



**PROJECT FOR
INTEGRATED SOLID WASTE MANAGEMENT MASTER PLAN IN
GUJRANWALA**

**INTERVIEW SURVEY OF ENVIRONMENTAL
AWARENESS AT EXISTING LANDFILL SITE IN
GONDLANWALA, GUJRANWALA**

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**PREPARED BY: HINA ISHAQUE
WASTE MANAGER, GUJRANWALA WASTE MANAGEMENT COMPANY
(GWMC)
BY THE GUIDANCE OF JICA PROJECT TEAM**

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List of Abbreviations

GWMC	Gujranwala Waste Management Company
ISWMP	Integrated Solid Waste Management Master Plan
JICA	Japan International Cooperation Agency
SWM	Solid Waste Management
TMA	Tehsil Municipal Administration
UU	Urban Unit

Interview Survey of Environmental Awareness at Existing Landfill Site, Gujranwala

1. INTRODUCTION

Gujranwala lies approximately 70km in the North of Lahore. The city centre locates at 32.16° North, 74.18° East and the elevation is 226 meters (744 feet) above seawater-level. The total area of the city for 64 UCs is approximately 61.5 km². Gujranwala is a major agricultural and industrial city of Punjab. Gujranwala shares its city boundary with Wazirabad in the North, Nowshera Vikran and Kamoke in the South. Figure 1 shows the map of Gujranwala city area and peri-urban area.

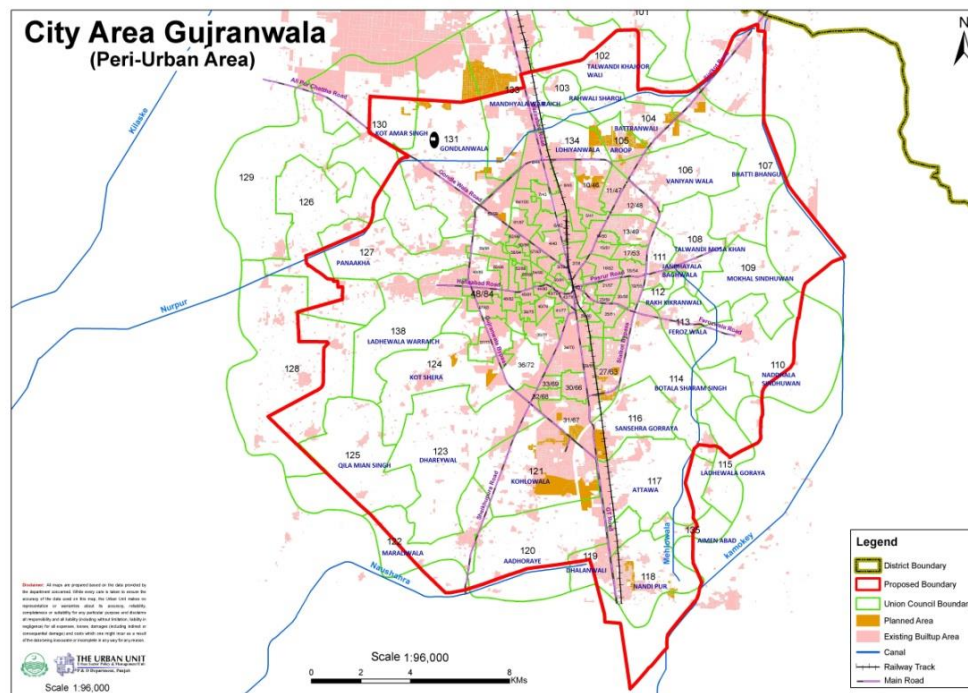


Figure 1: Map of Gujranwala

In Gujranwala, the project for Integrated Solid Waste Management Master Plan (hereinafter referred to as “ISWMP”) was initiated by JICA in cooperation with the authorities concerned of the Government of Islamic Republic Pakistan. The project involves various kinds of field surveys and studies because of unavailability of basic data and information regarding solid waste management. This survey “Environmental Awareness at Existing Landfill Site, Gujranwala” is conducted in view of grasping the problems of residents living nearby the Gondlanwala disposal site. The survey is carried out by the JICA Project Team with collaboration of Gujranwala Waste Management Company (hereinafter referred to as “GWMC”) and the Urban Unit, Punjab Government (hereinafter referred to as “UU”). The location of the Gondlanwala disposal site is shown in Figure 2 together with and other two disposal sites related with ISWM.

Currently, Gondlanwala is used as the temporary disposal site for the municipal solid waste of Gujranwala city. The site is located approximately 8 km away from the centre of the city towards north-northwest. Approximate area of the dumping site is 4.7 ha (12 Acres) and average depth of land depression is 8 to 9m. The site will be utilized by GWMC until the new sanitary landfill facilities becomes operational. Waste disposal at this site started in March 2014 for disposal of domestic waste from the 64 urban union councils in Gujranwala City.

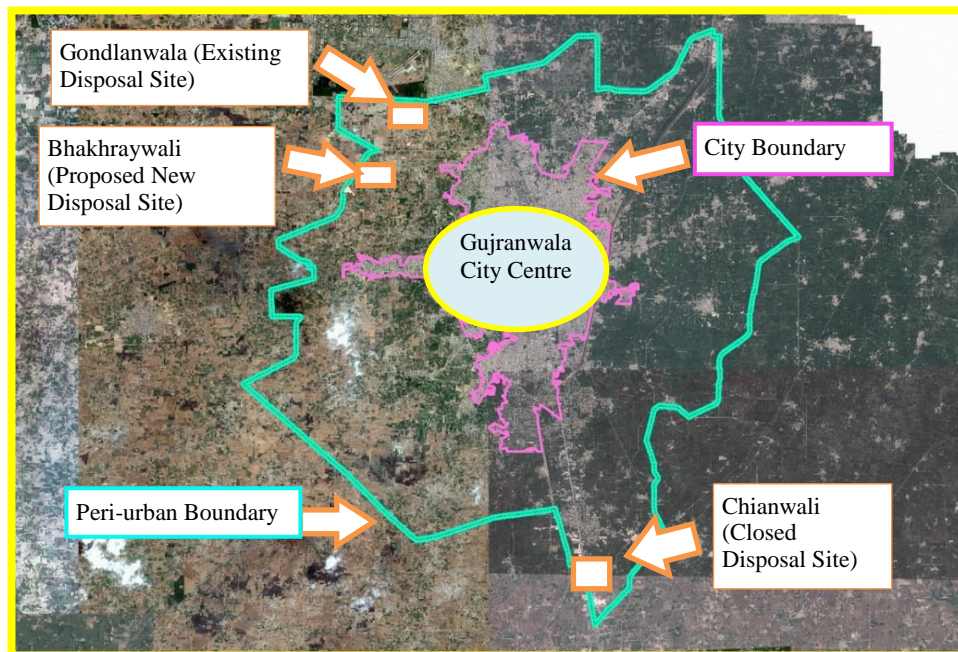


Figure 2: Location Map of Gondlanwala Disposal Sites

The site is expected to be used for 2 to 3 years for the estimated volume of about 400,000 m³. Dumping is carried out actively and the available area is decreasing day by day. The loaded waste amount of each vehicle is weighed by the weighbridge. Then, the waste is unloaded onto the top of the dumping site for spreading and compaction by two units of tractor shovels. In the records of the weighbridge, the maximum incoming waste amount up to now has become 665 tons per day on 30th September 2014.

The open dumping method is used for disposal, so that environmental degradation especially groundwater contamination, breeding of pests such as flies, etc., have become significant problems. GWMC is taking measures for draining contaminated water at the bottom of the dumping area and spraying insecticides but the effects are not quite significant.

Waste pickers, most of them look like under 18 years old male, collect recyclable materials at the waste unloading area and on the slope where wastes slide down to the bottom of the dumping area. The number of waste pickers was estimated to around 20 people, initially, but about 35-40 people divided into three groups working daily from September. Health hazards and risk of recovery operation is a matter of concern. The information about waste pickers working at Gondlanwala is being collected by another interview survey.

Surface water ponding at the bottom of the dumping area is contaminated, causing groundwater contamination. There are three farm houses within the distance of 500m from Gondlanwala disposal site as shown in Figure 3. The total number of people residing in these three houses is about 50. They live on breeding of about 150 livestock and agriculture stock in the area.

Every house uses groundwater for daily living, agriculture and livestock. Every house uses groundwater from shallow and deep aquifers by hand pump and tube well.

Before this survey, environmental awareness survey of the existing dumping site was not conducted. This survey was conducted for the first time to know the problems of residents and their level of awareness regarding environment and solid waste management.

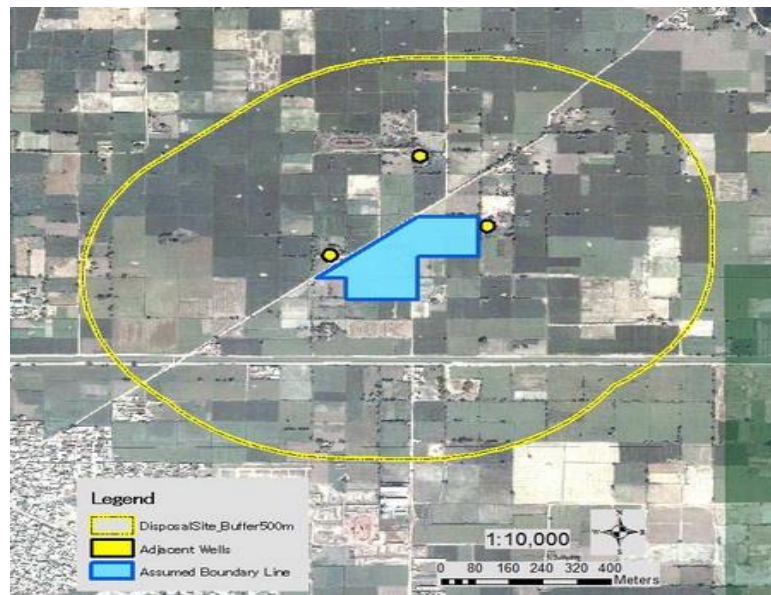


Figure 3: Location of Gondlanwala Disposal Site

2. OUTLINE AND PURPOSE OF SURVEY

2.1 Outline of the Survey

Interview survey was carried out to the residents in the vicinity of Gondlanwala site for 45 samples/ households located approximately 1km radius of the disposal site as shown in Figure 4. The questionnaire was prepared based on the description in the Inception Report and items of the sub-contracted Social Survey for adjustment. The survey was carried by the team of Waste Manager and Survey Assistant for 4 days. Orientation or rehearsal was conducted prior to the field survey. The survey was started in the 1st week of December.

