural drain in the city starting from New Karachi and ending at Chona Depot in Haji Mureed Goth, where it falls into the Lyari River. The Gujjarr Nullah drain is in worst condition, it earlier had 250 feet width and now its width is reduced to just 60 feet, due to encroachments, installation of soil pipe lines and unauthorized construction of small houses on both sides. Along almost of its length many encroached settlements are constructed. There was a Haryana drain which is now completely encroached and blocked due to construction of houses and buildings on the drain bed.

There was a natural drainage system comprised of many natural Nullahs in Karachi through which rainwater and drainage water flown out into Lyari and Malir river. Ultimately, rain water and open drain of many residential areas or settlements thorough these two main drains fall out into the sea. But unfortunately almost all natural drains and nullahs are encroached on a large-scale. It is a fact that mostly illegal settlements of the poor have taken over a wide area of drains. Due to political and humanitarian issues, it is difficult to remove these encroachments. Currently the option with the government is to secure at least the remaining space of these drains and keep these clean for increase water flow without interruption. There is also need to improve the proper sewerage and solid waste disposal system. In long term, mega development plan must be chalked out for extension of proper sewerage system, solid waste management and dumping system (instead of dumping around natural drains) and maintain natural rain drains or nullahs secure and clean.

1.3. Objectives:
The objectives of the Rapid Need Assessment were to

- Assess the current situation of urban flooding after heavy rains.
- Determine the extent and magnitude of damages that occurred due to heavy rain
- Identify the immediate community needs to develop the recommendations and immediate actions to address the humanitarian need to minimize the crisis.

1.4. Methodology:
HANDS carried out a Rapid Needs Assessment in three worst affected Towns of Karachi. HANDS team visited the affected areas to collect the information from the local authorities and communities, for physical observation and verification of the damages or situation. For this

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2 KARACHI RAINS AND THE DRAINAGE CHANNELS ISSUES AND SOLUTIONS by Prepared by the OPP Research and Training Institute (Page 25)
purpose, total 11 moderate to worst affected areas were selected. These areas are widespread over three Towns. Team has conducted fifteen interviews with Key informants, including 14 from males and one from female residents of those areas.

1.5. **Rational and Area selection for Need Assessment:**

The need assessment was carried out in following areas:

1. District West (Orangi Town) Sector 12, Qazba, Khairabad, Disco Morr, Bewa Quarter, Islam Chowk, Ali Garh Market, Bangla Bazar & Gulshan-e-Bihar
2. District West (Site Town) Kashmiri Mohalla Goli Mar.
3. District Central (Liaqatabad Town) areas adjacent to Gujjar Nallah.

**Rational:**

- According to initial reports regarding affected areas due to heavy rains and urban flooding in Karachi particularly Orangi Town, Site Town & Liaqatabad Town on electronic media Geo, Bol, 24/7 News, ARY, GNN and Social Media³.
- HANDS Karachi urban /Orangi Town offices received initial information from communities regarding affected areas/sites by heavy rain⁴.
- HANDS team and its volunteers are available in Orangi Town and other areas, HANDS team visited the affected areas to collect the information from the local communities and for the physical observation and verification of the damages and current situation. For this purpose, a total of 11 worst affected areas were selected.

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³ [https://www.youtube.com/watch?v=nBTRFsnT1PY](https://www.youtube.com/watch?v=nBTRFsnT1PY) News 24/7  
[https://www.facebook.com/159575954212325/posts/1619295821573657/?sfnsn=scwspmo&extid=XJOJOawjL8HrNnc&d=n&vh=e](https://www.facebook.com/159575954212325/posts/1619295821573657/?sfnsn=scwspmo&extid=XJOJOawjL8HrNnc&d=n&vh=e) Weather update  

⁴ [https://www.youtube.com/watch?v=hmXVN51F1LQ](https://www.youtube.com/watch?v=hmXVN51F1LQ) Geo  
[https://www.youtube.com/watch?v=i6jpvm9CEdA](https://www.youtube.com/watch?v=i6jpvm9CEdA) ARY  
[https://www.youtube.com/watch?v=YySA1o2hFsU](https://www.youtube.com/watch?v=YySA1o2hFsU) Bol  
[https://www.youtube.com/watch?v=hmXVN51F1L0](https://www.youtube.com/watch?v=hmXVN51F1L0) GNN Channel
2. Summary of Findings

Rapid Need Assessment is conducted in three towns, 8 union councils, located in two districtys of Karachi, which are most affected due to current spell of heavy rains. The estimated population of 15 most effected areas is 198,975 and nearly 28,425 families or households are affected. The following are the major findings:

