

# ORANGI PILOT PROJECT RESEARCH AND TRAINING INSTITUTE (OPP-RTI)

## LOW COST SANITATION PROGRAMME IN KARACHI

### **Survey of SKAA, KMC Abadis and BOR Goths**

This quarter mapping survey of 6 more abadis/goths was completed. Survey of total 519 abadis/goths outside Orangi has been finalized. Of these 62 belong to SKAA and 457 are KMC/ Board of Revenue (BOR), abadis/goths. Statistics of total 458 abadis/goths was finalized (5 this period) sept-Nov'16. Statistics shows 24,546 lanes and 2,53,577 houses, people have laid sewers on self help in 29.31% lanes and water lines in 25.27% lanes, investing Rs 168.131 million and Rs 135.110 million respectively. Government's work on internal development also exists i.e. sewer lines have been laid in 33.496% lanes and water lines in 20.043% lanes. Refer detail statistics in section 2.9.1. The first, second and the third volumes, each of 100 abadis (peoples housing) with maps, statistics and analysis has been published. Work on the fourth (Orangi) volume is in progress (maps and statistics are being updated). The first volume of 100 goths has been published. of the 148th quarterly progress report.

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### **Khuda Ki Busti - Taiser Town - Saiban**

Land supply for the poor is the focus of the NGO 'Saiban'. Khuda Ki Busti (KKB-III & IV) located in the periphery of Karachi, is their third and fourth project. 100 acres of land (acquired from the govt. around 1998) with 2,910 housing plots was planned and settled. Owners have paid the cost of an 80 sq.yds. plot in installments to Saiban, which has an office in the settlement.

Saiban has facilitated provision of social and physical infrastructure with the amount collected as development charge (included in the cost of the land). Statistics of the self help sewerage works are in section 1.8.1 of the 148th quarterly progress report reference Khuda ki Busti. Maintenance of the system is regularly managed by Saiban. Last period one secondary line 780 rft. laid by self help, costing Rs. 0.237 million.

Last period request was received from the community (a member of the women saving group) and Saiban for the rectification of the sewerage system in the area. OPP-RTI has planned a new disposal for the settlement along with two more goths; Rozi and Hasan Brohi goth benefiting from the proposal. Plan/estimate provided to the communities and govt., mobilization is under way.

### **The Technical Training Resource Centre (TTRC), The Tameer Technical Centre (TTC) and the Peoples Mapping Centre (PMC) - Karachi:**

Technical Training Resource Centre (TTRC): Youths trained as community architects setup the TTRC in 1998. Based in Ghaziabad a settlement in Orangi town, TTRC has extended its work out of Orangi. Besides supporting the construction of houses in Orangi and physical upgrading of schools (refer details in section 5.4), of the 148th quarterly progress report TTRC conducts training courses on mapping/documentation, drafting/CAD, level survey, planning and costing. A small fee is charged. Total 88 training courses have been conducted, comprising of 239 participants, for five more is in progress.

Supported by modest fees, TTRC has completed mapping the goths of Karachi including documentation of infrastructure. Total 33 goths of Kemari and Gadap towns have been mapped, and digitized.

TTRC has also provided technical support for the EM-Sewage Treatment Units, specially to the villages in flood rehabilitation project.

For the OPP-RTI's flood rehabilitation work mostly in Sindh, South Punjab and in Balochistan, being managed thru 27 partners (in the villages surrounding 2 cities and 25 towns), TTRC assisted with the on site guidance and documentation of the work (related to shelter, hand pumps and shelter for schools).

Mobilizing women's savings groups in settlements in Orangi towns: Since Jan'10, 21 groups in Orangi 500 women have saved Rs. 21,96,460. Thru the savings 378 members have been supported with credit ranging from Rs. 2,700 to 30,000. The credit has been used mainly for their children's health and education needs, loans for livelihood have also been initiated. More women are joining as members, thru the OPP-RTI's Housing Saving and Loan Program, total 97 members (11 this period) were provided housing loans, of Rs. 24,000-40,000 each, for ventilation and other improvements. On site technical guidance is being provided thru UTC, more requests for housing loans are under process.

TTRC is a strengthened organization on the three aspects: social /technical skills, organizational setup and financial system. Earlier small core fund support was provided, from Jan'11-Dec'12 the Asian Coalition for Housing Rights provided direct core fund support. From Jan'13 Misereor has provided support. In June last year it received Perween Rahman fellowship award. This fellowship was utilized for the mapping and documentation in Baldia town. This period report not received.

Contact details are: Mohd. Sirajuddin, M-299 Sec 11½, Mujahid Colony, Ghaziabad, Orangi Town, Karachi. E-mail: sirajttrc@yahoo.com, thettrcorangi13@yahoo.com, Mobile: 0333-2358301



**Tameer Technical Centre (TTC):** Trained and guided by OPP-RTI another youth organization the Tameer Technical Center (TTC) has evolved as a technical support organization since 2011. Besides supporting the housing program in Orangi and Gadap Town, TTC has conducted two training courses on basic drafting. Details are in section 3 & 5.4, as its work also relates to the Low Cost Housing Program. In 2015 it received Perween Rahman Fellowship Award. This fellowship was utilized for the housing program in goths.

