

Annex 3

Public Opinion Survey

3 Public Opinion Survey

3.1 Description of the survey

Since SWM is closely related to the culture, people's way of living, habits, preference, etc., it is very important to understand these aspects of society in Dar es Salaam in order to formulate the SWM master plan. Public opinion survey was, therefore, conducted to understand these.

a. Description of the survey

The main objectives of the public opinion survey were:

- to understand the present general situation of UES and the public demand for UES,
- to understand the present situation of SWM in DSM, and
- to obtain enough data to select proper samples for the waste amount and composition surveys.

The questions on SWM mainly focused on:

- background of household SWM practices;
- waste discharge manner;
- waste collection service;
- recycling
- willingness to pay and other financial matters; and
- public cooperation.

b. Criteria for selection of samples

In order to obtain representative data for the present general situation, public opinion and basic information related to UES and SWM in the study area, given that the number of public opinion samples was limited to 500, the sample interviewees were selected according to the following criteria.

- Samples were principally selected in accordance with the present population distribution.
- Since results would be aggregated according to the chosen classifications for the study area, the number of samples to be taken in a ward were adjusted. This means that, the number of samples taken from urban areas were increased to 50 because the number of samples based on population distribution alone would have been too small to be statistically representative.
- Based on the above criteria, the samples were randomly selected.

The number of samples to be taken by ward were determined accordingly and are shown in Table 3-1.

Table 3-1: List of Samples for POS

Category	Name of ward	District	Population in 1996	Population ratio in 1996	Number of samples
Urban Area	Kariakoo	Ilala	13396	23.6%	12
	Kisutu	Ilala	8698	15.3%	7
	Kivukoni	Ilala	5502	9.7%	5
	Mchafukoge	Ilala	7037	12.4%	6
	Upanga East	Ilala	11048	19.4%	10
	Upanga West	Ilala	11199	19.7%	10
	Sub-total		56880	100.0%	50
Semi-Urban Planned Developed Area	Gerezani	Ilala	7309	0.9%	2
	Ilala	Ilala	38863	5.0%	10
	Jangwani	Ilala	13554	1.7%	3
	Mchikichini	Ilala	17347	2.2%	4
	Tabata	Ilala	106587	13.7%	28
	Kawe	Kinondoni	92458	11.9%	24
	Kinondoni	Kinondoni	59362	7.6%	15
	Magomeni	Kinondoni	19603	2.5%	5
	Msasani	Kinondoni	88792	11.4%	23
	Mwananyamala	Kinondoni	107127	13.8%	28
	Kurasini	Temeke	39560	5.1%	10
	Miburani	Temeke	76465	9.8%	20
	Temeke 14	Temeke	109328	14.1%	28
	Sub-total		776356	100.0%	200
Semi-Urban Unplanned Developed Area	Buguruni	Ilala	66029	6.9%	14
	Kipawa	Ilala	70890	7.4%	15
	Vingunguti	Ilala	53697	5.6%	11
	Kigogo	Kinondoni	26059	2.7%	5
	Mabibo	Kinondoni	67908	7.1%	14
	Makurumula	Kinondoni	88021	9.1%	18
	Manzese	Kinondoni	91560	9.5%	19
	Mzimuni	Kinondoni	27664	2.9%	6
	Ndugumbi	Kinondoni	41792	4.3%	9
	Tandale	Kinondoni	116392	12.1%	24
	Keko	Temeke	50622	5.3%	11
	Mbagala	Temeke	115758	12.0%	24
	Mtoni	Temeke	94841	9.8%	20
	Yombo Vituka	Temeke	51782	5.4%	10
	Sub-total		963016	100.0%	200
Rural Area	Ukonga	Ilala	73141	31.3%	16
	Goba	Kinondoni	2177	0.9%	1
	Kunduchi	Kinondoni	38785	16.6%	8
	Ubungo	Kinondoni	80720	34.5%	17
	Kigamboni	Temeke	35965	15.4%	8
	Vijibweni	Temeke	3189	1.4%	1
	Sub-total		233978	100.0%	50
Total			2030231		500

The survey was conducted from 24th to 28th April, 1996 by 17 interviewers. The questionnaire was 16 pages in length and the results of the public opinion survey are attached as Appendix C.

3.2 Analysis of Public Opinion Survey

The analysis of these results are presented as follows.

Question 1: General Questions

- In the urban and semi-urban planned areas, on average there are six people per household or business.
- In the semi-urban unplanned area, the number of people per household or business fluctuates considerably between one and 15. However, the most common reply was that there are 5 people per house.
- In the urban area, 48% of the respondents replied that they live in a commercial building with their residence attached. In the semi-urban planned, semi-urban unplanned and rural areas, 73%, 75% and 72%, replied that they live in a detached residential building, respectively.
- In the urban area, 80% replied that they live in rented accommodation. In both the semi-urban and rural areas, 63% and 53% replied that they live in their own accommodation.
- In the urban area, 44% are business categories apart from residence.
- In the semi-urban planned, semi-urban unplanned and rural areas, about 80% live in a business category of residence.
- In all of the areas surveyed, the father is the often the breadwinner of the family.
- In the urban area, there are 1 or 2 children working. In the semi-urban planned area, there are one to three children earning money. In the semi-urban unplanned area, there are on average 2 children working.
- In the urban area, 47% replied that their family expenditure per month is more than 95,000 Tsh. There are no households with a monthly expenditure under 35,000 Tsh. In the semi-urban planned area, 70% of households have a monthly expenditure of less than 95,000 Tsh, of which, 6% have an expenditure of less than 35,000 Tsh/month. In the semi-urban unplanned area, 90% of households have a monthly expenditure of less than 95,000, of which 16% have an expenditure of less than 35,000 Tsh/month. In the rural area, 22% replied that their family expenditure per month is more than 95,000 Tsh. Seven per cent replied that their monthly expenditure is less than 35,000 Tsh.
- In the urban area, 10% replied they have lived there for more than 20 years. Twenty-nine percent replied they have lived there for less than 5 years. In the semi-urban planned, semi-urban unplanned and rural areas, 30%, 22% and 29%, respectively, replied they have lived there for more than 20 years. In the semi-urban planned area 26% replied they have lived there for less than 5 years. In the semi-urban unplanned area, 32% replied they have lived there for less than 5 years. In the rural area, 33% replied they lived there for less than 5 years.