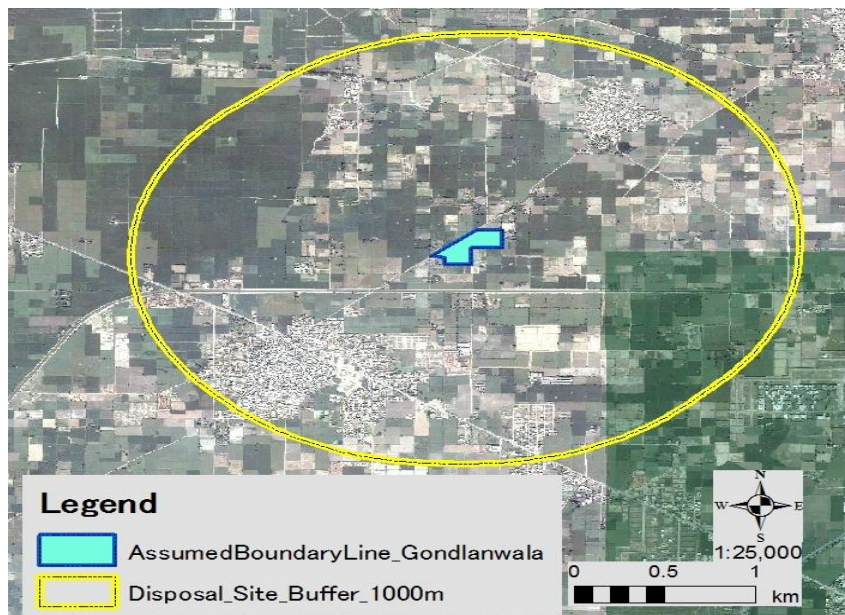


Figure 4: Targeted Area of Resident Interview Survey

2.2 Purpose of the Survey

The purpose of the Interview Survey of Environmental Awareness at Existing Dumping Site, Gujranwala is:

- Grasping the awareness level regarding environmental issues and concerns/problems among the residents in the vicinity of the existing dumping site in Gondlanwala, Gujranwala.

3. METHODOLOGY

3.1 Survey Team Configuration

Waste Manager and survey Assistant was deployed for this survey as shown in Table 1.

Table 1: Team Deployed for Survey

Sr. No.	Designation	Name
1.	Waste Manager	Hina Ishaque
2.	Survey Assistant	Qiaser Khalid Rana

3.2 Survey Work Time Schedule

The survey was conducted based on the time schedule shown in Table 2. The field survey was carried out in 4 days in the first week of December 2014.

Table 2: Time Schedule of Survey

Survey Work Time Schedule																				
Year	2014																			
Month	November					December														
Day	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Day of the Week	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
Current Situation Survey of the Residents in the Vicinity of the Existing Landfill Site (1 time)																				
Person in charge: Takasugi, Tsutui (Final analysis and incorporation into the report)																				
Survey																				
Waste Manager (Hina Ishaque.)							1	1	1	1										
Employee							1	1	1	1										
Data Analysis																				
Waste Manager (Hina Ishaque.)											1	1		1						
Employee																				
Total																				
Waste Manager	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0
Employee	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0

3.3 Survey Method

The questionnaire was finalized in discussion among the staff of the JICA Project Team and GWMC. The questionnaire items included the queries for the kinds of i) General information about the residents, ii) Awareness level of residents regarding solid waste and its management and iii) Their opinions for solid waste management. Furthermore, it included the questions to grasp the problems of

residents facing due to the landfill operation of the dump site and their opinions about the current waste disposal operation.

Forty five (45) households were picked out from the 1km radius target area shown in Figure 4 depending upon the number of houses population of the villages. The number of sample households is listed in Table 3 below.

Table 3: Number of Samples for Interview Survey

Areas	Number of Samples
Dera with Family nearby Gondlanwala Disposal Site	6
Dera without Family near Gondlanwala Disposal Site	4
Village RurryalaWarraich	10
Village Saar Wala	5
Village DeraQadam Abad	4
Village Gondlanwala	16
Total	45

RurryalaWarraich Village is situated north-east of the existing disposal site. Village Sara Wala and Qadam Abad are located north-west side while Gondlanwala Village is located south-east side of the existing disposal site.

Figure 5 shows the interview survey target households distributed in the villages mentioned above.

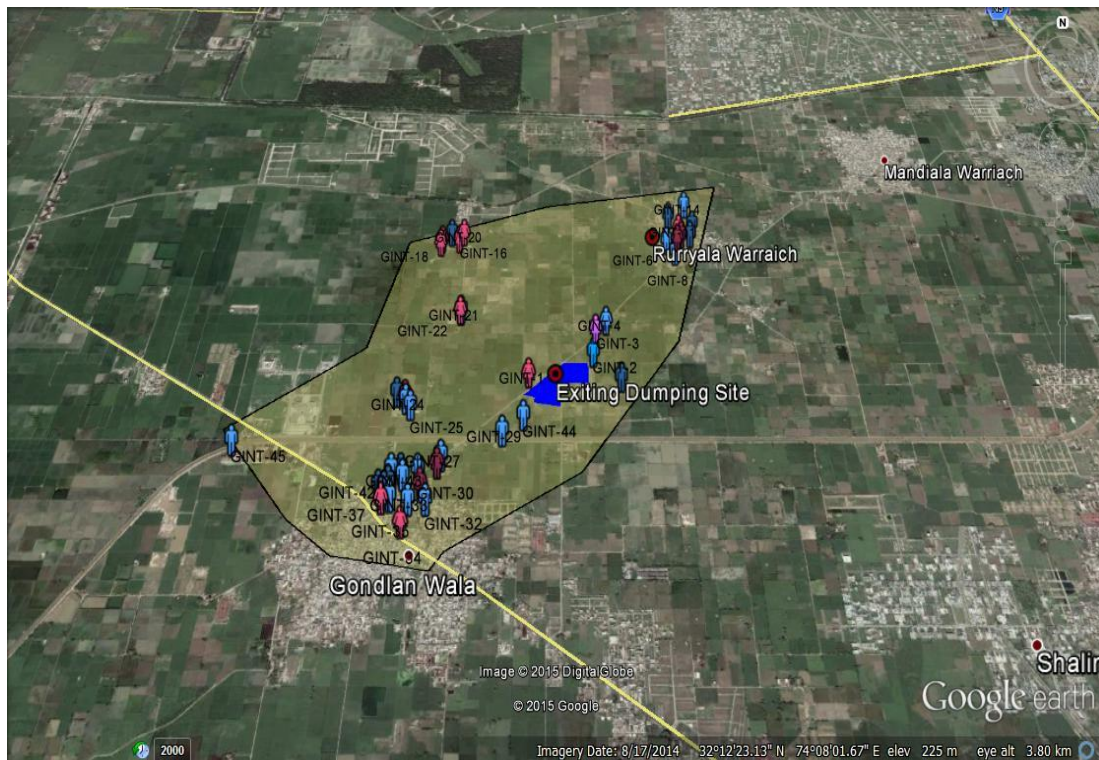


Figure 5: Location of Selected Households for Resident Interview Survey

The questions that were asked from the residents in the vicinity of the existing dumping site are summarized in table 4.

Table 4: Survey Items in the Questionnaires

Part 1: General Information
Sex
Age
Location
Household/ Dera
Latitude/Longitude
Part 2: Understanding about Solid Waste
Where waste is discharge
Location of discharge
Separation and recycling habit
Understanding about Compost
Understanding about risk associated if waste is not dumped properly
Part 3: Opinion about SWM
Problems due to existing dumping site
Opinion for waste pickers
Opinion for current operation of waste

4. DATA PROCESSING AND RESULT OF SURVEY

The data of the questionnaire was processed in order to understand the problems that the respondents were facing due to dumping site. The results obtained from statistical analysis of questionnaires were represented in graphical form and discussed below.

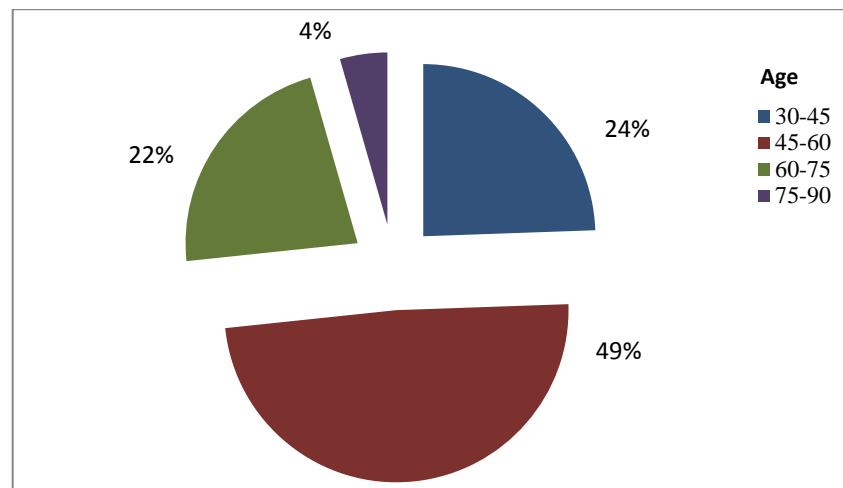
4.1 General Information

First part of the questionnaire includes the general information like name, sex, age, number of family members, and occupation etc.