Efforts are to strengthen the organisational setup and financial system of TTC as an organisation.

Contact details are: Hafiz Muhammad Danish, Shahrah-e-Qazafi, Khairabad, Zobu Goth, Manghopir UC-8, Gadap town, Karachi. Phone: 0334-3651094. E-mail: h.mdanish@yahoo.com

**Peoples Mapping Centre (PMC):** Since Oct'10 youths who are part of the mapping program (reference section 2.3) of the 148th quarterly progress report have set up the "Peoples Mapping Centre" operating from OPP-RTI. Mapping and documentation of the goths is the focus. Of total 54 goths work was completed with backup support by OPP-RTI.

Contact details are: Abbas Khan, House No. M-172, Sector No. 11-1/2, Orangi Town, Karachi. Phone: 0344-3579275.

**A youth support organization has evolved:** The Ujala Technical Centre (UTC) - in Orangi is a group of four youths being trained/ guided by TTRC to support the Housing Saving and Loan (HS&L) program. Small core fund support is provided by OPP-RTI.

## Support to 'goths' (rural settlements fast becoming urban) in Karachi-including the water supply provision

Details of the related Secure Housing Support Program are in section 3 of the 148th quarterly progress report. Here the provision of sewerage/drainage systems for the goths is being presented. There is advocacy with the govt. for provision of bulk infrastructure, while support to communities continues for internal development.

Plan, design and estimates for bulk infrastructure for the 1,183 goths (that have become urban settlements) is being prepared: OPP-RTI research shows that out of the 2,173 goths, mostly in the three peripheral towns of Karachi, 1,183 goths have become urban settlements, (with fast subdivision of agricultural land - mostly since 2006 onwards). By Feb'11 the related master map was completed, as more goths are becoming abadis (urban) the map is being regularly updated. Earlier in meetings, with the govt. agencies need emerged for the development of a master plan for bulk sewage/drainage disposal for these goths. OPP-RTI is preparing, in phases, the plan for sewage/drainage disposal for the same. Work explained below in 186 goths and more than 45 nearby abadis (total 43 projects – one new this period) is part of this plan. Implementation is underway.

Mapping of goths and documentation of the existing infrastructure continues. These maps are also related to the Secure Housing Support Program, so the details are in section 3. of the 148th quarterly progress report

### Development of main nalas as box drains (serving 105 goths and more then 45 settlements):

Sr.No	Name of Nala/Drain	Status
1	Khairabad drain	By Nov'09 KMC began the construction of Phase-I. (16,000 rft.) of the Khairabad drainage channel. 14,650 rft. box drain is complete, it has been jointly agreed to include the balance 1,350 rft. in the phase-II of last project. The box drain serves as the disposal for sewage and rainwater for 17 goths and 2 settlements in Gadap town (and also 2 settlements in Orangi town) comprising of 2,200 lanes, about 40,000 houses. OPP-RTI design was earlier approved by the City Govt. and budget of Rs. 189 million was sanctioned for Phase-I&II (total 32,000 rft.). OPP-RTI has supervised construction, while mobilizing community to monitor work. Effort continues for the start of work on phase-II drain. Meanwhile laying of the self help lane sewers connected to the drain is continuing.
2	Secondaries connecting Khairabad drain	Survey for designing the large secondary sewers connecting to the K'abad drain has remained stopped since March'12, due to security issues
3	KAN drain	Construction of KAN drainage channel I & II (9,333 rft.): By June'12 work was completed (6,625 rft. developed as box drain and 2,025 rft. developed as a main sewer). This drain serves as disposal for sewage/drainage for 2 settlements and 8 goths (about 6,000 houses). For supporting internal development, documentation of the existing sewage disposal system in 8 goths was earlier completed
4	Lasi goth nala	Development of the Lasi Goth nala as box drain, 12,100 rft serving 14 goths, and 2 large abadis costing Rs. 116 million (as designed by OPP-RTI). Last period design and estimate of one branch nala 1,000 rft. costing Rs. 5.598 million was prepared. By June'12 the project was sanctioned and included in the Sindh govt. budget of 2012-13. As a result of followup contacts/meetings with the officials of the P&D Deptt. and the KMC engineers work was contracted. Community activists and goth elders are in contact for monitoring onsite work. Work on site has begun total 7,400 rft. box drain completed (this period 800 rft.). For supporting internal development, planning for 6 goths was completed and provided to the community.
5 & 6	UC-8 Gadap town (Ramzan and Yar Mohammad goth)	Plan/design/estimates for box drains and trunk sewers for 2 projects in Gadap town UC-8 (costing Rs. 127.91 million, serving 10 goths and 12 Abadis population 0.27 million was earlier provided to the KMC. As a result of continuous advocacy by June'12 the project was included in the Sindh govt. budget of 2012-13. Further contacts with the govt. officials, goth elders/community activists, continues as a