Question 2: Present Situation of Public Services

- In the urban area, 65% use private taps in their house as a water source, 19% use a communal tap in the area and 11% buy water from water sellers. In the semi-urban planned area, 31% use private taps in their house as a water source, 16% and 15% use rain water and water bought from a water seller, respectively. Twenty per cent in this area have alternative water sources. In the semi-urban unplanned area, 22% use private taps in their house as a water source, 44% use either a communal tap in the area or communal well/groundwater as a water source. Sixteen percent use rain water as a water source and 20% have an alternative water source.
- In the urban area, 75% of households have flush toilets connected to sewerage pipes. In both of the semi-urban areas this rate is 5%. In the rural area, 6% have a flush toilet connected to the sewerage pipe.
- One hundred percent of households are supplied with electricity in the urban area. In the semi-urban planned area 75% of households have an electricity supply. In the semi-urban unplanned and rural areas, 53% of households are supplied with electricity. TANESCO is the sole supplier of electricity in all four areas.
- In the urban area 40% of the roads are paved with tarmac. Twenty percent of the roads are not paved in this area. In the semi-urban planned area 15% of the roads are paved with tarmac and 41% are gravel/cement/brick pavements. Forty one percent of the roads in this area are not paved. In the semi-urban unplanned area, 5% of the roads are paved with tarmac, and 32% are gravel/cement/brick pavements. In this area, 59% of roads are not paved. In the rural area 10% of the roads are paved with tarmac, 25% are gravel pavements and 63% of the roads are not paved in this area.
- About 50% of respondents living in urbanised areas replied that an adequate water supply was their first priority. 72% of rural inhabitants gave the same reply.
- When asked about the priority of waste collection 30% of urban inhabitants thought it was a 1st priority. In the semi-urban planned, semi-urban unplanned and rural areas, 16%, 18% and 7% of the inhabitants thought that refuse collection is a first priority, respectively.

Question 3: Refuse Discharge

- In the urban area nearly 30% of the respondents hand their waste to Multinet, discharge at a market and/or leave their waste outside.
- In the semi-urban planned, semi-urban unplanned, rural areas, nearly 70% of respondents burn their waste.
- The most commonly used vessel to carry waste, in all four areas, is plastic/metallic/ wooden bucket followed by plastic and paper bags.
- Respondents remove refuse mainly to keep the area clean, keep away pests and to prevent foul odours.
- In the urban area, over 50% of respondents are not aware of a regulation for appropriate containers, however, this figure is less than 40% in all other areas.

- Over 90% of respondents in all areas say they will cooperate in refuse collection by carrying their waste to a collection point.
- One of the reasons why some people do not wish to cooperate is because they feel that the present system is much better, also in the semi-urban planned area, respondents said that there is no one to carry the waste to the collection point.
- In the urban area, 58% of respondents do not have a garden. In the semi-urban areas and rural areas, about 50% to 60% of respondents have a small garden i.e. less than 100 sq. m
- In the urban and semi-urban planned areas, over 70% of respondents do not generate garden wastes. In the semi-urban unplanned and rural areas, 44% and 64% generate garden wastes, respectively.
- Fifty percent of city dwellers dispose of their garden wastes by themselves. In the other three areas, more than 65% dispose their garden waste in this manner.
- Over 70% of all respondents will discharge their garden waste if refuse collection is regular.

Question 4: Refuse collection Services

- In the urban area, nearly all respondents have a refuse collection service in their area. In the other three areas, however, nearly all respondents do not have a refuse collection service.
- In 65% of cases in the urban area, Multinet is the provider of refuse collection service. In the other three areas, the city council provides refuse collection in 70% of cases.
- In the urban and semi-urban unplanned areas, 58% of respondents are dissatisfied with the collection service, this figure rises to 83% and 75% in semi-urban planned and rural areas, respectively. (However this statement may not be a true representative of the people's views, especially in the semi-urban planned, unplanned and rural areas, due to the small number of respondents.)
- The two common reasons as to why they are dissatisfied is that the refuse collection is both irregular and the frequency is too little.
- Fifty percent of respondents in the urban and rural areas carry their refuse to a point. This figure rises to 67% and 75% for semi-urban planned and semi-urban unplanned areas, respectively.
- In urban areas, 64% of the respondents receive a daily collection service. In the other areas, the most common replies were that the collection services are conducted from 3 times a week to rarely.
- In the urban and semi-urban planned area, 98% and 83% of the respondents said that collection service was not conducted at a fixed time.
- In the semi-urban unplanned and rural area, 58% and 50% of the respondents said that collection service was not conducted at a fixed time.

Question 5: Resource Recovery and Recycling

- In all of the areas, more than 70% of the respondents said they will cooperate with the new system.
- The reasons as to why they will not cooperate were that the new system requires several containers and that it requires a certain amount of effort.
- Over 70% of respondents in all the areas thought that resource recovery from waste and recycling was necessary. However, nearly 60% of respondents in all areas replied that no one collects their recyclable waste.
- The most commonly collected recyclable resource in all areas are bottles and aluminium cans.
- Nearly 100% of respondents do not sell recyclable materials to shops.
- Of those that do sell recyclable waste, the most commonly sold materials are bottles and aluminium cans. Respondents who sell materials say that this activity produces profits.
- All the respondents from the urban area (i.e. 100%) do not use food and/or garden waste for compost. In the other three areas, between 70% and 90% of the respondents do not use food scraps/garden waste for compost.
- Most of the respondents in the urban semi-urban planned and unplanned areas are not familiar with producing compost from food/garden waste. However, most people in the rural areas are familiar with this practice.