- After the heavy rains and flooding, the water is receding from all areas but debris removal and smooth access is a serious challenge.
- Cleaning of primary drains is still a challenge.
- It was difficult to access 12 (80%) areas due to damages to the road or the presence of stagnant water.
- Due to heavy rains, roads were damaged and submerged in 12 (80%) areas, and while there were partial damages to bridges in 2 (13%) areas.
- A total of 12 (80%) areas were facing increased load shedding of an average of 10 hours.
- As per the assessment, there were only partial damages to 10% of shelters in six areas.
- Information regarding living conditions reveals that the majority of the families are living within their areas and only 5% of families have migrated from six areas to distant places due to stagnant water or partial damage to their houses.
- Information collected from 15 areas reveals that 90% of the population uses piped water general use, while 10% of the population uses hand pumps.
- For drinking purpose, 81% of the population uses piped water, 15% of the population uses handpump water, 2% of the population use tankers and 2% of the population uses RO plants.
- As reported by the communities, and later on observed by the team, tap water didn’t appear clean in 12 (80%) areas. While 11 (72%) areas reported smell in water and 6 (60%) areas reported suspended particles in water.
- As per information received from respondents, 54% of the population in affected areas are not using any water treatment method, while remaining population using filtration plant, chlorine, boiling water, and Aqua tabs as a water cleaning method to make it safe for drinking.
- Information related to hand washing practices from respondents, reveals that 76% of households use soap for handwashing in their daily routine.
- Information regarding health problems after heavy rains reveals that diarrhea, malaria, fever, cough and cold reported in 9 (60%) areas and while 2 (13%) areas reported skin infection.
- According to the respondents, 3% of shops or small businesses suffered losses during heavy rains in affected areas.
- Garbage dumps and stagnant water become the main hazard for children and vulnerable populations of 10 (66%) areas.
3. Areas wise Status

3.1. Aligarh Market

Aligarh Market area situated at UC 13 of Orangi Town in district Karachi West, consists of 180 households. The majority of people living in the area are laborers and have small businesses. Though people of Mujahid mohalla of Aligarh colony have well-constructed houses but were partially damaged due to rainwater and drainage water which was raised to 5 to 6 feet in areas. As per people of the area, drainage lines are not properly cleaned, that’s why, in every monsoon season, the area faces the same situation. Every corner of the area was trash-point that also worsened the situation during the heavy rains. The main source of drinking water is piped water which is also affected by drainage water and was not suitable or safe for drinking purposes.
3.2. Qazba Colony
About 1200 families are living at the Qazba colony of Manghopir, district Karachi West. The majority of residents are daily laborers, shopkeepers, or have small businesses and regular jobs. There were no damages to the houses in the areas because all houses have cemented structure. There is a drainage line beside the colony that overflowed during heavy rains and drain water with rain water entered into houses, due to which 10% of residents were compelled to move to the other safest places. Stagnant water and huge garbage dumps become the main hazard for children and vulnerable population of the areas.
3.3. Sector 12

More than 700 families are living at the sector 12 colony of Organi town, district Karachi West. The majority of residents are daily laborers, shopkeepers, or have small businesses and regular jobs. There is a water channel beside the colony that overflowed during heavy rains and which entered into houses, due to which the people were compelled to move to the other safest places. Though all houses have cemented structures, still 20% number of houses were partially damaged. Rain and drainage water damages roads and small bridges in the area and gave partial loss to shops and other businesses. Stagnant water and large garbage dumps become the main hazard for children and vulnerable populations of the areas. People of areas didn’t receive support from any private or any government organization.
3.4. Khairabad

More than 3200 houses are at the Khairabad colony of Organi town, district Karachi West. The majority of residents are daily laborers, shopkeepers, or have small businesses and regular jobs. Main source of drinking water for the population is tankers. Though all houses have Kacha structures or temporary shelters like structure (unplastered/Jhopri/tent), there were damages to houses or shops in areas. The roads, streets and pavements were filled with garbage and mud which created problems in mobility of the people, and situation is hazardous for children, women and vulnerable population.
3.5. Disco Morr

More than 200 families are living at the Disco Morr colony of Organi town, district Karachi West, and have about 5000 population. The majority of residents are daily laborers, shopkeepers or have small businesses and regular jobs. There were no damages to the houses in the areas because all are houses have cemented structure. Rain and drainage water damages roads and bridges in the areas and shops suffered a partial loss. The main sources of water for the majority population are handpumps, piped water and tankers supplies. Stagnant water and garbage dumps were present all around. People of areas didn’t receive support from any private or any government organization.
3.6. Bewa Quarter

More than 1200 families are living at the Bewa quarter colony of Organi town, district Karachi West. The majority of residents are daily laborers, shopkeepers, or have small businesses and regular jobs. Main source of drinking water is piped water and residents considered it safe for drinking. Rain and drainage water damages roads and bridges in the areas. Rainwater and drainage water entered into houses. There were no damages to the houses in the areas because all house has cemented structure, but shops or small business suffered a partial loss. Some families have migrated to safer places. Stagnant water and garbage dumps become the main hazard for children and vulnerable populations of the areas. People of areas didn’t receive support from any private or any government organization.
3.7. Islam Chowk

More than 6000 families are living at the Islam chowk colony of Organi town, district Karachi West. The majority of residents are daily laborers, and others are shopkeepers or have small businesses and regular jobs. Main source of drinking water is Piped water, and it's not safe for drinking. Rain and drainage water damages roads and bridges in the areas. There were damages to the houses, and shops or small businesses also suffered a partial loss. Some families have migrated to safer places. Streets and houses are filled with rainwater and drainage water. Stagnant water and garbage dumps become the main hazard for children and vulnerable populations of the areas. People of areas didn’t receive support from any private or any government organization.
3.8. **Bangla Bazaar**