		result tendering process was completed in the last quarter of 2013. Work on site has begun. Ramzan goth; total 4,750 rft. drain completed (last period 250 rft.), total 4,290 rft. main sewer also completed. In Yar Mohammad goth total 6,000 rft. box drain completed (this period 300 rft.). Main sewer also completed 4,084 rft.
7	A.Rehman goth nala, Bin Qasim town	Survey, design/estimates for the natural nala development in Bin Qasim town serving 10 goths and one abadi (ref: A.Rehman goth project) was earlier completed and provided to the KMC engineers. With continued advocacy, the project was approved by the Chief Minister. However, due to interim govt. setup during elections it has all gone in vion, therefore, was resubmitted for approval. OPP-RTI team held meetings with KMC Engineers.
8	Sungal drain	Sungal drain 8,660 rft. costing Rs. 54.39 million serving 2 large goths and several settlements. With 800 rft. drain completed by March'12 further work has remained stopped.
9	Chakra goth drain	The Chakra Goth drain 7,000 rft. ,earlier designed, costing Rs. 38.24 million serving 2 large goths and several settlements is under process for approval by the govt. OPP-RTI team held meeting with KMC Engineers.
10	Chakor nala	For the Chakor nala 46,480 costing Rs. 200 million serving 6 large goths and 2 settlements, plan/est. were earlier prepared and provided to the govt. Earlier, requested by the KMC and community activists, for the priority phase (i.e the "Bakhtawar goth nala" 15,325 rft.) revised plan,estimate was completed and provided. OPP-RTI team held meeting with KMC Engineers.
11	Moach goth nala	Moach Goth nala 70,705 rft. costing Rs. 695.62 million serving 19 goths and 3 large abadis, survey plan/design/est.was earlier completed. With followup advocacy earlier, CM approved the project. Earlier the priority phase of the nala, 23,100 rft., has been resubmitted to the CM's coordinator for approval.
12	Qalandaria drain	For the Qalandaria box drain 17,200 rft. costing Rs. 42.67 million serving 2 goths and many abadis construction work of phase-I 10,200 rft. was earlier completed, for the remaining phase-II followup advocacy continues.
13,14 & 15	Sherpao, Chashma, Jumma Kalmati goth nalas	For 3 natural nalas in Bin Qasim town, that serve as disposals for sewage and drainage, design and estimates of the box drains were completed earlier. It was provided to CM's coordinator for Sindh govt. for approval. However, due to interim govt. setup during elections it has all gone in vion, therefore, being resubhmitted for approval. a) Sherpao box drain 13,720 rft. serving 4 large abadis b) Chashma goth box drain 5,895 rft. serving 3 goths and 5 abadis and c) Jumma Kalmati goth box drain 10,350 rft. serving 10 goths and 9 abadis. OPP-RTI team held meeting with KMC Engineers.
16	Haji Mehmood goth	Haji Mehmood goth box drain 9,030 rft. serving one abadi and 7 goths (UC-8 Manghopir, Gadap town) plan/design/estimates completed earlier. This project provided to MNA Shahab Rahmani for the approval by the Govt.
17	Dhabeji (Bilal Nagar 1 & 2)	Dhabeji (Bilal Nagar 1 & 2 box drain 4,250 rft. serving two abadi (UC-Dhabeji, Thatta) plan/design/estimates completed last period.

**Progress of work on other schemes, serving 80 goths:**

1	Dost Md Junjar and Haider Goths	In Dost Md Junjar and Haider Goths (comprising of 1,855 houses and 196 lanes) earlier, with OPP-RTI's technical guidance community mobilized more then Rs. 6.25 million for external development. Work onsite was earlier completed, 13,420 rft. main and secondary sewers were laid. OPP-RTI provided on site technical guidance. Internal development is in progress, total 76 lane sewers and 2 secondary sewers 17,868 rft. were laid, 1,279 houses invested Rs. 5.943 million on latrines and sewers. For more lanes there is money collection.
2	Ghani+19 goths (UC-4 & 5 Gadap town)	For the scheme comprising of Ghani and 19 goths plus many housing societies, (in UC-4,5 Gadap town), OPP-RTI designs for 14,500 rft. mains and secondary sewers costing Rs. 10.3 million, (prepared on the request of community activists) was earlier approved by the govt.. By Sept'11 work on site started, Govt. deptt. PHED has managed the project. OPP-RTI and community activists jointly monitored the laying of the main sewers, 15,025 rft. completed, earlier, community mobilization for laying the connecting lane sewers is underway. Money collection is in progress in 3 goths (Jatyal, Junjar and Ghani). In Ghani goth total 11 lane sewers of 3,308 rft. 9 lanes were laid on self help and 2 lanes laid by govt., supervised by OPP-RTI (4 last period). 201 houses invested Rs. 8,91,901 on the sewers and latrines. In more lanes work is scheduled to begin. For Junjar and Jatyal goths report is given below.
3	UC-8 Gadap (Manghopir Mazar area)	For UC-8 Gadap (Manghopir Mazar area) designs for main sewers serving 19 goths and 2 settlements were earlier provided to the area Naib Nazim. By March'11 work on site was completed, 9,900 rft main sewers were laid. Earlier documentation of the existing sewage disposal system in the connecting goths was initiated, of 8 goths completed. Community meeting held last period.
4	Dildar Umrani goth	Requested by the community activists of Dildar Umrani goth,