Question 6: Collection Fee and Financial Matters

- In the urban, semi-urban planned and unplanned areas nearly 90% of the respondents believe that the city council is responsible for solid waste management. In the rural area, 16% believe that a private company is responsible for solid waste management.
- Almost all the respondents in all four areas believe that the present municipal solid waste management system is appropriate.
- Most of the respondents from all four areas thought that a private company should be responsible for solid waste management. However, a significant amount of respondent from semi-urban unplanned and rural areas replied that the central government should be responsible for solid waste management.
- Almost 100% of respondents in all areas do not pay for the current collection service.
- Over 50% of respondents from all areas replied that the collection fee is too expensive or a bit expensive. None of the respondents thought that the collection fee is too cheap.
- In the urban area, most of the respondents replied that the central government should bear the extra cost for refuse collection. In the semi-urban and rural areas, the majority of the respondents replied that the central government should bear the extra costs, however, a significant amount thought that an increase in collection fees and the ward office should bear the extra costs.

- Almost 90% of respondents in all four areas want a refuse collection service.
- The average willingness to pay for waste collection varies greatly from 432 Tsh/month in rural areas to 3,118 Tsh/month in urban areas.

Question 7: Public Co-operation

- Half of the urban dwellers interviewed have received guidance on methods of proper waste discharge. Less than 40% of the respondents have received guidance in semi-urban areas. In the rural area, nearly 60% of the respondents have received guidance on methods of proper waste discharge.
- Nearly 70% of respondents sweep the road outside their premises daily in the urban and semi-urban planned areas. This figure fall to 64% and 51% for semi-urban unplanned and rural areas respectively.
- Over 90% of respondents in all areas believe that public cooperation is necessary to maintain a beautiful city environment. Almost all the respondents replied that they will cooperate in maintaining the environment clean/beautiful.
- Almost all the respondents believe that public education and campaigning is necessary to maintain the city/ environment clean.
- As to who shall be responsible for taking such action there was a broad spectrum of answers; central government, city council, ward office and the community were some of the more common answers. Also, respondents felt that family members should also be responsible for taking such action.

3.3 Results of the Survey

a. Methodology of the Survey

This report provides a summary of information from 500 public opinion surveys. The survey was conducted from April 24th to 28th, 1996 following selection and training of the interviewers. The survey consisted of a total of 500 questionnaires administered in 39 areas of Dar es Salaam. The questionnaire was 16 pages in length, but due to the style of questions, the duration of each interview was approximately one hour.

17 Tanzanian interviewers were recruited to carry out the public opinion survey. Training was held over a two day period. The first day consisted of reading, discussing, and revising the questionnaire, while on the second day practice interviews were conducted in the field. All interviewers for the questionnaire held at least one university degree. Training of these people was conducted by Norconsult's senior sociologist.

Before entering each ward, the senior sociologist and the interviewers of the questionnaire approached the ward secretaries. In many cases, with the ward secretaries' guidance, interviewees were selected. In other cases, interviewers chose the households themselves. Interviewers were met everyday by the senior sociologist at prearranged sites. At this time, questionnaires were retrieved and checked for completeness.

Each questionnaire was given a code when entered on the computer. Three letters and a two digit number were used. The three letters are the first three letters of the study area

and the number denotes where in the series it belongs. For example, Kin 05 means that this questionnaire is the fifth survey conducted in the Kinondoni area. For cases where the first three letters were the same for two areas, changes have been made. These changes are: Upanga East - UPE; Upanga West - UPW; Mchikichini - MIK; Kigamboni - KAM; Yombo Vituka - Vit.

The city of Dar es Salaam was divided into four categories. These categories are: Urban, Semi-Urban Planned, Semi-Urban Unplanned, and Rural. In the analysis, the data was separated according to these categories. In the case of single answer questions, pie charts illustrate the results of the survey and in the case of multiple answer questions, bar graphs are used.

A gift was given to each of the interviewees. The gift consisted of a school exercise notebook and pen.

Not all questions have 500 responses as the questionnaire was structured so that some questions were skipped depending on previous answers.

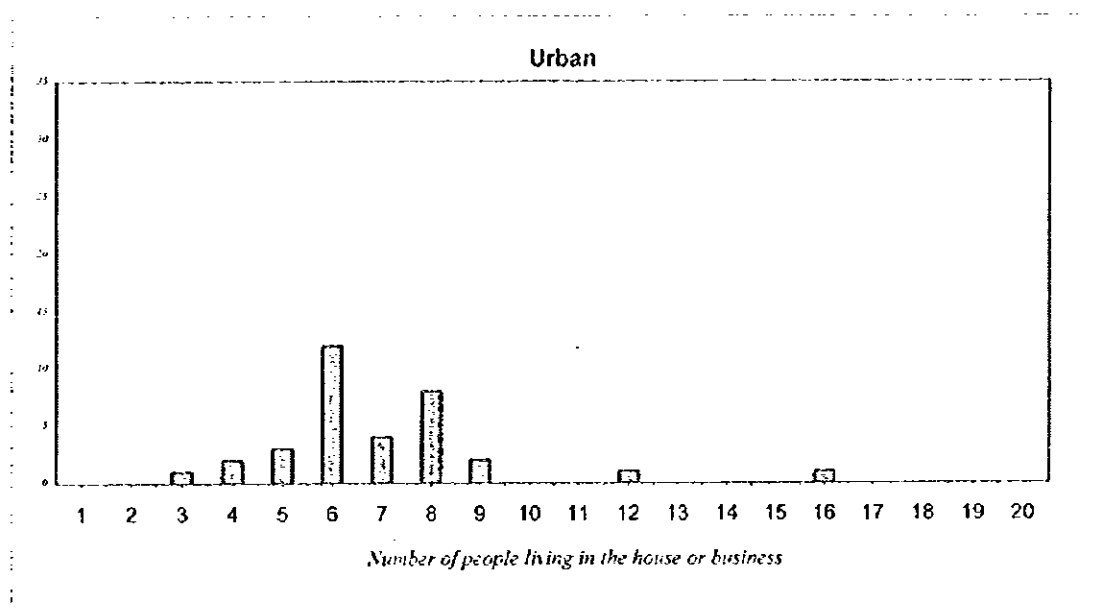
Sample Address (Location): Because few buildings in Dar es Salaam have no formal address (i.e. no street name and/or no building number), the location is written simply as the area where the questionnaire was conducted. Ward Secretaries were contacted for each area and would be able to provide assistance in locating the interviewees involved if future needs warrant this service.