4.1.1 Age of respondents

Table 5: Age of respondents

Age	Frequency	Percentage
30-45	11	24
45-60	22	49
60-75	10	22
75-90	2	4



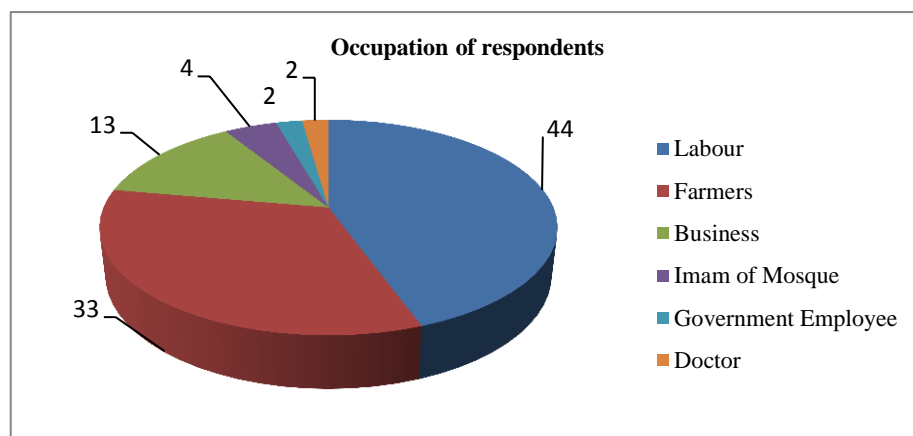
Graph 1: Age of respondents

Table 5 and Graph1 show the age groups of the respondents. The interview was conducted with the master/head of the family. It is clear from the graph that 49% respondents are from 45-60 age group, 24% are in range of 30-45 age group and 22% are 60-75 age group. Only 4% respondents were in the range of 75-90 age group.

4.1.2 Occupation of the respondents

Table 6: Occupation of Respondents

Occupation	Number of respondents	Percentage
Labour	20	44
Farmers	15	33
Business	6	13
Imam of Mosque	2	4
Government Employee	1	2
Doctor	1	2



Graph 2: Occupation of Respondents

Table 6 and Graph 2 show the occupation of respondents. Forty four percent (44 %) respondents are labour, 33% are farmers, 13% do their own business, and 2% are Government employees.

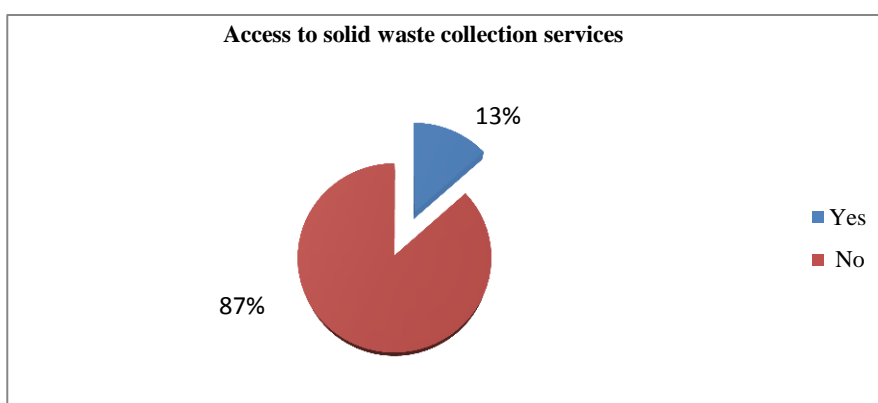
4.2 Awareness and Understanding of Solid Waste and its Management

To know about the awareness of the residents about solid waste management, the following results were obtained.

4.2.1 Access to Solid Waste Management Services

Table 7: Frequency of Access to Solid Waste Management Services

	Frequency	Percentage
Yes	6	13
No	39	87
Total	45	100



Graph 3: Percentage of access to solid waste collection services

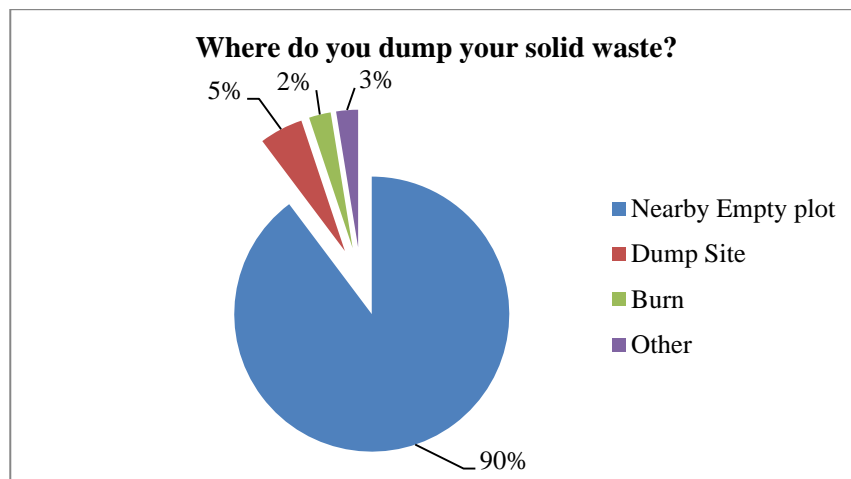
Table 7 and Graph 3 represent that 87% residents living nearby existing dumping site has no access to solid waste management services. Only 13% have hired a private sanitary worker by paying waste collection fee to him. They pay fee in the range of 100-150 Rupees per month. Out of these 13% respondents, 6.5% are satisfied with the current solid waste management services and others are not satisfied.

Although in Gondlanwala village, the provision of solid waste collection services is the responsibility of TMA Aroop but due to lack of budget these services are not provided.

4.2.2 Frequency of Discharging Solid Waste

Table 8: Frequency of Discharging Solid Waste

Frequency of Discharging Solid Waste		
	Frequency	Percentage
Nearby Empty Plot	35	89.7
Existing Dump Site	2	5.1
Burn	1	2.6
Other (Nearby Canal)	1	2.6
Total	39	100



Graph 4: Percentage of dumping of solid waste

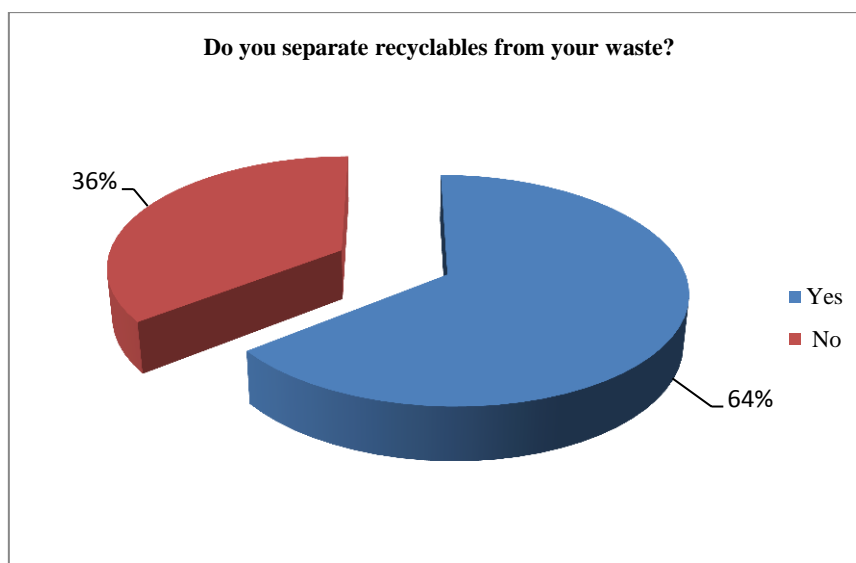
Table 8 and Graph 4 show that about 90% respondents discharge solid waste in the nearby empty plots, 5.1 % respondents dispose solid waste in the existing landfill site, 2.6% of the respondent burn waste and 2.6% discharge waste in the canal. As mentioned earlier, collection service is not provided by the government in these areas, so people do manage domestic waste by themselves.

4.2.3 Separation of Recyclables from waste

This question is a multiple choice question for replying the answer Yes or No.

Table 9: Separation of Recyclables from Waste

	Frequency	Percentage
Yes	29	64
No	16	26
Total	45	100



Graph 5: Percentage of separation of recyclables from waste

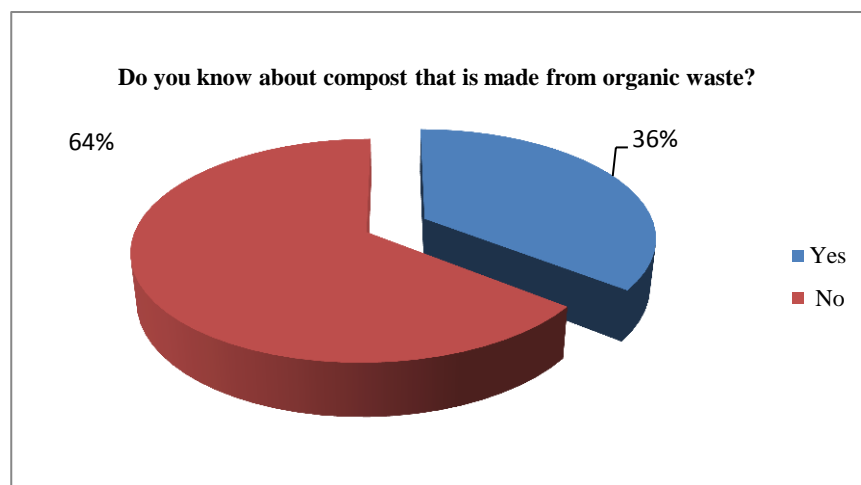
Table 9 and Graph 5 show that sixty four percent (64%) respondents separate the recyclables from waste and other 36% respondents do not separate recyclables. The reason why they do not

separate recyclables is they were not using newspaper, pet bottles or other things like that, they belonged to low income group and mostly respondents were labourer by profession.

4.2.4 Awareness about compost

Table 10: Awareness of Compost from waste

	Frequency	Percentage
Yes	16	36
No	29	64
Total	45	100



Graph 6: Percentage of understanding of compost

Table 10 and Graph 6 show that only 36% respondents do not aware about compost made from organic portion of the waste. The majority of 64% of the respondents have an idea of compost from organic waste.