		earlier, plan/design was provided for the sewerage main connecting 52 lane sewers and serving 1,360 houses. By Sept'11 community mobilized funds from the govt., construction of the sewer main 1,370 rft. was completed. Mobilization for the self help lane sewers is ongoing. Total 12 (1 last period) lane sewer 2,665 rft. was laid on self help, supervised by OPP-RTI. 218 houses invested Rs. 948,602 on latrines and the sewers.
5	Wazir Brohi Goth	Wazir Brohi Goth (51 lanes and 576 houses) plan/estimate for a main, 3 secondary sewers and a sample lane sewer were earlier provided to the community activists. Total 20 lane sewers, 1 secondary sewer (4,060 rft.) was completed on self help 315 houses have invested Rs. 13,95,840/- on sewers and latrines. Last period one secondary sewer laid by govt. 200 rft. cost Rs. 0.113 million. For more lanes money collection is in progress.
6 & 7	Ghazi goth UC-8 Gadap Shah Khalid colony	In Ghazi goth UC-8 Gadap comprising of 140 lanes and 1,652 houses, community mobilized govt. resources for the sewer mains. OPP-RTI and community supervised the on site work, 4,820 rft. main sewers 12"-15" dia were laid costing Rs. 14.64 million. Work on disposal remains stopped since June'12. These main sewers also serve a nearby abadi Shah Khalid colony comprising of 17 lanes and 234 houses. Earlier, on community request, map, plan/estimate for 3 secondary and 12 lane sewers were provided.
8	Junjar goth UC-5 Gadap	Junjar goth UC-5 Gadap comprising of 24 lanes and 676 houses, earlier plan and estimates were provided for 2 secondary sewers 1,045 rft. and for the lane sewers. The disposal is the govt. main sewer completed by July'12, reference project 2. On community lobbying, earlier, one secondary sewer 440 rft. has been laid by the govt. costing Rs. 1,78,332. Work on 14 lane sewers (3,683 rft.) completed on self help (last period 1 lane sewer laid), supervised by OPP-RTI. 281 houses have invested Rs. 1,468,490 on sewers and latrines. For more there is money collection.
9	Jatyal goth UC-5 Gadap town	In Jatyal goth UC-5 Gadap town, comprising of 16 lanes and 275 houses, on community request, earlier plan/estimates for 3 secondary and 13 lane sewers (costing Rs. 17.6 million) were provided. There was community mobilization. Earlier the govt agency PHED laid the secondary sewers 2,090 rft. costing 3.4 million. Community has started laying the lane sewers on self help. OPP-RTI has provided on site supervision. 9 lane sewers 2,518 rft. are complete, 172 houses have invested Rs 1.007 million on sewers and latrines.
10	Noor Md, Ahmed Brohi, Chanesar and M. Hussain Goths (UC-5 Gadap town)	For Noor Md, Ahmed Brohi, Chanesar and M. Hussain Goths (in UC-5 Gadap town) comprising of total 141 lanes and 1,849 houses, on community request map, plan and estimates for a main , 6 secondary and 90 lane sewers (costing Rs. 10.2 million) were earlier provided, community activists are lobbying govt. for the main /sec.sewers last period. Meeting held with MNA Shahida Rahmani to expedite the process of approval.
11	Muslimabad, Adam, Hindu and Pir Buksh Goths (UC-5 Gadap)	For Muslimabad, Adam, Hindu and Pir Buksh Goths ( in UC-5 Gadap) comprising of total 93 lanes and 732 houses, on community request earlier, map, plan and estimates were provided for a main, secondaries and 36 lane sewers. By June'12 the PHED laid the main sewer 1,150 rft., connecting it to an existing trunk main. Community is lobbying govt. for laying of the secondaries. Meanwhile community mobilization continues for the self help lane sewers. Internal development is in progress. Total 4 lane sewer 1,400 rft. were laid 88 houses invested Rs. 0.516 million on latrines and sewers.
12	Jamali goth, including 3 more goths (Masoodabad, Bashir Shoulder and Gulshan-e-Baloch)	For Jamali goth, including 3 more goths (comprising of 143 lanes and 3,542 houses), Earlier on community request map, plan, and estimates were completed for one main, 3 secondaries and 82 lane sewers costing Rs. 9.04 million. An existing trunk sewer serves as the sewage disposal for these goths. Community is lobbying govt. for laying the mains. Earlier 800 rft. laid by a private builder, at a cost of Rs. 0.461 million. Work on 5 lane sewers and one secondary sewer 2,200 rft. completed undertaken by govt. (2 lanes and one secondary) and community ( 3 lanes) on self help and govt. 98 houses and govt. have invested Rs. 1.34 million.
13	Haji Mehmood goth (UC-8 M'pir Gadap town) including Haji Ameer Bux, Haji Abdul Raheem, Ghulam Hussain Goth, Haji Malik goth, Nabi Dad goth, Haji Mehmood goth and Aziz Brohi goth	For Haji Mehmood goth (UC-8 M'pir Gadap town) including seven more goths (284 lanes, 1,264 houses) on community request, plan/est. for the sewage disposal system completed and provided to the community, one main sewer 3,990 rft. Cost Rs. 2.42 million and 9 secondary sewers 17,050 rft. Cost Rs. 8.266 million. Community activists are lobbying PHED for external sewers.
14	Abdullah Gabol Goth (UC-5, Gadap town)	For Abdullah Gabol Goth (UC-5, Gadap town) comprising of 113 lanes, 859 houses requested by a local activist map, plan, estimate were provided for two main and 6 secondaries 20,137 rft. costing Rs. 10.13 million. Community lobbying continues. Total 3,975 rft., 3,940 rft. main line completed (last period 700 rft.) costing Rs. 7.266 million laid by Govt.
15	Gul Mohallah goth (UC-5 Gadap town)	Gul Mohallah goth (UC-5 Gadap town) plan and estimate completed a main 1,500 rft. costing 0.533 million.
16	Pir Buksh goth, Mohallah Noor	Pir Buksh goth, Mohallah Noor Muhammad Mengal (UC-5 Gadap town) comprising 37 lanes and 913 houses. Earlier on