b. Results of the Survey

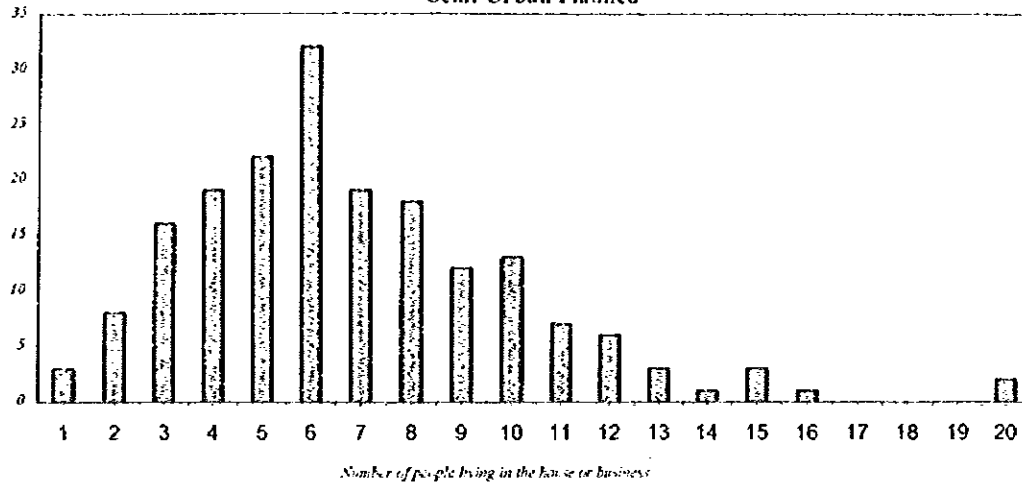
The results of the public opinion survey are shown as follows.

Question 1-1 (1) Number of people living in the house or business

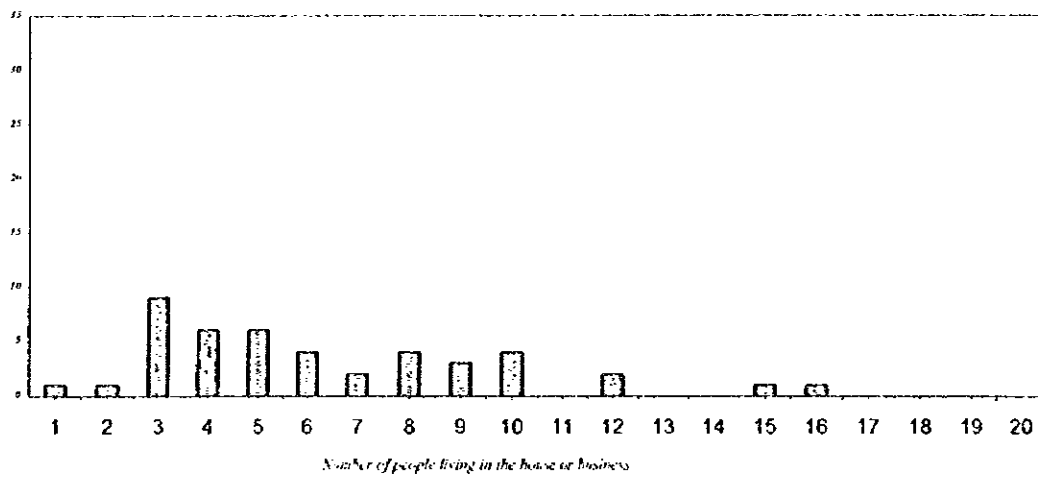
Number	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
1	0	3	9	1
2	0	8	9	1
3	1	16	29	9
4	2	19	26	6
5	3	22	31	6
6	12	32	16	4
7	4	19	15	2
8	8	18	22	4
9	2	12	11	3
10	0	13	10	4
11	0	7	1	0
12	1	6	3	2
13	0	3	2	0
14	0	1	2	0
15	0	3	2	1
16	1	1	0	1
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	2	0	0