4.2.5 Understanding about Risks Associated with Waste

One hundred percent (100 %) respondents have understanding about this. They know that if waste is not disposed properly, diseases may spread, and it cause health damage.

4.2.6 Contribution of Gondlanwala Disposal Site for Gujranwala SWM

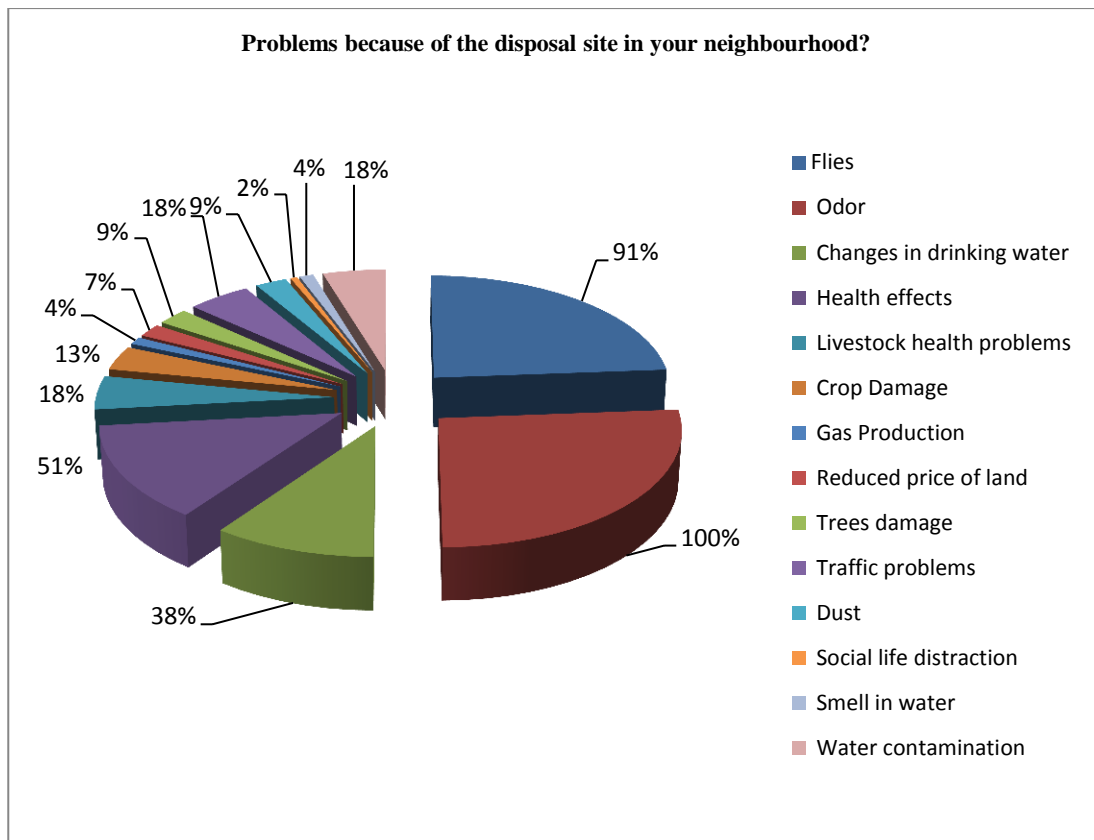
The question is "Do you think this disposal site contributes for Gujranwala city?" This is a multiple choice question; all respondents said that existing disposal site may contribute for Gujranwala city but not for us. Their main opinions associated with the questions are i) it is a problem for us. ii) Beauty of the area is lost due to dumping of waste, iii) now it looks a dirty place.

4.2.7 Problems Facing by Respondents

When asked about the problems they have ever felt, all respondents replied that they are facing a number of problems due to this dumping site. This is an open ended question, we received a list of problems from every respondent and all these problems are overlapping. So coding is done for each problem and categorized it as given in Table 11.

Table 11: List of Problems facing by respondents

Problems	Frequency of Respondents	Percentage of Respondents
1. Flies	41	91
2. Odour	45	100
3. Drinking water taste is different	17	38
4. Health effects	23	51
5. Health problems of Livestock	8	18
6. Crop Damage	6	13
7. Gas production	2	4
8. Price of land is reduced	3	7
9. Trees damage	4	9
10. Traffic problems	8	18
11. Dust	4	9
12. Social Life Distraction	1	2
13. Smell in water	2	4
14. Water Contamination	8	18



Graph 7: Percentage of problems respondents were facing

Table 11 and Graph 7 show that the major problem of the respondents from the existing dumping site is odour. One hundred percent (100 %) respondents have bad odour problem. Then the second major problem is flies/ mosquitoes. Ninty one percent (91%) of the respondents have problem

of flies. Thirty eight percent (38 %) respondents is noticing the change of water taste. Four percent (4 %) respondents feel smell in water. Eighteen percent (18%) respondents said that water in this area is contaminated. Before the current operation the drinking water of this area is very clean and pure but now the taste of water is different.

Fifty one percent (51%) respondents say that their children remain sick most of the time. The main health problems they are facing; gastrointestinal problems, hepatitis, breathing problems etc. They say that the children suffer more than elders.

Eighteen percent (18%) respondents say that they are facing with the problem of livestock's health. As people are breeding buffaloes, goats, cows etc. in their deras / house yard. This percentage is less because only a few respondents breed livestock in their house yard. This percentage is from the deras/animal farms where visited.

Thirteen percent (13%) respondents say that their crop is damaged. They say that the production of wheat, rice is decreased this year.

Two out of 45 people four percent (4%) respondents say that methane gas is produced in their deras. Gas production is noticed only those respondents who live nearby the existing dumping site in deras.

Seven percent (7 %) respondents say that the price of land nearby the existing dumping site is dropped.

Nine percent (9 %) respondents say that trees are damaged. Eighteen percent (18%) respondents are facing the problem of traffic congestion as road is single / one-way. They say that minor accidents also occurred due to heavy traffic.

Nine percent (9 %) respondents say that dust is more due to unpaved road. Two percent (2%) respondents say that their social life is destructed because their relatives do not visit them due to bad smell and flies.

4.3 Opinion for Solid Waste Management

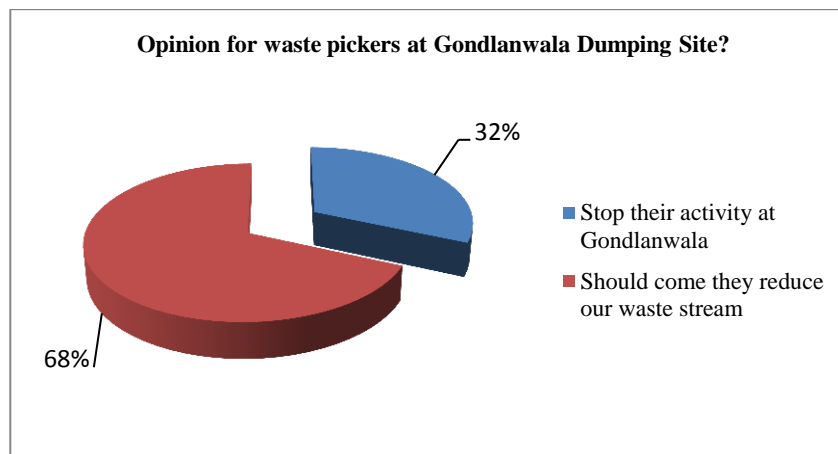
4.3.1 Opinions for Waste Pickers at the Gondlanwala Disposal Site

First part of this question is multiple choices and second part is open ended question.

Forty two percent (42%) respondents are eligible to answer this question and 58% are not eligible to answer this question as they did not know about the activity of waste pickers at Gondlanwala Disposal Site.

Table 12: Opinion about Waste Pickers at Gondlanwala Disposal Site

Opinion about waste pickers at Gondlanwala Dumping Site					
	Frequency	Percentage	19 Respondents out of 45		
			Opinion	Number Out of 19	Percentage
Yes	19	42	Stop their activity at Gondlanwala	6	32
			Should come they reduce our waste stream	13	68
			Total	19	100
No	26	58			
Total	45	100			



Graph 8: Opinion for waste pickers at Gondlanwala Dumping Site

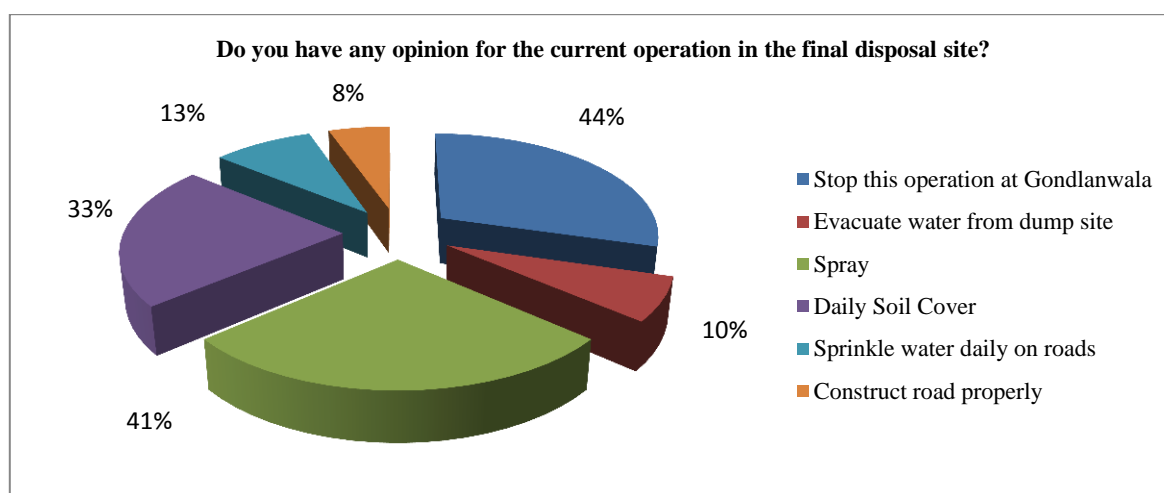
Table 12 and Graph 8 show that 68% respondents say that waste pickers contribute for reducing disposal waste amount. They say that waste pickers should come. While 32% respondents say that the activity of waste pickers at Gondlanwala existing disposal site should be stopped because of security problems. The respondents say that the waste pickers steal things from their houses.