	Muhammad Mengal (UC-5 Gadap town)	community request map, plan and estimates werer completed, for a main, 6 secondaries and 37 lane sewers costing Rs. 6.012. Last period 1,500 rft. main line completed costing Rs. 0.940 million laid by Govt
17	Chutta Gabool goth (UC-4 Gadap town)	Chutta Gabool goth (UC-4 Gadap town) comprising of 47 lanes and 274 houses plan/estimate for a main, 8 lane sewers (costing Rs. 1.043 million) provided to the community activist. Total 22 lane sewers (this period 4) and 1 main line and two secondary line (8,024 rft.) was completed on self help. 510 houses have invested Rs. 35,31,700 on sewers and latrines, for more there is money collection.
18	Saifal Khan Mary goth UC-6 Gadap town	Comprising of 141 lanes and 1,749 houses, plan/estimate completed for a main 1,155 rft. costing Rs. 0.724 million and 9 secondary sewers 7,755 rft. costing Rs. 3.83 million and provided to the community. Last period government has approved 3,000 rft. main sewer, 1,000 rft. completed last period costing Rs. 0.494 million laid by Govt..
19	Noor Khan goth, Noor M. Burfat goth, Allah Rakhio goth, (UC-4 Gadap town)	For Noor Khan goth, Noor M.Burfat goth and Allah Rakhio goth in UC-4 Gadap comprising of total 288 lane and 2,289 houses. On community request map, plan and estimates completed last period. For 4 main line (4,130 rft.) costing Rs. 2.178 million, 11 secondary sewer (7,520 rft.) costing Rs. 3.665 million provided to the community. Last period 8 lane sewers 2,500 rft. sewers and one secondary sewer 500 rft. was laid on self help, 100 houses invested Rs. 1.253 million on latrines and the sewers.
20	Haji Zakaria Goth (UC-2 Gadap Town)	Comprising of total 103 lanes and 329 houses, on community request map, plan and estimate completed last period for 5 secondary lane (5,365 rft.) costing Rs. 2.703 million. Desilting and rectification work (5,440 rft.) costing Rs. 0.109 million. Last period 3 secondary sewers laid by Govt. 3,867 rft. costing Rs. 1.915 million.
21	Umer Brohi Goth (UC-6 Gadap town)	Comprising of total 76 lanes and 61 houses on community request map, plan and estimates completed last period for one main line (3,105 rft.) costing Rs 0.447 million and four secondary lines (1,100 rft.) costing Rs 1.20 million, provided to the community.
22	Ghani Goth-2 (Gadap UC-5 goth project)	Comprising of 27 lanes and 437 houses plan/estimate completed for a 3 secondary sewers 1,769 rft. costing Rs. 0.77 million and 27 internal lines 8,928 rft. costing Rs. 2.011 million, provided to the community.
23	Arz Mohammad Goth UC-6 Gadap Town	Comprising of 33 lanes and 212 houses plan estimate completed. For a main line 1,395 rft, costing Rs.0.780 million one secondary sewer 450 rft, costing Rs. 0.220 and 23 internal lines 4,800 rft, costing Rs.0.537 million, provided to the community.
24	Khair Muhammad Goth UC-6 Gadap	Comprising of 17 lanes and 73 houses plan estimate completed for a main line 650 rft. costing 0.446 million 3 secondary sewer 1,175 rft. costing Rs. 0.667 million and 17 internal lines 3,635 rft. costing Rs. 1.145 million, provided to the community.
25	Abbasi Goth UC-6 Gadap town	Comprising of 26 lanes and 404 houses plan/estimate completed for a secondary line 2,275 rft. costing Rs. 1.396 million and 24 internal 1,0495 rft. costing Rs. 2.71 million, provided to the community.
26	Rozi Goth UC-6, Gadap town	Comprising of 77 lanes and 1,026 houses plan estimate completed for a main line 1,885 rft. costing Rs. 1.395 million 4 secondary line 2,650 rft. costing Rs. 1.405 million and 77 internal line 16,988 rft. costing Rs. 5.08 million provided to the community.



