

Exploring Needs of Secondary Sewers to Connect Slums and Squatter Settlements with Primary Network in Faisalabad City

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Abstract

Faisalabad is an industrial city and expanding very rapidly. The gulf between housing supply and demand is widening every day. The formal housing sector is unable to meet the demand. Resultantly, the slums and squatter settlements are originating swiftly. These settlements are deprived of all basic facilities and especially water supply and sanitation facilities are not provided by the developers as well as by government agencies. These settlements are either un-serviced or under-serviced. The Water and Sanitation Agency (WASA) is responsible for provision of these services in Faisalabad city. Due to shortage of funds WASA is unable to provide the water supply and sanitation facilities to 100 % city population. In addition many community participatory social development projects funded by donors have also been initiated. The social mobilization staff of these organizations has mobilized the communities for laying tertiary sewers (street level sewer lines) on self-help basis by sharing all expenses and communities are waiting for help at secondary level sewers (sewers connecting street level sewers to main trunk sewer lines). This research study was conducted to explore the need of secondary sewers which could connect street level (tertiary) sewers of slums and squatter settlements to main sewer lines (primary sewerage net-work). The area profiles (summary of information) of different slums and squatter settlements (about three) were prepared. The identification of secondary sewers is made indicating that how long secondary sewers are required along with number of houses in each

street, number of vacant plots in each street, number of houses in the settlement, length of secondary sewers and estimated cost of each secondary sewer work.

Key Words: Squatter Settlements, tertiary sewers, secondary sewers, participatory development, area profiles, cost estimates, community share, slums, sanitation, under-serviced.

Introduction

Housing is important to development in both economic and welfare terms. Major share of household expenditure about 15% to 20% is spent on housing (World Bank, 1975). It is also mentioned in the same Housing Sector Policy Paper of the World Bank that in 2000 about 1,200 million people in developing countries will be living in cities, this mean that about a third of the population of the developing world is urban at present. Pakistan is one of the fastest growing and populous countries of the world.

Pakistan has faced formidable housing problems from its very birth as an independent nation because of the sudden mass influx of a million refugees in 1947. The urban population is increasing tremendously and about 35% of total population is living in cities which is called as urban population. Faisalabad is the third largest city of Pakistan with an estimated population of 2.1 million. According to a survey about 30-32% population of Faisalabad is living in slums and squatter settlements (Haq, 2002). These settlements are deprived of all basic services including water supply and sewerage. Water and Sanitation Agency (WASA) a body of Faisalabad Development Authority (FDA) is responsible for development, operation and maintenance of water supply, sewerage and drainage facilities for the residents of the whole city. At present 1.4 million (68 %)

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population is being served from sewerage facility by WASA. The remaining 32% population living in Slums and Squatter Settlements (*Katchi Abadis*) is badly affected with poor sanitation. The poor sanitation is damaging the health: typhoid, diarrhea, dysentery, scabies and malaria are very common in these settlements. The dry latrines and soak pits are being used for the disposal of human excreta and open drains for disposal of wastewater. Therefore, the poor drainage and sewerage system is causing water logging and thus damaging the property and land values and houses are either stagnant or decreasing.

In Faisalabad, though a number of projects such as those initiated by Faisalabad Area Upgrading Project (FAUP), Anjuman Samaji Behbood (ASB), an NGO, Community Action Programme (CAP) also an NGO and UNDP-PLUS project funded by UNO which is presently called as National Urban Poverty Alleviation Programme (NUPAP), communities have demonstrated that they are willing to invest in tertiary sewerage system. The construction (laying) of secondary sewers is actually responsibility of WASA. The WASA has the following sources of funding for provision of such facilities:

- ❖ Annual Development Programme (ADP);
- ❖ Funding by Donors;
- ❖ Service charges from Deposit Works of different organizations like District Government, Labour department, Nazims or any other department; and
- ❖ Income from charges- billing of water supply and sewerage;

But at present WASA is facing the following problems:

- Annual operation deficit of Rs. 60.00 million.
- Non-payment of water and sewerage charges by the public.
- Sewerage system is affected badly due to mushroom growth of over 120 private colonies, and most of them are slums.
- Replacement of old and dilapidated sewers lines which; often cause contamination in the drinking water.

It is worthwhile to mention that in the District Development Budget recently approved by the District Assembly a small amount is allocated for sewerage and drainage schemes and major chunk of that allocation is for ongoing schemes.