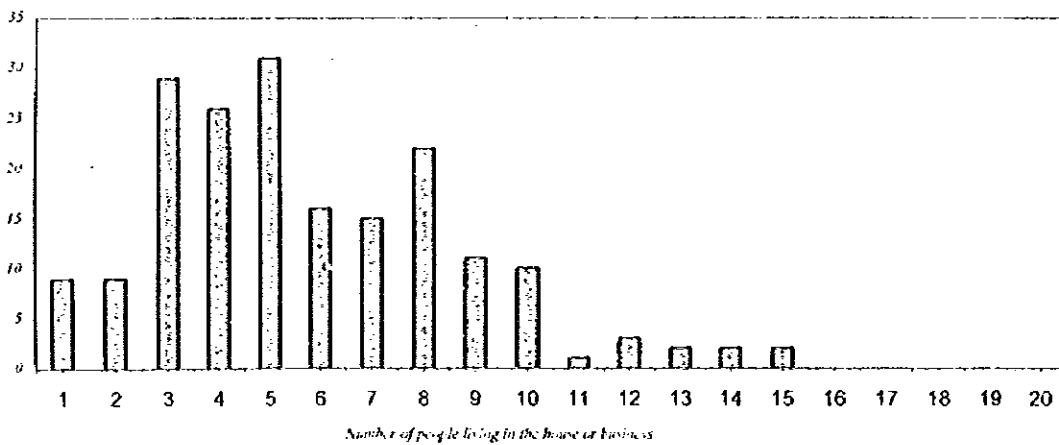
Semi-Urban Planned



Rural

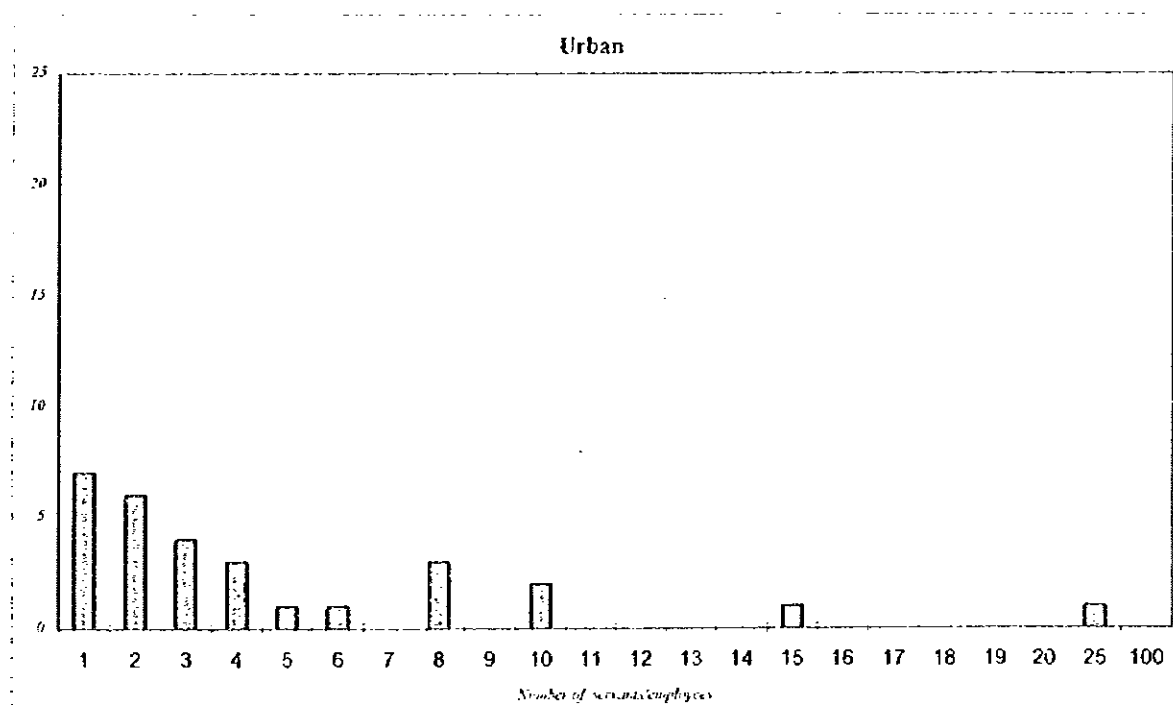


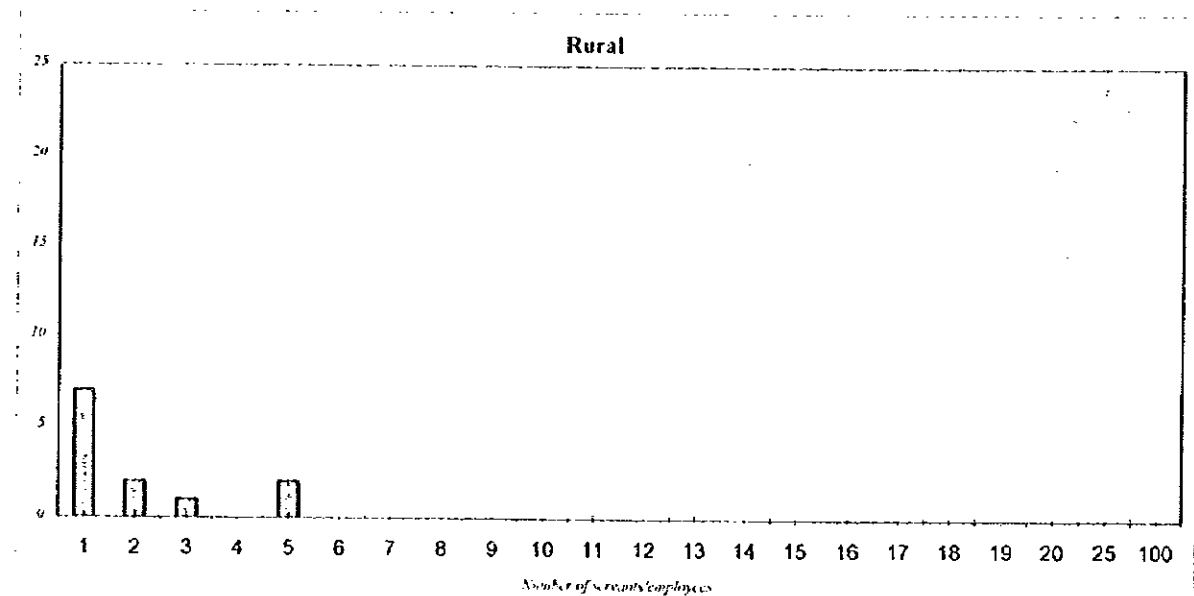
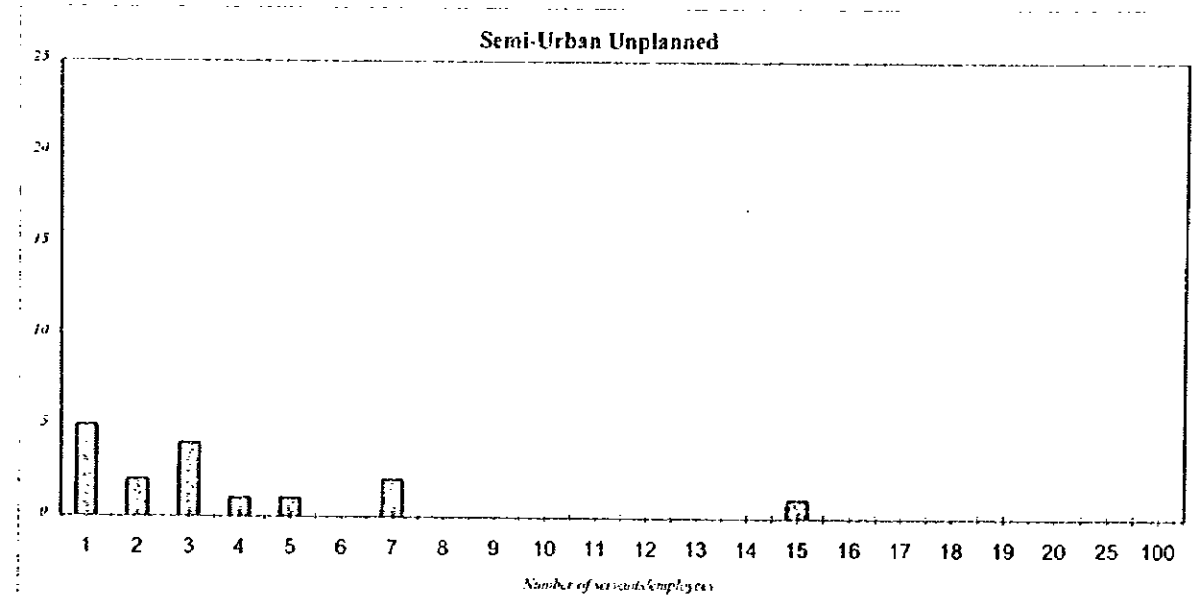
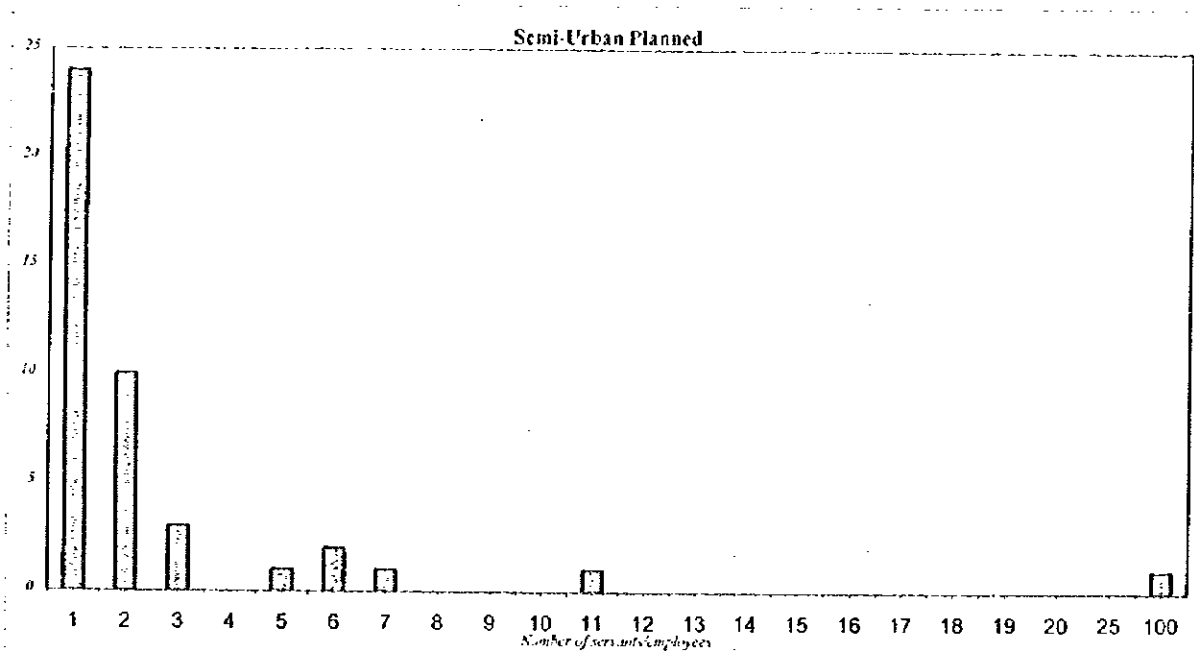
Semi-Urban Unplanned



Question 1-1 (2) Number of servants/employees

Number	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
1	7	24	5	7
2	6	10	2	2
3	4	3	4	1
4	3	0	1	0
5	1	1	1	2
6	1	2	0	0
7	0	1	2	0
8	3	0	0	0
9	0	0	0	0
10	2	0	0	0
11	0	1	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	1	0	1	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
25	1	0	0	0
100	0	1	0	0