### Water supply in the goths/abadis:

1) Earlier on community request estimates were provided for laying the water lines in 6 lanes of Mohd Khan colony Baldia town. By June'12 community completed the works, 146 houses invested Rs. 3,65,000 (2,500/house). 2-3) The existing water supply system (bulk and distribution) for 6 goths in UC-8 Gadap town with more then 12,000 houses have been documented. Two projects Ghazi and nearby goths/abadis is being monitored for its bulk and secondary distribution system, jointly with the community and ii) a self help distribution system in operation in Khairabad since 2009, has been documented. 4) Earlier community activists of 10 goths of UC-4 Gadap town (comprising of 573 lanes and 9,137 houses) requested technical support for replacement of an old water main. Preparation of plan/est. completed and provided. 5) On the request of community activists of 4 goths in UC-5 Gadap (Ghani, Jatyal, Abdullah Gabool goth and Junjar) and one abadi (Umer Colony UC-5 Jamshed town) for technical support, preparation of plans for water mains completed and provided to the community who is lobbying with MPA for implementation. Govt. agency PHED has received funds for the works and has agreed to implement the community proposals. In Abdullah Gabol goth PHED started work on the construction of under ground tanks two completed, other is in progress. In addition, work on 3,300 rft. and 1520 rft. 10" dia main is in progress. Out of total 4800 rft., 2,820 rft. completed. Internal line 5,383 rft. work started by PHED. 3,000 rft. work completed this period. 6) Saifal Khan Mary goth (UC-6 Gadap town) plan estimate completed earlier, consists of a main line and three secondary lines 17,920 rft. costing Rs. 6.907 million. Last period govt. has approved 4" dia,10,000 rft. pipe, work has begun. 1000 rft. 6" dia and 3,700 rft. 4" dia work is in progress. There is request from Hindu goth UC-5 Gadap for planning. 7) Ahsan Raza Burfat goth (UC-3 Gadap town) plan estimated completed earlier, work is in progress. 8) Adam goth (UC-5 Gadap town) plan/estimate completed last period. It consists of two main lines, 900 rft., costing Rs. 0.176 million. 9) Pir Buksh goth (UC-5 Gadap town plan, estimate completed last period. Consisting of two secondary sewers, 900 rft., costing Rs. 0.176. 10) Dildar Umrani goth (UC-4 Gadap town plan, estimates completed last period. It consists of one main line 1,750 rft. costing Rs. 0.055 million.(last period work completed 1800 rft). 11) Tharoo Mangal goth PHED has started work on construction of one under ground tank completed last period. In addition work on 2,500 rft. water line is on going OPP-RTI team is supervising the work. 11) Abdul Ghani goth-2 (UC-4) Gadap town plan estimated completed one main and 2 secondary lines 2,840 rft. costing Rs. 0.596 million.12) Arz Mohammad Goth (UC-6) Gadap Town plan estimate completed one main line 1,400 rft and one secondary line 450 rft costing Rs.0.261. 13) Khair Muhammad



Goth (UC-6) Gadap town plan/estimate completed; 2 secondary line 880 rft. costing Rs. 0.210 million. 14) Abbasi goth (UC-6) Gadap town plan/estimate completed; one secondary line 2,350 rft. costing Rs. 0.480 million. 15) Rozi goth (UC-6) Gadap town plan/estimate completed 4 secondary line 4,950 rft. costing Rs. 0.733 million.

### **Development of Natural Nalas/Drainage Channels into box drains/trunks- Working with KMC - Citywide application**

Natural nalas/drainage channels in Karachi serve as the main disposal, for sewage and rain water for all of Karachi. To safeguard the existing sewerage system important developments are a) desilting, securing the width and development of these as box drains, and b) laying interceptor drains along side the main nadi's (Lyari nadi, its branches the Orangi/Gujjar nalas and Malir nadi).

OPP-RTI has since 1998 been involved, with the KMC, SKAA and KWSB, in the development of nalas/drains. Along many of the nalas and drains there are low income settlements, OPP-RTI designs avoid displacements. In June 2006 on Governor's directive first the KWSB and since August 2007 the Karachi Metropolitan Corporation has taken charge of O&M of all the nalas/drains of Karachi. A separate department has been setup for this work. OPP-RTI maps are being used.

All over the city nalas/drains are being desilted, repaired, reconstructed/constructed, and covered, or trunk sewers are being laid alongside these, (more than 55% of all completed - latest survey) in line with the concept promoted by OPP-RTI since 1996 for Orangi and since 1998 for Karachi. Some works are regularly documented for understanding, though the rest is too large a scale to document. Detail report on nala/box drain developments serving the goths has been explained in section 1.7.4. of the 148th quarterly progress report on development of the Orangi nala is in section 4.4. of the 148th quarterly progress report Explained below are some more developments in implementation since June'2004.