At present no deposit work is being executed by WASA as well as the donors are also not providing funding to WASA. Therefore, WASA can not provide funds for secondary sewers. The other alternative could be to mobilize the communities

for installing secondary sewers on participatory basis as it had been proved successful in Karachi under the Orangi Pilot Project (OPP). Keeping in view the above narrated situation and understanding the importance and gravity of the problem the study in hand was conducted. An effort was made to explore the need of secondary sewers and assessing the quantum of work in order to connect the slums and squatter settlements with primary net-work of sewerage. The study was a mix of using secondary data and collecting primary data from the field by visual observation as well as in consultation with the community members and local representatives like union council Nazims and other community activists.

Material and Methods

1. Preliminary and Detailed Informative

Discussion with Development Sector

Organizations

At the outset the first hand information was collected from secondary sources. A series of meetings were conducted with FAUP, presently known as Strategic Planning Unit (SPU) staff, NUPAP field office staff which is located in Tehsil Municipal Complex, staff members of ASB and CAP. The field social organizers of NUPAP informed that at present they have mobilized the communities in slums and squatter settlements of the city and community is ready to pay for tertiary sewers if technical assistance is provided to them and it is ensured that secondary sewers will be laid very soon for emptying the tertiary sewers. Similarly the staff members of other organizations like SPU, ASB and CAP also indicated during the discussion that at present this is the golden time and communities are ready to participate for the construction of tertiary sewers if the technical assistance is extended by any agency/organization and secondary sewers are laid by any department, agency, donor, NGO and/or WASA. Moreover social organizers of all four above mentioned organizations reflected that at this stage if the secondary sewer work is not started, the community will lose the confidence developed among it through hectic efforts made by PLUS/NUPAP, FAUP, ASB and CAP teams. Therefore, funding should be arranged for secondary sewers due to the following reasons:

- ❖ Communities have collected the money for tertiary (lane level) sewers.
- ❖ The communities are poor and cannot afford the cost of secondary sewers.
- ❖ WASA has no funds for secondary level sewers construction.

- ❖ Under the new set up (DOP) only allocations are made for ongoing schemes in the District Budget.
- ❖ The Union Councils Nazims have ensured to the communities that if some organization will construct the secondary sewers and community would construct the tertiary sewers then they will ensure the pavement of those streets from local government funds.
- ❖ To maintain the trust developed among the communities and the organizations working in development sector in Faisalabad.

Moreover, further detailed meetings were conducted with staff of NUPAP. The field social organizers informed that team has been able to mobilize and organize the communities living in under/un-serviced urban settlements. They also informed that the psychological, economic, technical and sociological barriers have been removed from the community and working relations have been developed. The following progress has been made:

- ❖ Community Mobilization completed.
- ❖ Communalities are organized (50-lane organizations are formed).
- ❖ Lane Managers are selected.
- ❖ Already Communities constructed about 2000 Rft of lane level sewers.
- ❖ Community has collected their share (100% for tertiary level sewers about Rs. 250,000.00) and for further about 5000 Rft. long sewers the collection is in progress.
- ❖ A trust and working relations has been developed between the NUPAP team and the community.
- ❖ The communities have been also motivated for other components like education, health and micro-credit.

2. Fly Visit of the Slums and Squatter Settlements

A field visit of all such settlements was made to collect the physical, social and cultural information. A list of all Slums and Squatter Settlements situated in Faisalabad city was collected from the office of SPU, FDA and NUPAP. The settlements were marked on the map of Faisalabad City. The boundary of each slum and squatter settlement was earmarked on the map and further detailed individual maps of all settlements were also collected from the concerned departments. The author (team leader) along with two field researchers made a preliminary visit of all slums and squatter settlements.

Further field work for assessing the need of secondary sewers was very lengthy and laborious one and every step of which could not be described

in detailed in this paper however, a summary of the steps adopted for exploring the needs of secondary sewers to connect slums and squatter settlements with primary network in Faisalabad city is given as under:

1. Identification of Slums and Squatter Settlements; which include:
 - ✓ Preparing the list of Slums and Squatter Settlements;
 - ✓ Collection of city map and discussion with Faisalabad Development Authority (FDA) and other agencies;
 - ✓ Fly visit of the city for orientation;
 - ✓ Plotting/Marking the Slums and Squatter Settlements on the city map;
 - ✓ Making clusters of Slums and Squatter Settlements;
 - ✓ Rapid Appraisal of the clusters for short-listing of possible clusters to include in survey for this study;
2. Preliminary Rapid Physical Assessment of the Area/Cluster;
3. Preliminary Social and Physical Assessment of individual Slum and Squatter Settlement.
4. Preparing Physical and Social Mapping of the Individual settlement;
5. Preparing Location/Key Map of the Cluster;
6. Preparing Area Profiles (individual settlement), only for sampled three settlements.
7. Preparing Detailed Profile of each Street having the following information:
 - Name of area
 - Total # of streets
 - Total area in acres
 - Total Population
 - ❖ Detail of each Street
 - Street #
 - Street length and width
 - Type of Street pavement
 - NO. Of houses
 - NO. Of shops
 - NO. Of Vacant Plots
 - NO. Of power-looms
 - Type of Public buildings in the street
 - Total Population of the street
 - Sex Composition
 - Status of drainage/sewerage in the street (running, blocked and choked etc.)
 - Activists in the street
 - Any CBO in the settlement
 - Past initiatives of the CBO
 - Willingness of the community for the development of the area
 - Preparation of street level map

Results and Discussion

Area Profiles

First of all the area profiles of three settlements, one from each cluster of slums and squatter settlements was prepared. The area profile gives an overview (pen picture) of the settlement and these profiles were used as basic instruments/tools for exploring the needs of secondary sewers to connect the slums and squatter settlements with primary net-work of sewerage system. Three area profiles prepared during this research study are presented at Tables, 2-4. The area profiles indicate the location of the settlement, its area, total households, No. of streets, land value, monthly income of a household, availability of public facilities, total population, sex composition, occupations of the residents, casts, social problems, self initiatives and social cohesion etc. The detail can be seen from the tables.

Identification of Secondary Sewers

After preparation of area profiles a final list of slums and a squatter settlement was prepared which was the universe of the study. A detailed and vigorous field visit that was an exhaustive one was carried out for more than two weeks. The team

comprised of the researcher himself, a sub-engineer from WASA, and two field assistants/research assistants hired for this study. First of all a rapport building visit and rapid physical and social assessment of the settlement was made. Secondly, the key informants and community activists were identified. At third step the sources of ultimate disposal (disposal station, slug carrier channel, pumping station, primary sewer line or a drainage channel) was identified. Then the natural slope of the all streets was assessed. Ultimately, the need of secondary sewers for each settlement was explored. The detail of secondary sewers works which were explored in close collaboration of concerned communities and local representatives in different slums and squatter settlements is given at Table: 1. on next page. The table depicts the length of secondary sewers, potential for tertiary sewers to be laid by the community and estimated cost of secondary sewers work. About 30% low-income population living in un-serviced areas could get the facilities of good sanitation if the concerned agencies are ready to initiate the work of installing secondary sewers.

References

Nawaz, A.H. Impact Assessment of Katchi Abadi Improvement Programme in Punjab, a Ph.D. Thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Rural Sociology, University of Agriculture Faisalabad, Pakistan. 2002

Environment and Urban Affairs Division, Govt. of Pakistan Shelter for Homeless: Pakistan Canvas, Master Plan and Environmental

Control Department, Karachi Development Authority, Karachi.1978

Project Management Unit (PMU) Faisalabad Area Upgrading Project, A Review of the Project, 1994-199, FDA Rest House, Gulistan Colony # 2 Millat Road Faisalabad.1999

World Bank HOUSING, Sector Policy Paper, 1818 H Street, N.W. Washington, D.C. 20433, U.S.A. 1975

Table 1. Secondary Sewers to Connect Slums and Squatter Settlements with Primary Net-work in Faisalabad City

Sr. #	Name of Settlements	Length of Secondary Sewers in feet	Potential for Tertiary (street level) sewers to be installed by community		Estimated Cost of Secondary Sewers Rs.
			# of Streets	Length (ft.)	
1.	Hassan Pura, Bilal Colony & Himmat Pura	1600	40	8000	200,000.00
2.	Dhuddi Wala East & Kehkashan Colony-2	600	15	3000	75,000.00
3.	Elahi Abad on Satiana Road	600	20	6000	75,000.00
4.	Madina Abad and Bismillah Park Near Raza Abad	550	18	3500	68,750.00
5.	Bilal Park Near Chak 79/RB (Choti 79)	700	10	2000	87,500.00
6.	Nawaz Park	1000	7	1400	125,000.00
7.	New Green Town (Millat Road)	400	5	3000	50,000.00
8.	Yousaf Abad No. 2	300	5	1500	50000.00
9.	Ahmad Abad	1100	10	2000	137,500.00
TOTAL		6850	130	30400	868,750.00