4.3.2 Opinions for Solid Waste Management

First part of this question is multiple choices and the second part is open ended question. Only 87% respondents are eligible to answer this question and 13% are not eligible to answer this question.

Table 13: Opinion for the Current Operation of the Existing Gondlanwala Disposal Site

Opinion for the current operation in the final disposal site					
39 Respondents out of 45 Answered					
	Frequency	Percentage	Opinion	No. out of 39	Percentage
Yes	39	87	Stop this operation at Gondlanwala	17	44
			Evacuate water from dump site	4	10
			Spray	16	41
			Daily Soil Cover	13	33
			Sprinkle water daily on roads	5	13
			Construct road properly	3	8
No	6	13			
Total	45	100			



Graph 9: Opinion for current operation at Gondlanwala

Table 13 and Graph 9 show that 44% respondents say to stop the current operation at Gondlanwala dumping site, 10% respondents say to evacuate water from the dump site, 41% say to spray insecticide daily, 33% say to cover the waste daily with soil, 13% respondents say to sprinkle water on road daily, and 8 % say to construct the road properly to reduce the damages.

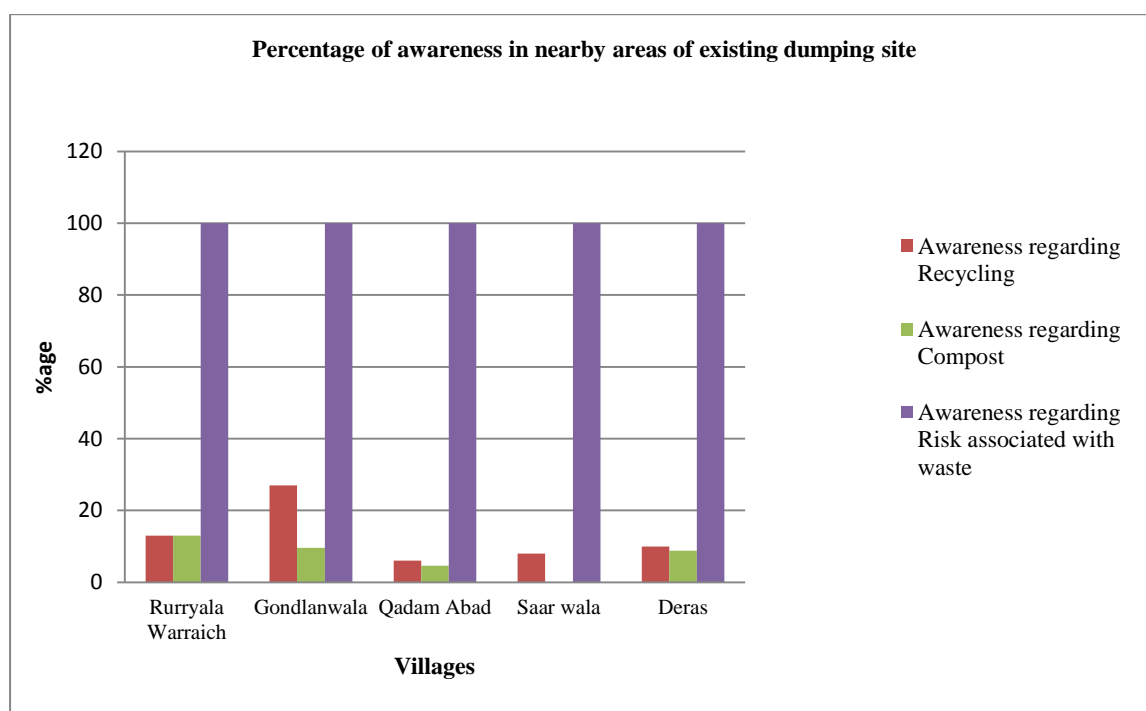
5. EVALUATION OF SURVEY RESULT

5.1 Level of Awareness

From the survey data of 45 respondents, it is evaluated that the level of awareness is high in Gondlanwala village as compared to other villages as shown in Table 14 and Graph 10 below. Twenty seven percent (27%) people out of 64% of Gondlanwala understand the recycling practices and 9.6% aware about the compost that is made from the organic waste. Awareness level is the lowest in the village Saar Wala, only 8% respondents aware about the recycling practices and no one aware about compost. It is observed that the level of awareness link with education. Awareness level regarding risks associated with waste is the highest in all the villages surveyed.

Table 14: Level of Awareness in Different Villages

Awareness Level in different Villages	Awareness regarding Recycling (%)	Awareness regarding Compost (%)	Awareness regarding Risk associated with waste (%)
RurryalaWarraich	13	13	100
Gondlanwala	27	9.6	100
Qadam Abad	6	4.6	100
Saar wala	8	0	100
Farm lands	10	8.8	100
	64	36	100



Graph 10: Level of Awareness in different respondents

5.2 Types of Problems facing by Respondents

When asked about the problems they have ever faced from the existing dumping site, all 45 respondents say that they are facing with the problem of bad smell/odour. Although Gondlanwala village is very far from the existing dumping site but 15 respondents (33%) out of 45 reply the odour problem.

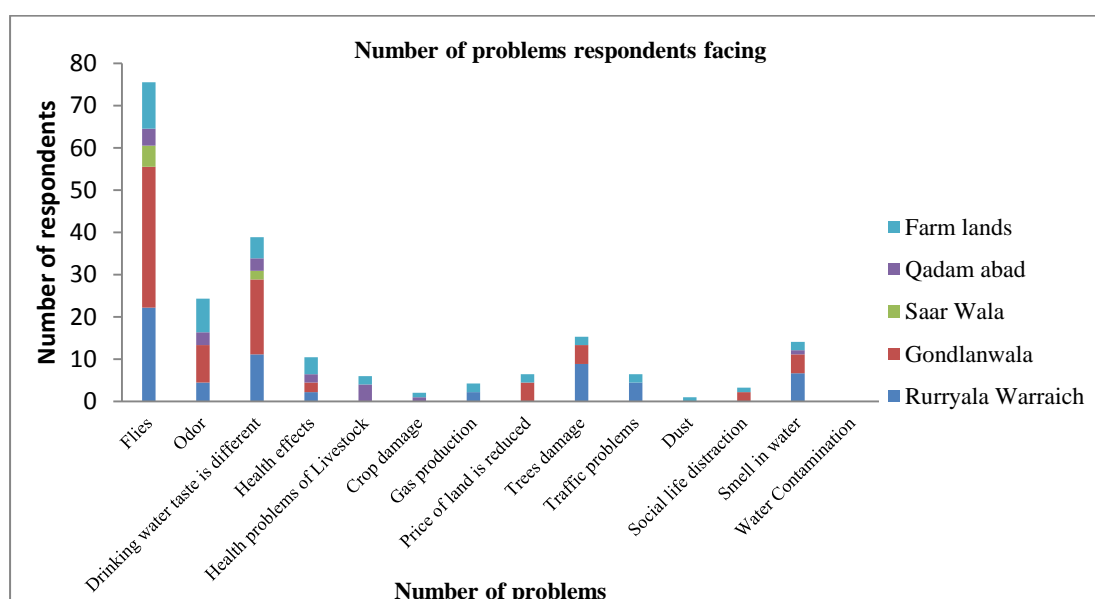
Respondents who worry about water contamination also reply concern about the influence to the health. Respondents in Rurryala warraich (6%), Gondlanwala (4%) and Farmlands (4%) are particularly concern about water contamination problem.

Those who say the problem of livestock health cultivate farmlands (9%). It shall be noted that the traffic problem is pointed out by most of the people in RurryalaWarraich as they use single approach road going to their village. Problems such as gas production, trees damage, social life disturbance and price of land drop are replied only by the respondents of farmlands as shown in Table 15 and Graph 11.

Table 15: Problems of Respondents of Gondlanwala

Problems	RurryalaWarraich	Gondlanwala	Saar Wala	Qadam Abad	Farm lands
	Number of respondents in each village				
Flies	9	15	5	4	8
Odour	10	15	5	4	11
Drinking water taste is different	2	4	0	3	8
Health effects	5	8	2	3	5
Health problems of Livestock	1	1	0	2	4

Crop damage	0	0	0	4	2
Gas production	0	0	0	1	1
Price of land is reduced	1	0	0	0	2
Trees damage	0	2	0	0	2
Traffic problems	4	2	0	0	2
Dust	2	0	0	0	2
Social life distraction	0	0	0	0	1
Smell in water	0	1	0	0	1
Water Contamination	3	2	0	1	2



Graph 11: Level of Awareness in different respondents

5.3 Opinions for the Current Landfill Operation

Twenty two (22) out of 39 (56%) of respondents agree to some extent that the current operation at the existing dumping site should be carried out but after some arrangements. One third of the respondents 17 out of 39 (44%) say that they do 'totally not agreed' to the current operation and they say to stop this operation as soon as possible.

Four (4) out of 39 respondents (10%) say to evacuate water first from the existing dumping site and then use it. Sixteen (16) out of 39 respondents (41%) request to spray insecticide so that the problem of flies/ mosquitoes can be overcome.

Thirteen (13) out of 39 (33%) respondents say to cover the waste with soil daily while 5 out of 39 (13%) respondents say to sprinkle water on road to overcome the problem of dust. Three (3) out of 39 (8%) say to construct the road properly.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

This survey on awareness of residents reveals the fact that the knowledge, perception and awareness of solid waste management are clearly related to the education of a person. The better educated people are, the more they look for understanding of solid waste management services. It is concluded from the survey that awareness level regarding solid waste management is not so poor

especially regarding the risks associated with waste. One hundred percent (100 %) respondents know the risks associated with solid waste if the management is not practice properly and about 64% people have the idea of recycling. But 36% people have no idea of compost.