In June'2004 the Executive District Officer (EDO) and the engineers of the Works and Services deptt. (W&S) of the KMC, requested OPP-RTI's support for the development of natural nalas as box drains and the upgradation of existing drains in Karachi. OPP-RTI together with the city engineers was made a member of the focal group formed for the work. On request maps and documentation of main nalas/drains are regularly provided to the group. Thru mutual consultations nalas/drains were identified, OPP-RTI support continues thru providing the surveyed maps, plans, designs, estimations and on site monitoring. Followup contacts/meetings continued this period too, with the engineers of DMC/KMC for development of the Lasi, Ramzan and Yar Muhammad goths box drains serving many goths and abadis in Gadap town. Earlier budgets for these projects were included in the govt's annual development plan (2012-13). Work was tendered by DMC West. Work on site is continuing.

In June 2007, based on OPP-RTI designs, an umbrella PC-I for the development of 9 main nalas into box drains, costing Rs. 900 million was approved by the provincial govt. as proposed by the CDGK/KMC. The nalas are of total length 1,28,096 rft. and serve parts of 8 towns, the development benefits 93,781 houses. Work was earlier completed on five box drains (11-A, Baldia, Qalandria-I, Khairabad-I and KAN). On site supervision and community mobilization for monitoring undertaken by OPP-RTI. remaining works on two, (Mominabad 15,558 rft. and Baloch 14,585 rft.) serving parts of Orangi, and Site towns, will be under taken through ADP. Location of Chakara goth nala was shifted during its implementation. For the Sungal nala (8,660 rft.) in Gulshan town, with 800 rft. drain completed, work on site remains stopped since Jan'12. Six more nala development (box drain) projects (2 earlier) as designed by OPP-RTI have been approved since the umbrella PC-I. On one Soldier Bazar, work is completed on Mianwali work continues, on others, the process of contracting is underway.

Documentation of the existing systems on maps has been consistently advocated by OPP-RTI in meetings, discussions, forums and presentations. Since 2003 the KMC and KWSB has been focusing on this. Maps documenting the drainage channels and sewerage systems of 16 out of the 18 towns of Karachi, were earlier digitized, these are now available on our website, together with the maps documenting the overall City's drainage. On site updating of sewerage drainage system in towns of Karachi initiated total of 16 towns completed.

### **Documentation of Natural Nalas /Drainage Channels**

OPP-RTI mapping and documentation, strengthening advocacy, has influenced the KWSB and KMC's development plans. 114 natural nalas/drainage channels (mains and branches), of total length 1,076,803 rft., located all over Karachi have been surveyed and mapped. Plan, design and estimates for the development of total 65 nalas were provided to KMC/SKAA and PHED/P&D. Most of these branch nalas and drains dispose into 2 main nadis, Lyari and Malir which then dispose into the sea. Accepting the importance of these drainage channels, plans for box trunks along the main nadis were earlier prepared and being implemented by KWSB (as the S-III plan). A map of Karachi in the scale of 1: 10,000 documenting the nalas/drains surveyed was prepared, and is displayed at the OPP-RTI "Perween Rahman hall". From the map a clear picture emerges of Karachi's sewage/drainage disposal channels. The map is regularly updated. Together with the map (ref. goths become abadis/urban), three more maps are regularly disseminated 1) showing city wide location of nalas/drains 2) the S-III plan for Karachi and 3) illustration of the blockage of the city's outfalls and the related land grab by the govt. and other official agencies

**Working with KWSB – City's Sewerage, Drainage, the S-III plan and the Water Supply plan for the city. Also is the working with P&D Deptt. and PHED Sindh.**

OPP-RTI proposal for a Sewage Disposal System for Karachi published as a monograph in 1998, presented an alternative to the KWSB's Greater Karachi Sewerage Plan. A study in 2001 for the governor's task force on municipal services strengthened this. The alternative has been: i) the existing functional system and present use of nalas/drainage channels for sewage and rain water disposal be accepted and the nalas/drains be developed as box trunks or interceptors be laid alongside ii) Sewage treatment plants to be built where the nalas/drains join the sea iii) Roles and responsibilities to be decentralised, so that external development becomes the responsibility of the government and internal development the responsibility of communities or cooperative societies.

It has been observed that the KMC and the KWSB are increasingly implementing the alternative proposal, as explained in 1.7.4 – 5 and 4.4. of the 148th quarterly progress report





1. KWSB's S-III plan: OPP-RTI's low cost proposal for sewage disposal for Karachi is now the Karachi Water and Sewerage Boards (KWSB) S-III plan for the city, KWSB has revised the PC-I, the cost is expected to rise from initial 8 billion to 25 billion. Project include setting up of 5 STPs with a treatment capacity of 550 mgd. Last period construction of TP-IV, Korangi and invitation of tenders for upgrading of TP-I and TP-III in progress. OPP-RTI's role on the one hand is to liaise with the KWSB and their consultants to ensure proper implementation and on the other to facilitate communities.

KWSB's local consultants have designed the project components as 1) the Lyari river basin and its 5 projects and 2) the Malir river basin and its 5 projects. Work on site on Lyari river basin has started and expected to be completed by the end of 2014, is now delayed.

OPP-RTI's work together with the KMC, assists in coordinating the development of the branch nalas/drains and their linkup to the above.