Table 2. Area Profile of Azam Abad

Items	Description
Physical Characteristics	
Location	South-West side of the city at a distance of about 5 kilometers. A big pond is in the center.
Total Area	30 acres
Total Houses	1170
Total vacant plots	84
NO. Of Streets	10
Land Value	Rs. 60,000/marla*
Availability of Basic Amenities	
Electricity	Available
Sui Gas	Available
Telephone	Available
Sewage Disposal	Open drains
Health Facilities	Medical Practitioners
Education Facilities	Private Primary & Middle Schools. Religious Masjid Maqtab school. No Govt. school in the area.
Socio Economic Characteristics	
Total Population	10000
Sex Composition	51% females and 49% males.
Household Size	9
Occupations	Laborers, Government Employees
Monthly Income/Household	Rs. 5000-6000
Castes	Malik, Rajpoot, Ansari, Rehmani, Ghafari and Arian etc.
Community Activists	Haji Abdur Rehman, Muhammad Ashfaque and Noor Muhammad
Social Problems	Un-hygienic environment. Lack of employment opportunities Lack of recreational facilities. Death of two children in pond
Self Initiatives	In half part of St. # 1&3 brick pavement on self-help basis.
Social Cohesion	Social ties are weak
Festival Arrangement	No proper place for festivals.

* A marla is equal to 272.25 square feet.

Table 3. Area Profile of Murad Colony

Items	Description
Physical Characteristics	
Location	South side of the city at a distance of 7 kilometers (Summandri Road)
Total Area	12.5 acres
Total Houses	325
Total vacant plots	6 (Lane 1,2, 3 and main road)
No. Of Streets	9
Land Value	Rs. 60,000-75,000 per marla*
Availability of Basic Facilities	
Electricity	Available
Sui Gas	Available
Telephone	Available
Sewage Disposal	Drains and being disposed into fields and vacant plots
Health Facilities	Private Dispensary
Education Facilities	Government Girls primary school and a private school
Socio Economic Characteristics	
Total Population	3000

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Sex Composition	43% females and 57% males
Household Size	8
Occupations	Laborers, Small businessmen
Monthly Income/Household	Rs. 5000-6000
Castes	Malik, Insari,,Jaat and Gujar
Community Activists	Qari Rafiq, Allah Ditta St. # 8 lane 1, Master Siddique, Muhammad Bibi St. # 8 lane 2, Munshi Ghulam Hussain, Master Yousaf, Nusrat Bibi St. # 8 lane 3. Liaqat and Ijaz, Main Road (street # 8).
Social Problems	❖ Mobility problems (during rainy season) ❖ Quarrels
Self Initiatives	Some earth filling in street and sewer in some lanes
Social Cohesion	Social ties are strong
Festival Arrangement	No proper place for festivals.

* A marla is equal to 272.25 square feet.

Table 4. Area Profile of Elahi Abad

Items	Description
Physical Characteristics	
Location	South side of the city at a distance of 7 kilometers (Satiana Road)
Total Area	37.5 acres
Total Houses	1500
Total vacant plots	100
NO. Of Streets	20
Land Value	Rs. 60000-70000 per marla*
Availability of Basic Facilities	
Electricity	Available
Sui Gas	Not available
Telephone	Partially Available
Sewage Disposal	Sewer in lane 1-14 and Katcha drains in some street from 15 to 20
Health Facilities	Homeopathic Doctor
Education Facilities	Government primary school-boys Masjid/Maqtab school is also available.
Socio Economic Characteristics	
Total Population	12000
Sex Composition	51% females and 49% males
Household Size	8
Occupations	Laborers, Small businessmen
Monthly Income/Household	Rs. 6000-7000
Castes	Jaat, Rajpoot, Qureshi and Mughals etc.
Community Activists	Manzoor Baig, Muhammad Hussain, M. Zafar Iaqbal and Master Muhammad Yaqoob
Social Problems	❖ Mobility problems ❖ Quarrels-a boy was murdered in 17 th street on dispute of throwing the dirty water in the street in front of a house.
Self Initiatives	In half part of St. # 14 sewer was laid on self-help basis.
Social Cohesion	Social ties are strong
Festival Arrangement	No proper place for festivals.

• A marla is equal to 272.25 square feet.