All of the forty five respondents living nearby the existing dumping site reported that they all are facing a lot of problems. And the major problems are bad smell/odour, flies/ mosquitoes, health effects and change in water taste. All the respondents, 100%, are facing the problem of odour/ bad smell, 91% respondents are facing the problem of flies/ mosquitoes, and 51% claimed about the health effects. It is also recorded that children are more vulnerable to health problems as compared to adults.

One serious challenge noted by the majority of the residents is a lack of intention of GWMC on cleaning arrangements at the existing dumping site. These problems can be overcome if proper arrangements are provided in that area.

6.2 Recommendation

- Waste collection service is not provided in the survey area. So the people manage their waste in different way or inappropriately by themselves. Provision of waste collection services to them may induce cooperative manner to the landfill operation.
- Current environmental and social impacts should be improved through practicing appropriate landfill management. In view of the current situation, emergency measures must first be taken to mitigate at least, the following:
 - Daily soil conversion the waste.
 - Daily pest control.
 - Improvement of a proper access road
 - Installation of leachate collection, pumping and evaporation system.

Appendix-1: Survey Data

Gondlanwala Interview-No.		GINT-1	GINT-2	GINT-3	GINT-4
Date		1/12/2014	1/12/2014	1/12/2014	1/12/2014
Name of Interviewee:		Salma Bibi	Muhammad Abid	FoziaBibi	Muhammad Latif
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 23. 5" E: 074° 07' 56. 4"	N: 32° 12' 27. 3" E: 074° 08' 08. 7"	N: 32° 12' 32. 0" E: 074° 08' 09. 5"	N: 32° 12' 33. 6" E: 074° 08' 11. 6"
Recorded by		Hinalshaque	HinaIshaque	Hinalshaque	HinaIshaque
1	General Information				
1.1	Age	38	41	52	38
1.2	Sex	F	M	F	M
1.3	Address:	Near Gondlanwala Dump Site	Behind Gondlanwala Dump Site	Dera Ali Hassan, Gondlanwala Dumping Site	ManeywalaDera, near Gondlanwala Dumping Site
1.4	Number of family members	16	8	11	10
1.5	Occupation/ Source of Income	Labour	Farmer	Farmer	Animal Farming
1.6	Dera type place or Family House	Family House	Dera	Family House	Family House
1.7	Contact No:	Nil	0347-6000741	0345-6554593	0347-6131136
2	Awareness and Understanding of Solid Waste and its Management				
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	B	C	A	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	B	B	A	B
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	A	A	B	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Clean the city but not for us, Ground Water Contamination due dumping of waste here	Clean the city but odour problem for us.	Ground water is contaminated	Smell and odour due to this dump site, also Ground water is contaminated
3	Opinion for Solid Waste Management				
3.1	Have you ever felt any problem because of the disposal site in your neighborhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Flies, 2. Odour problem, 3. Drinking water taste changed, 4. Health effects on children, 5. Livestock health problems	1. Flies, 2. Odour problem, 3. Drinking water taste is changed, 4. Gas production, 5. Trees damaged, 6. price of land is reduced	1. Flies/ mosquitoes, 2.smell/ odour problem, 3. Animal Health Problems	1. Flies/ mosquitoes, 2.smell/ odour problem, 3. Animal Health Problems, 4. Diseases spread 5.Traffic accidents
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	B	B	A	B
3.2(a)	Opinion			Stop their activity	
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	A
3.3(a)	opinion	Stop dumping waste here	Stop dumping waste here	Stop the current operational acitivity, stop to dump waste here	Stop waste throwing here

Gondlanwala Interview-No.		GINT-5	GINT-6	GINT-7	GINT-8
Date		1/12/2014	1/12/2014	1/12/2014	1/12/2014
Name of Interviewee:		Abdul Aziz	Rehmat Ali	KhalidaPerveen	IftikharMehmood
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 36. 9" E: 074° 08' 13. 9"	N: 32° 12' 50. 9" E: 074° 08' 25. 0"	N: 32° 12' 51. 6" E: 074° 08' 27. 6"	N: 32° 12' 48. 4" E: 074° 08' 26. 6"
Recorded by		HinaIshaque	HinaIshaque	HinaIshaque	HinaIshaque
1					
1.1	Age	70	52	55	48
1.2	Sex	M	M	F	M
1.3	Address:	ManeywalaDera, near Gondlanwala Dumping Site	RaryalaWarraich near Mosque ToheedGanj	RaryalaWarraich	Sheikh House, RaryalaWarraich
1.4	Number of family members	8	6	4	12
1.5	Occupation/ Source of Income	Farmer	Labour	Labour	Government Employee
1.6	Dera type place or Family House	Dera	Family House	Family House	Family House
1.7	Contact No:	Nil	0306-6482738	Nil	0333-8124337
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	A
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				B
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				A
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				B
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A	A	
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	A	A	A	B
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	A	A	A
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Ground water is contaminated due to this	Health is effected due to this	Bad Smell, Environment of this area is polluted.	Good for the city of Gujranwala but it is problem for us. It is cause of environmental pollution in our area.
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Number of Flies increses, 2.we cannotbreath in this air, smell/ odour problem, 3. Health Problems, 4. Smell in water 5.Traffic jams, 6. land price is reduced, 7. accidents due to waste vehicles,	1. Flies increases, 2.smell/ odour problem, 3. Drinking water taste is changed	1. Flies increases in this area, 2.smell/ odour problem, 3. Health effects on children, child gastrointestinal problems, 4. Accidents due to heavy traffic and road is narrow	1. Bad Smell, 2.Flies and Mosquitoes number increase
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	A	B	B	B
3.2(a)	Opinion	Stop their activity			
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	B
3.3(a)	Opinion	Stop waste throwing here	Should cover the waste with soil daily	Stop throwing waste here, our relatives do not visit our home due to the smell. Our village becomes dirty due to this waste dumping.	

Gondlanwala Interview-No.	GINT-9	GINT-10	GINT-11	GINT-12
Date	2/12/2014	2/12/2014	2/12/2014	2/12/2014
Name of Interviewee:	ShehnazBibi	AsmatTahira	Kishwar Sultana	BasharatMehmood
Surveyor	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates	N: 32° 12' 50. 7" E: 074° 08' 29. 3"	N: 32° 12' 52. 4" E: 074° 08' 28. 5"	N: 32° 12' 54. 0" E: 074° 08' 28. 1"	N: 32° 12' 52. 4" E: 074° 08' 30. 2"
Recorded by	Hina Ishaque	Hina Ishaque	Hina Ishaque	Hina Ishaque
1				
1.1	Age	49	61	52
1.2	Sex	F	F	F
1.3	Address:	RaryalaWarraich	RaryalaWarraich	RaryalaWarraich
1.4	Number of family members	8	9	12
1.5	Occupation/ Source of Income	Labour	Labour	Labour
1.6	Dera type place or Family House	Family House	Family House	Family House
1.7	Contact No:	0320-6004867	0324-6087615	0321-4792929
2	Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	A	A
2.1.1	Who does collect? (A: Govt. B: Private C: Other)		B	B
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)		A	A
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)		A	A
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A		A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	A	A	A
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	A	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B
2.9(a)	In what way	Ground water contamination. When they started to throw waste here water is present inside the depression so when they put waste all water source of this area becomes contaminated.	Environment is degraded	Cholera spread in our area
				it is a cause of environmental pollution especially air of this area is polluted and we are facing health problems.
3	Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighborhoods? (A: Yes B: No)	A	A	A
3.1(a)	Problems	1. Smell increases 2. water Contamination 3. Dust problem	1. Flies increases in this area, 2.smell/ odour problem, 3. Itching on skin	1. Flies, 2. Drinking water taste is changed, 3. Gastrointestinal problems in children, 4. Bad Smell, 5. Traffic Jams
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	A	B	B
3.2(a)	Opinion	Sympathetic behaviour for them		
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A
3.3(a)	Opinion	Sprinkle water daily on road to reduce the dust.	Spray daily on waste	Wide the road and spray insecticides
				Sparry daily

Gondlanwala Interview-No.		GINT-13	GINT-14	GINT-15	GINT-16
Date		2/12/2014	2/12/2014	2/12/2014	2/12/2014
Name of Interviewee:		Muhammad Shakeel	Muhammad Ijaz	Syed Muhammad Munir	RasoolBibi
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 54. 8" E: 074° 08' 30. 9"	N: 32° 12' 59. 5" E: 074° 08' 29. 6"	N: 32° 12' 56. 8" E: 074° 08' 25. 9"	N: 32° 12' 51. 3" E: 074° 07' 41. 0"
Recorded by		Hina Ishaque	Hina Ishaque	Hina Ishaque	Hina Ishaque
1					
1.1	Age	38	42	68	72
1.2	Sex	M	M	M	F
1.3	Address:	RaryalaWarraich	RaryalaWarraich	RaryalaWarraich	Dera Saar wala
1.4	Number of family members	8	8	12	11
1.5	Occupation/ Source of Income	Business	Business	Business	Labour
1.6	Dera type place or Family House	Family House	Family House	Family House	Family House
1.7	Contact No:	0324-6415865	0322-5567840	0323-7445828	Nil
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	A	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)			B	
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)			A	
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)			B	
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A		A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	B	A	B	B
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	A	B	A	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Environment of this area is polluted our relatives do not visit our home due to bad smell	Diseases spread due to waste in our village. My wife remains sick when the waste is coming here. Air of this area is not pure and natural due to this waste.	Bad Smell	Bad Smell
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Flies, 2. Bad Smell, 3. Traffic Jams	1. Flies/ mosquitoes problem 2. Drinking water taste is changed, 3. Diseases spread in our area 4. Bad Smell, 5. itching on skin, 6. Dust problem	1. Flies, 2. Bad Smell	1. Flies, 2. Diseases spread in this area, 3. Bad Smell
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	B	A	B	B
3.2(a)	Opinion		They could come here, waste pickers reduce our waste.		
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	B	B
3.3(a)	Opinion	Construct road properly and spray daily	Spray daily, cover the waste with soil and sprinkle water on road.		