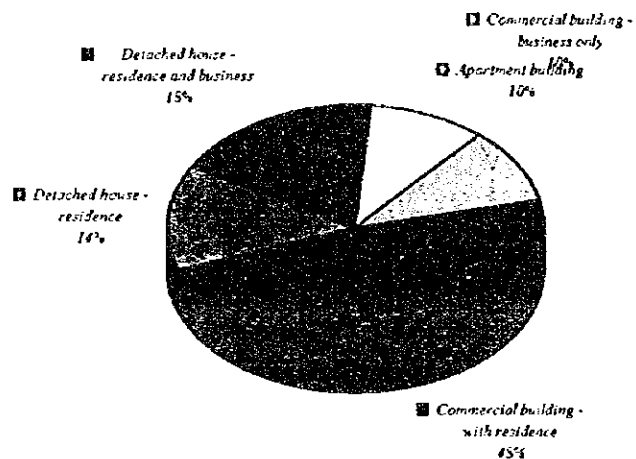




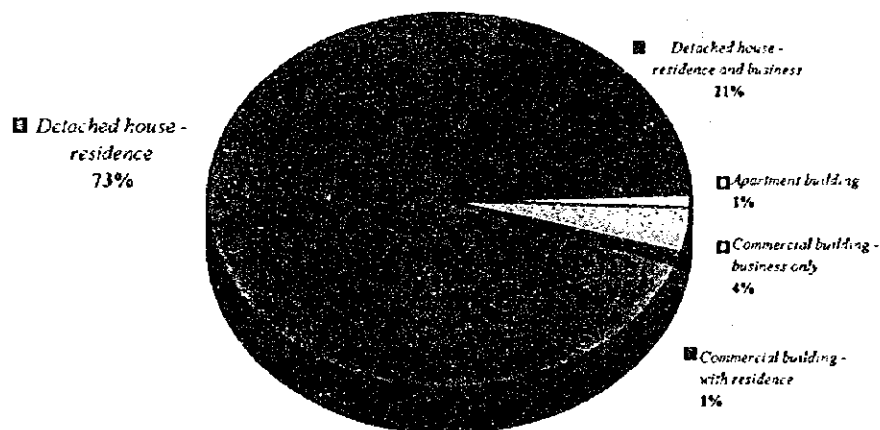
Question 1-2 Building category

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Detached house - residence	14%	73%	75%	72%
Detached house - residence and business	18%	21%	20%	12%
Apartment building	10%	1%	0%	6%
Commercial building - business only	10%	4%	4%	8%
Commercial building - with residence	48%	1%	1%	2%