Bilal colony is situated near to Bangla bazaar of Orange town, district Karachi West. More than 200 families are living in the colony. The majority of residents have a regular job, few are shopkeepers or have small businesses and laborers. There is a water channel named Gujjar Nallah beside the colony that overflowed during heavy rains and water entered into houses. Rain and drainage water damages roads in the areas. There were no damages to the houses in the areas. The main source of drinking water is piped water, and it's not safe water for drinking. Garbage dumps become the main hazard for children and vulnerable populations of the areas. People of areas didn’t receive support from any private or any government organization.
3.9. Gulshan-e-Bahar

Gulshan e bahar is situated at UC 6 of district Karachi West. The colony is comprised of more than 500 houses. The majority of residents are daily laborers and others are shopkeepers or have small businesses and regular jobs. The main source of drinking water is piped water, and they considered it safe for drinking purposes. There were no damages reported of houses or other community physical infrastructure.
3.10. Gujjar Nallah – in Liaquatabad

Gujjar Nallah is 13.5 km long, passed through many residential areas. It is a natural drain in the city starting from New Karachi and ending at Chona Depot in Haji Mureed Goth, where it falls into the Lyari River. The area around soilGujjar Nallah situated in Liaquat Abad, district Central Karachi is among the worst affected area. More than 2800 families are living in the colony. The majority of residents are daily laborers and others are shopkeepers or have small businesses and regular jobs. The main source of drinking water is piped water and its not safe for drinking. Rain and drainage water damages the roads of the colony. There were partial damages to the houses due to heavy rains and stagnant water. Stagnant water and garbage dumps become the main hazard for children and vulnerable populations of the areas. People of areas didn’t receive support from any private or any government organization.
3.11. Kashmiri Mohallah

Kashmiri Mohallah is situated in district Centarl Karachi. More than 1300 families are living in the colony. The majority of residents are daily laborers including street hawkers & domestic workers, and others are shopkeepers or have small businesses and regular jobs. The main source of water is piped water and majority of the residents get drinking water from nearby RO plant. Rain and drainage water damages roads and bridges in the areas. Due to the overflow of drains, houses and streets are filled with rain and drainage water. Due to that situation, more than 100 families have migrated to other safer places. There were partial damages to houses due to heavy rains and stagnant water, shops or small businesses also suffered partial losses. Stagnant water, electricity wires, and garbage dumps become the main hazard for children and vulnerable populations of the areas. People of areas didn’t receive support from any private or any government organization.
4. **Recommendations:**

Considering the magnitude and scale of current situation, few short term recommendations are:

- There is no such immediate need for life-saving/ emergency response intervention but immediate support is required to local councils in debris removal from streets.
- Restoration/cleaning of primary, secondary and tertiary sewerage to minimize the risk against forecasted heavy rains in the city from 6\(^{th}\) to 8\(^{th}\) July.
- Supply of clean drinking water through water tankers in those areas where water contamination is reported.

For medium to long term consideration or plan following sectoral specific recommendation are:

4.1. **WASH**

- To avoid the occurrence of a catastrophe of this scale in the future, it is necessary for the new, comprehensive and integrated stormwater drainage system for the city. In addition, a special one-time project to conduct a restoration and rehabilitation of 36 large drain nullahs of the city, including relocations of encroached housing settlement and other constructions, avoid dumping of garbage around, rebuilding and strengthening of the nullahs walls.
- Response teams must be trained and deployed in each district municipal corporations with dewatering machines and other accessories. Dewatering is identified as one of the major need as families and children are still stuck at their homes, many roads are submerged in water limiting the mobility and access of the people to the markets and other necessities.
- Urgent need for ensuring supplies of safe drinking water such as restoration of hand pumps, supplies of safe water through trucking, and water treatment measures or supplies. As health risks are associated with the use of contaminated and untreated water for drinking purpose.

4.2. **Livelihood**

- The majority of the affected population are daily wage laborers so their source of livelihood is limited now. Cash-based social protection scheme or programming for vulnerable families is needed to fulfill their sustenance needs.

4.3. **Shelters**

- Immediate need for shelter repair and renovation as the number of shelters has been damaged partially.

4.4. **Health**

- Due to stagnant water, there is a significant risk of Mosquitos and other vectors’ growth. This may spread vector-borne diseases on large scale such as malaria, diarrhea, typhoid and hepatitis. The poor hygienic conditions may also result in the spread and outbreak of other highly contagious diseases such as measles and pneumonia, these may affect the vulnerable population such as children, pregnant women, and persons of old age and with disabilities. Health-related activities such as mobile camps through trained health care providers including curative and preventive activities should be initiated to minimize the risks of morbidities and mortalities.
4.5. Household items (NFIs)

- Immediate need for household items (NFI) support such as Bedding or floor mats, kitchen kits (sets), hygiene items (kits), jerry cans or large water storage pot with lid covers, and adequate stoves