Gondlanwala Interview-No.		GINT-17	GINT-18	GINT-19	GINT-20
Date		2/12/2014	3/12/2014	3/12/2014	3/12/2014
Name of Interviewee:		ZubaidaBibi	Fatima Bibi	Muhammad Ashraf	NasreenBibi
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 51. 4" E: 074° 07' 37. 4"	N: 32° 12' 50. 5" E: 074° 07' 37. 1"	N: 32° 12' 52. 8" E: 074° 07' 39. 1"	N: 32° 12' 52. 9" E: 074° 07' 41. 9"
Recorded by		Hina Ishaque	Hina Ishaque	Hina Ishaque	Hina Ishaque
1					
1.1	Age	39	67	65	39
1.2	Sex	F	F	M	F
1.3	Address:	Dera Saar wala	Dera Saar wala	Dera Saar wala	Dera Saar wala
1.4	Number of family members	9	10	15	23
1.5	Occupation/ Source of Income	Labour	Labour	Business	Labour
1.6	Dera type place or Family House	Family House	Family House	Family House	Family House
1.7	Contact No:	Nil	Nil	0344-1466860	0345-7500894
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A	A	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	A	A	A	A
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	B	B	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Drinking water taste is changed	Bad Smell	Smell and flies due to this waste dumping, Environment of this area is polluted.	Diseases spread in this area due to dumping of waste.
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighborhoods? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Flies, 2. Bad Smell	1. Flies, 2. Bad Smell	1. Flies increases 2. Odour problem	1. Flies increases 2. Odour problem, 3. Diseases spread
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	B	B	A	B
3.2(a)	Opinion			They earn their living from this. Feel sympathy for them.	
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	B	B	A	A
3.3(a)	Opinion			Spray daily	Spray to reduce the smell

	GINT-21	GINT-22	GINT-23	GINT-24	
Date	3/12/2014	3/12/2014	3/12/2014	3/12/2014	
Name of Interviewee:	ShakeelaBibi	Abbas Ali	Najma Mushtaq	Muhammad Tariq	
Surveyor	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	
Coordinates	N: 32° 12' 35. 8" E: 074° 07' 42. 4"	N: 32° 12' 35. 8" E: 074° 07' 42. 4"	N: 32° 12' 19. 5" E: 074° 07' 33. 3"	N: 32° 12' 18. 7" E: 074° 07' 33. 3"	
Recorded by	HinaIshaque	HinaIshaque	HinaIshaque	HinaIshaque	
1					
1.1	Age	32	62	53	60
1.2	Sex	F	M	F	M
1.3	Address:	QutabwalaKhoo	DeraGadoo pulley	DeraQadam Abad	DeraQadam Abad
1.4	Number of family members	10	30	8	5
1.5	Occupation/ Source of Income	Animal Farming	Animal Farming	Doctor	Farmer
1.6	Dera type place or Family House	Family House and Dera both	Family House and Dera both	Family House	Family House
1.7	Contact No:	Nil	0342-6030209	0344-6114891	0342-6030157
2	Awareness and Understanding of Solid Waste and its Management				
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A	A	B
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	A	A	A	A
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	B	B	A
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Ground water is polluted so taste of water is changed.	Diseases spread, Environment of this area becomes polluted due to waste dumping.	Cause of Environmental Pollution	Clean the city but not better for us, odour problem, ground water contamination
3	Opinion for Solid Waste Management				
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Drinking water taste is bad. 2. Odour problem, 3. Breathing problem	1. Number of Flies increases, 2. Smell/ odour problem, 3. Animal Health Effects, 4. Ground water contamination 5. Crop damaged, 6. Diseases spread, 7. Drinking water taste is changed, 8. Trees die out, 9. Price of land is reduced	1. Number of Flies increases, 2. Smell/ odour problem, 3. Animal Health Effects, 4. Taste of water changed 5. Crop damaged, 6. Diseases, respiratory problem, 7. Gastrointestinal problems due to water	1. Bad Smell, 2. Flies, 3. Crops damaged, 4. Gastrointestinal problems
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	B	A	B	A
3.2(a)	Opinion		Sympathetic behaviour for them, they reduce our waste stream.		Reduce our waste
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	B	A	A	A
3.3(a)	Opinion		Stop to bring waste here. Dump the waste in any other area. Stop this activity.	Take steps to control the odour	Daily cover of soil on waste reduces the bad smell, evacuate water from depressions.

Gondlanwala Interview-No.		GINT-25	GINT-26	GINT-27	GINT-28
Date		3/12/2014	3/12/2014	3/12/2014	3/12/2014
Name of Interviewee:		Muhammad Anwar	Ihlaq Ahmad	Kashif Hassan	KalloomBibi
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 17. 6" E: 074° 07' 34. 3"	N: 32° 12' 19. 9" E: 074° 07' 31. 5"	N: 32° 12' 09. 0" E: 074°07' 40. 8"	N: 32° 12' 07. 8" E: 074° 07' 40. 4"
Recorded by		Hinalshaque	Hinalshaque	Hinalshaque	Hinalshaque
1					
1.1	Age	55	63	25	60
1.2	Sex	M	M	M	F
1.3	Address:	DeraQadam Abad	DeraQadam Abad	DeraGillanwala	DeraGillanwala
1.4	Number of family members	10	18	7	8
1.5	Occupation/ Source of Income	Farmer	Farmer	Farmer	Farmer
1.6	Dera type place or Family House	Family House	Family House	Family House	Family House
1.7	Contact No:	Nil	0300-7688406	0311-7404914	0311-4200224
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A	A	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	B	A	B	A
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	A	A	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Ground water contamination flies and smell due to this dump site.	Ground water is polluted because they dump waste in water. They did not evacuate water from depression where they are dumping waste.	Looks Dirty, Environment damage, Ground water contamination	Smell, Diseases, land owners of that area earn money by keeping us in trouble
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Animals death rate increases 2. Flies, 3. Gas production from the dump site that causes breathing problems, 4. Bad smell, 5. Crops damage, 6. Taste of water is different	1. Bad Smell, 2. Flies, 3. Crops damaged, 4. Ground water contamination	1. Crops damage, 2. Flies, 3. Bad smell, 4. Accidents on roads, 5. Diarrhea (Health problems), 6. Water contamination	1. social life distraction, 2. Flies, 3. Water taste is changed, 4. Smell/ odour problem
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	A	A	A	B
3.2(a)	Opinion	Sympathetic behaviour for them, they earn their living from this waste.	Sympathy on them, they reduce our waste streams and earn from waste.	They should come here, feel sympathy for them, earn their livings from waste.	
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	A
3.3(a)	Opinion	Stop Dumping	Stop Dumping	Pump water from depressions first and then dump waste there. Daily cover waste with soil, also Spray to kill flies.	Stop Dumping

Gondlanwala Interview-No.		GINT-29	GINT-30	GINT-31	GINT-32
Date		3/12/2014	3/12/2014	3/12/2014	4/12/2014
Name of Interviewee:		IhsanShakir	Hafiz Abdul Shakoor	NusratBibi	Amjad Ali
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 13. 1" E: 074°07' 51. 6"	N: 32° 12' 06. 7" E: 074° 07' 36. 9"	N: 32° 12' 04. 6" E: 074°07' 37. 7"	N: 32° 12' 02. 0" E: 074° 07' 38. 7"
Recorded by		Hinalshaque	Hinalshaque	Hinalshaque	Hinalshaque
1					
1.1	Age	42	52	61	31
1.2	Sex	M	M	F	M
1.3	Address:	Near canal, Oposite to dumping site, Gondlanwala, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad near mosque Abu Hajvaria, Gondlanwala Village, GRW.
1.4	Number of family members	150	5	12	7
1.5	Occupation/ Source of Income	Imam Madrisa	Imam Masjid	Labour	Labour
1.6	Dera type place or Family House	Family house and Madrisa	Family House	Family House	Family House
1.7	Contact No:	0300-6480695	0346-6154261	0324-8702174	0347-6273208
2		Awareness and Understanding of Solid Waste and its Managemnt			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	D (Canal)	A	A	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	B	A	A	A
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	B	B	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Environment of area is polluted and it looks dirty place.	Smell	Ground water of this area is polluted due to dumping of waste.	Beauty of area is lost, it looks dirty now, Environment of this area is polluted now, Air, Water, Soil all are polluted due to throwing of waste here.
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Flies 2. Itching on the skin, 3. Red eyes of children, 4. Smell problem	1. Flies, 2. Odour problem	1. Health problems, (Chest infection in children) 2. Flies, 3. Smell problem, 4. Dust problem, 5. Water taste is different.	1. Smell problem, 2. Accidents due to road narrow and more vehicles, 3. Flies, 4. Health effects
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	B	A	A	B
3.2(a)	Opnion		Stop them, they steal things from our homes. We have security problem.	Stop their activity	
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	A
3.3(a)	Opnion	Sprinkle water daily on roads, Spray daily, Construct speed brakrs	Daily cover the waste with soil to reduce smell.	Spray daily, Soil cover on waste daily and sprinkle water on road.	Stop this activity here, Stop throwing waste here.