**Working with P&D Deptt. and PHED Sindh:** P&D Deptt. Sindh and PHED continues to support the external sewerage/drainage works in the goths/abadis of Karachi, indirect advocacy thru activists continues.



## Citizen's Water and Sanitation Group for the City of Karachi and other Cooperative Actions.

Thru the process of joint advocacy several city NGOs, CBOs, activists and citizens earlier came together as a group. Partner NGO, URC was used as the base.

The citizens strongly advocated use of local resources as opposed to foreign loans and building on what exists rather than superficial mega projects. OPP-RTI alternative for sewage/drainage disposal for the city was presented as a case study demonstrating the use of local resources and the lack of dependence on foreign loans.

In sewage disposal, drainage, water supply, solid waste disposal and transport the alternative plans, are advocated. In forums, media reports/programs, meetings with govt. and citizens the alternatives are presented and discussed. Govt.'s plans and works for sewage disposal/drainage and water supply have been influenced. Some details on sewage disposal, drainage and the water supply plan have been explained. Information about others is available with URC.



The group members support other on going cooperative actions. Earlier support was provided to avoid evictions of the poor from their settlements, as off and on there are some instances of threat by the govt. People resisted this, in most cases now they have succeeded in safeguarding their settlements. Need has been observed to further strengthen peoples resistance and negotiating power. The OPP-RTI's Secure Housing Support Program, as detailed in section 3, addresses this and other evolving needs. URC support continues to the railway communities. The communities won a case on right of freedom of information from the Ombudsman. The Ombudsman accepted public right to access information on vital government projects. On the order of Ombudsman, the government provided the relevant information to the communities.



## Site, Baldia, Gadap, Kemari, Lyari and Shah Faisal Town

**Site town:** Construction of the Mianwali drain (Site Town) 6,880 rft., 3,330 rft. is complete. (Orangi Town) 4,376 rft., 3,900 rft. is complete remaining work 4,026 rft.. Work on another the Mominabad drain phase-I-6,652 rft. started in May'11, 1,600 rft. drain has been completed and work stopped. Phase-II - 8,906 rft. is located in Orangi town. Due to political pressure the KMC has changed the design into a wasteful unnecessarily wide RCC drain. Since then as needed OPP-RTI was just documenting the work, as for now this too is not possible due to security situation.

**Baldia town:** Development of the Baldia nala 3,650 rft. designed by OPP-RTI as a box drain was earlier completed. This serves as sewage /drainage disposal for 4,000 houses in Baldia. Its disposal is the segment in Kemari town renamed as the Shershah-I nala, effort continues for its development.

**Gadap town:** Work on external/internal sanitation in UC-4,5 & 8 Gadap town has already been detailed in section 1.7.4 related to the work in the goths of Karachi.

**Kemari town:** Effort continues for the development of the Shershah-I nala measuring 4,365 rft.. The nala serves as sewage/drainage disposal for 10,000 houses. In addition it is the disposal segment of the Baldia box drain. Plan/design were earlier provided to the KMC engineers.

**Lyari Town:** For the Kalri and Pitchard nalas (9,505 rft. and 15,000 rft. respectively) plan, design and estimates costing Rs. 192.53 million were earlier provided to the KMC and the Planning and Development Deptt. of the Sindh govt. Work is approved, KMC has started tendering process.

**Shah Faisal Town:** By Dec'13 KMC started construction of Golden town nala with 3,000 rft. box drain completed. By June'14 KMC started construction of Moria goth nala, 550 rft. box drain completed.

## Sewerage Construction in Karachi-Dec'2016

Sr. No.	Number of Settlements	Internal Sanitation				External Sanitation	
		Lanes	Rft	Latrines	Cost(Million)	Mains.Rft	Cost(Million)
1	76	2907	502106	37476	67.545	*270364	604.801

\*Included are the natural nalas developed as box trunks, that serve a larger area then the settlements. For example the Manzoor Colony box drain is the disposal for a major part of Jamshed Town (Pop. 1 million). Likewise is the case with Welfare, Rajput, Mianwali, Baldia, Qalandria, Khairabad and KAN box drains that serve a major part of their towns.as well as the adjacent towns.Details are given below .

Sr.No.	Name of the Nala	Town	Length	Total Cost (Rs. million)	Lane Served	Houses Served
1	Manzoor Colony Nala	Jamshed Town	11670	93.3	625	12500
2	Welfare Colony Nala	Gulshan-e-Iqbal Town	1970	3.04	117	1415
3	Rajput Colony Nala	Gulshan-e-Iqbal Town	2125	1.04	50	629
4	Pirabad Muslimabad	Site Town	3484	14.0	105	860

5	Mianwali Colony Nala	Site Town	6862	21.89	350	12618
6	Baldia Town Nala	Baldia Town	15715	64.7	625	12500
7	Kawaja Ajmair Nagri(KAN) Nala Phase-1	Gadab/New Karachi Town	9333	27.83	553	6000
8	Qalandria NalaPhase-1	North Nazimabad Town	8237	42.67	600	9000
9	Khairabad Nala Phase-1	Gadap/Orangi Town	16000	71.152	2200	40000
10	Sungal Drain	Gulshan Town	8660	54.39	750	18750