Gondlanwala Interview-No.		GINT-33	GINT-34	GINT-35	GINT-36
Date		4/12/2014	4/12/2014	4/12/2014	4/12/2014
Name of Interviewee:		Muhammad Abdullah	ZarinaBibi	Muhammad Arif	Atta Ullah
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 02. 0" E: 074° 07' 35. 7"	N: 32° 11' 58. 6" E: 074°07' 35. 0"	N: 32° 12' 02.5" E: 074° 07' 32. 4"	N: 32° 10' 03.9" E: 074° 07' 31. 3"
Recorded by		Hinalshaque	Hinalshaque	Hinalshaque	Hinalshaque
1					
1.1	Age	49	79	53	48
1.2	Sex	M	F	M	M
1.3	Address:	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.
1.4	Number of family members	7	19	8	10
1.5	Occupation/ Source of Income	Labour	Labour	Labour	Labour
1.6	Dera type place or Family House	Family House	Family House	Family House	Family House
1.7	Contact No:	Nil	0312-7209368	Nil	0324-4620626
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	A	A
2.1.1	Who does collect? (A: Govt. B: Private C: Other)			B	B
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)			A	A
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)			A	B
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A		
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	A	A	A	B
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	A	B	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Drinking water taste is different.	Diseases spread due to waste dumping, we can not breath sometimes in such a polluted and bad smelled air.	Water of this area is contaminated and we are facing health problems. Our children remain sick due to drinking of this contaminated water.	Environment is polluted, water of this area is contaminated due to dumping of waste here.
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Odour problem, 2. Flies/ Moquitoes increase, 3. Ground water contaminated, 4. drinking water taste is changed.	1. Smell problem, 2. Flies, 3. Garstointestinal problems, 4. Health effects, Breathing Problems	1. Odour problem, 2. Diseases spread, 3. Flies, 4. Water of this area is polluted.	1. Air pollution, 2. Odour problem, 3. Ground water contamination, 4. Drinking water taste is changed, 5. Flies
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	A	A	B	B
3.2(a)	Opnion	Feel sympathy, reduce our waste load.	Feeling sympathy on them, they come and reduce our waste.		
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	A
3.3(a)	Opnion	Daily cover the waste with soil to reduce smell	Stop dumping waste here.	Stop dumping waste at Gondlanwala dump site, choose another place.	Spread sheet where you are dumping waste and evaporate water that is standing inside the depressions, Spray daily,soil cover daily 3-4 feet soil should spread over waste.

Gondlanwala Interview-No.		GINT-37	GINT-38	GINT-39	GINT-40
Date		4/12/2014	4/12/2014	4/12/2014	4/12/2014
Name of Interviewee:		AnayatRehmani	Noor Hussain	Lal Shah	Muhammad Ramzan
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 03.2" E: 074° 07' 31. 2"	N: 32° 12' 04. 8" E: 074° 07' 31. 9"	N: 32° 12' 04.8" E: 074° 07' 31. 9"	N: 32° 12' 04.1" E: 074° 07' 30. 3"
Recorded by		Hinalshaque	Hinalshaque	Hinalshaque	Hinalshaque
1					
1.1	Age	71	51	81	53
1.2	Sex	F	M	M	M
1.3	Address:	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.
1.4	Number of family members	12	11	13	12
1.5	Occupation/ Source of Income	Labour	Labour	Labour	Farmer
1.6	Dera type place or Family House	Family House	Family House	Family House	Family House
1.7	Contact No:	Nil	0346-6070734	Nil	0345-6518997
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A	A	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	A	A	A	A
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	B	B	B	B
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Water is contaminated, Bad Smell	Smell due to this waste, it becomes a dirty place, the beauty of arae is lost.	Smell	Flies increase in this area, Beauty of this area is affected, environment becomes polluted.
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Flies, 2. Bad Smell, 3. Diseases	1. Bad smell, 2.Flies	1. Flies, 2. Bad Smell, 3. Itching on skin	1. Flies, 2. Bad Smell, 3. Trees damaged
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	A	A	B	A
3.2(a)	Opinion	Reduce our waste. Should come	Stop the waste pickers, they steal our things.		Should come, they earn their livings from this waste, feel sympathy
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	A
3.3(a)	Opinion	Stop dumping of waste there.	Stop dumping waste at Gondlanwala dump site.	Stop this operation	Stop this

Gondlanwala Interview-No.		GINT-41	GINT-42	GINT-43	GINT-44
Date		4/12/2014	4/12/2014	4/12/2014	4/12/2014
Name of Interviewee:		Muhammad Irfan	Syed Baqir Ali Shah	Muhammad Arif	Abdul waheed
Surveyor		Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana	Qiaser Khalid Rana
Coordinates		N: 32° 12' 06.8" E: 074° 07' 33. 9"	N: 32° 12' 06.8" E: 074° 07' 32. 2"	N: 32° 12' 05.8" E: 074° 07' 34. 3"	N: 32° 12' 15.8" E: 074° 07' 55. 4"
Recorded by		Hinalshaque	Hinalshaque	Hinalshaque	Hinalshaque
1					
1.1	Age	48	53	54	55
1.2	Sex	M	M	M	M
1.3	Address:	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	Mohalla:Farooqa Abad, Gondlanwala Village, GRW.	SokhianwalaDera, Gondlanwala
1.4	Number of family members	8	7	6	20
1.5	Occupation/ Source of Income	Farmer	Labour	Business	Farmer
1.6	Dera type place or Family House	Family House	Family House	Family House	Dera
1.7	Contact No:	0345-6493013	Nil	0345-0538073	0347-6017810
2		Awareness and Understanding of Solid Waste and its Management			
2.1	Do you have solid waste collection services? (A: Yes B: No)	B	B	B	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)				
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)				
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)				
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A	A	A	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	B	A	B	B
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	A	B	A	A
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A	A	A	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B	B	B	B
2.9(a)	In what way	Water is contaminated due to this disposal site.	Due to dumping of waste bad smell in our area, environment is polluted.	Ground water is contaminated, they dump waste in stagnant water so water is polluted.	Water is contaminated due to this disposal site. Beauty of area is lost.
3		Opinion for Solid Waste Management			
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A	A	A	A
3.1(a)	Problems	1. Flies, 2. Bad Smell, 3. Drinking water taste is changed.	1. Flies, 2. Bad Smell,	1. Flies, 2. Bad Smell, 3. Drinking water taste is changed, 4. Ground water is contaminated.	1. Flies/ Mosquito, 2. Bad Smell, 3. Smell from water, 4. Water taste is changed, 5. Livestock Health problem, 6.Damage to trees
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	A	B	A	B
3.2(a)	Opinion	Stop them.		Sympathy on them, get money from waste, should come.	
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A	A	A	A
3.3(a)	Opinion	Spray daily, Cover the waste with soil daily.	Step to reduce the smell, spray on flies daily.	Spray on waste, soil cover daily.	Evacuate water from dump site, spray daily, cover the waste with soil.

Gondlanwala Interview-No.		GINT-45
Date		4/12/2014
Name of Interviewee:		Muhammad Aashiq
Surveyor		Qiaser Khalid Rana
Coordinates		N: 32° 12' 11.6" E: 074° 07' 02. 5"
Recorded by		Hinalshaque
1		
1.1	Age	59
1.2	Sex	M
1.3	Address:	DeraKhajoorwala
1.4	Number of family members	13
1.5	Occupation/ Source of Income	Farmer
1.6	Dera type place or Family House	Dera
1.7	Contact No:	Nil
2	Awareness and Understanding of Solid Waste and its Management	
2.1	Do you have solid waste collection services? (A: Yes B: No)	B
2.1.1	Who does collect? (A: Govt. B: Private C: Other)	
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)	
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)	
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)	A
2.3	Do you separate recyclables from your waste? (A: Yes B: No)	B
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)	A
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)	A
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)	B
2.9(a)	In what way	Environment of this area is polluted.
3	Opinion for Solid Waste Management	
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)	A
3.1(a)	Problems	1. Flies, 2. Bad Smell, 3.Livestock health problem, 4. Traffic Problem
3.2	Do you have any opinion for waste pickers? (A: Yes B: No)	B
3.2(a)	Opinion	
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)	A
3.3(a)	Opinion	Sprinkle water on roaddaily, Spray daily.

Appendix-2: Processed Data

Interview Survey of Residents of Gondalanwala			
		Frequency	Percentage
1	General Information		
1.1	Age		
	30-45	11	24
	45-60	22	49
	60-75	10	22
	75-90	2	4
1.2	Sex		
	Male	29	64
	Females	16	36
1.3	Occupation		
	Labour	20	44
	Farmers	15	33
	Business	6	13
	Imam of Mosque	2	4
	Government Employee	1	2
	Doctor	1	2
2	Awareness and Understanding of Solid Waste and its Management		
2.1	Do you have solid waste collection services? (A: Yes B: No)		
	A	6	13
	B	39	87
2.1.1	Who does collect? (A: Govt. B: Private C: Other)		
	A	0	0
	B	6	100
	C	0	0
2.1.2	Do you pay fee for waste collection services? (A: Yes B: No)		
	A	6	100
	B	0	0
2.1.3	Are you satisfied with the current solid waste management services? (A: Yes B: No)		
	A	3	50
	B	3	50
2.2	Where do you dump your solid waste? (A: Nearby Empty plot B: Dump site C: Burn D: Other)		
	A	35	89.7
	B	2	5.1
	C	1	2.6
	D	1	2.6
2.3	Do you separate recyclables from your waste? (A: Yes B: No)		
	A	29	64
	B	16	36
2.4	Do you know about compost that is made from organic waste? (A: Yes B: No)		
	A	16	36
	B	29	64
2.5	Do you understand the risks associated with the waste? (A: Yes B: No)		
	A	45	100
	B	0	0
2.6	Do you think this disposal site contributes for Gujranwala city? (A: Yes B: No)		
	A	45	100
	B	0	0
3	Opinion for Solid Waste Management		
3.1	Have you ever felt any problem because of the disposal site in your neighbourhood? (A: Yes B: No)		
3.1(a)	Problems		
	1. Flies	41	91%
	2. Odour	45	100%
	3.Change in drinking water taste	17	38%
	4.Health effects	23	51%
	5.Livestock Health problems	8	18%

	6.Crop Damage	6	13%
	7.Gas production	2	4%
	8.Reduced price of land	3	7%
	9.Trees damage	4	9%
	10. Traffic problems	8	18%
	11. Dust	4	9%
	12. Social Life Distraction	1	2%
	13. Smell in water	2	4%
	14. Water Contamination	8	18%
3.2	Do you have any opinion for waste pickers at Gondlanwala Dumping Site? (A: Yes, B: No)		
	A	19	42
	B	26	58
	Opinion		
3.2(a)	Stop their activity at Gondlanwala	6	32
	Should come they reduce our waste stream	13	68
3.3	Do you have any opinion for the current operation in the final disposal site? (A: Yes B: No)		
	A	39	87
	B	6	13
	Opinion		
3.3(a)	Stop this operation at Gondlanwala	17	44
	Evacuate water from dump site	4	10
	Spray	16	41
	Daily Soil Cover	13	33
	Sprinkle water daily on roads	5	13
	Construct road properly	3	8

Appendix-3: Survey Photograph