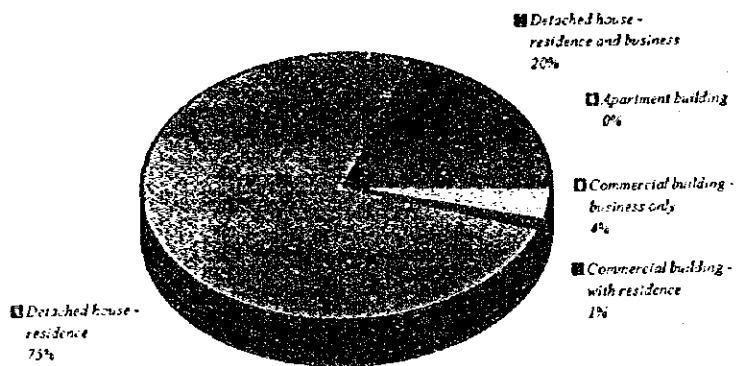
Urban



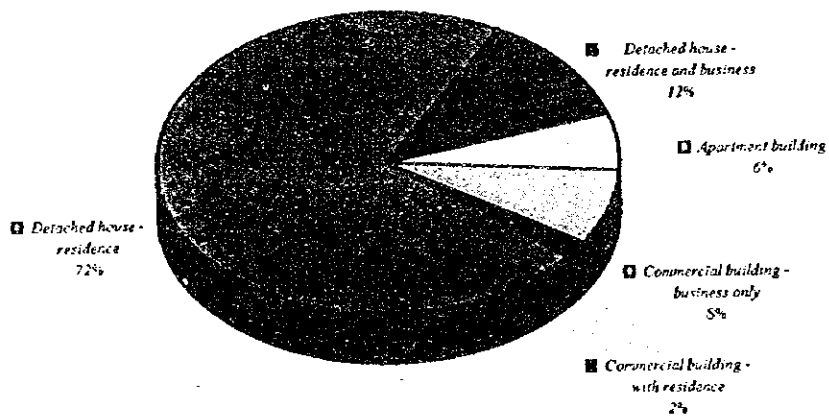
Semi-Urban Planned



Semi-Urban Unplanned

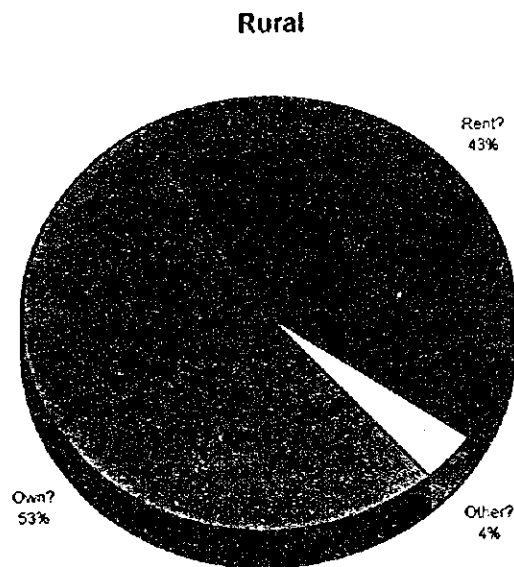
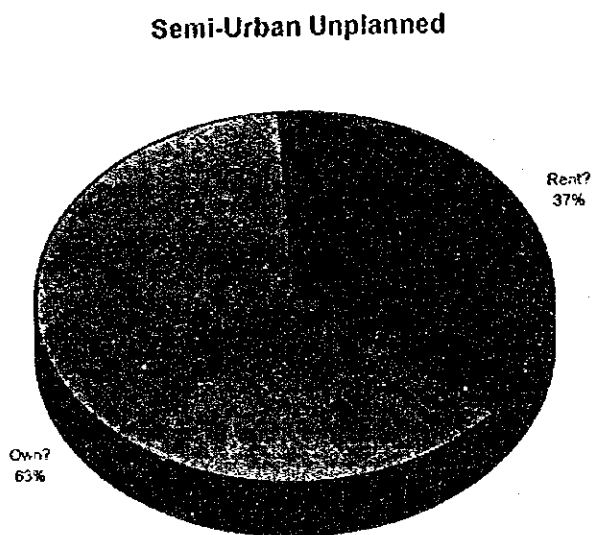
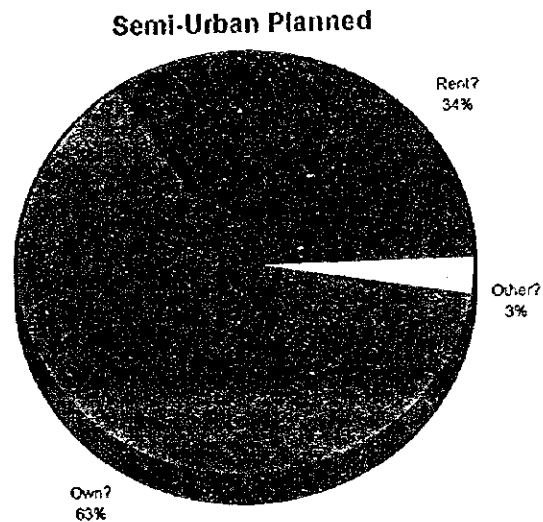
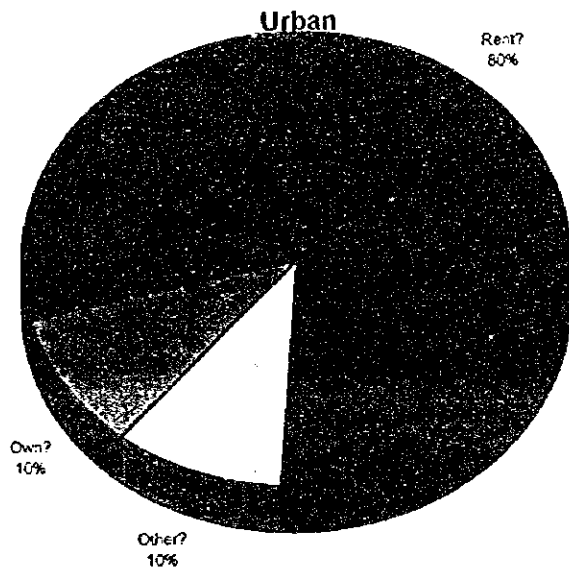


Rural



Question 1-3 For your home/ business do you

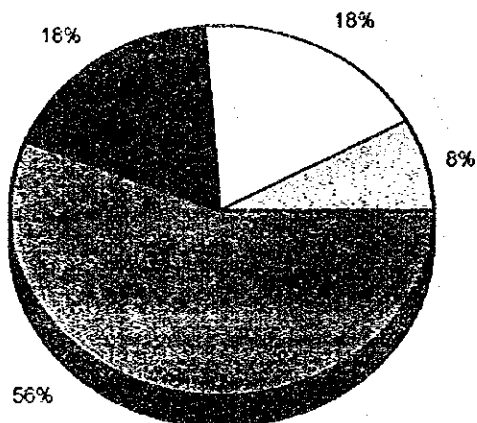
	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Own?	10%	63%	63%	53%
Rent?	80%	34%	37%	43%
Other?	10%	3%	0%	4%



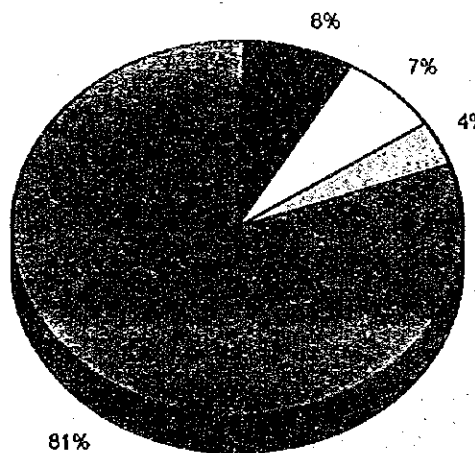
Question 1-4 Business category

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Residence	56%	81%	80%	78%
Restaurant/catering shop	18%	8%	8%	6%
Shops other than restaurant/catering shops	18%	7%	11%	14%
Other	8%	4%	1%	2%

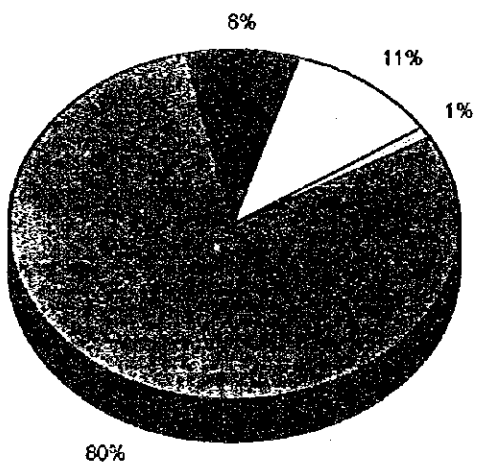
Urban



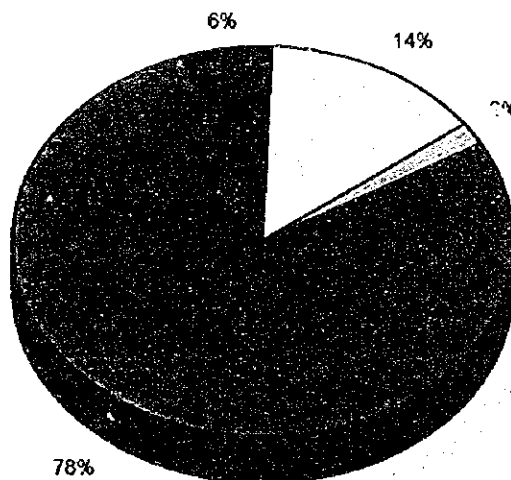
Semi-Urban Planned



Semi-Urban Unplanned



Rural



■ Residence

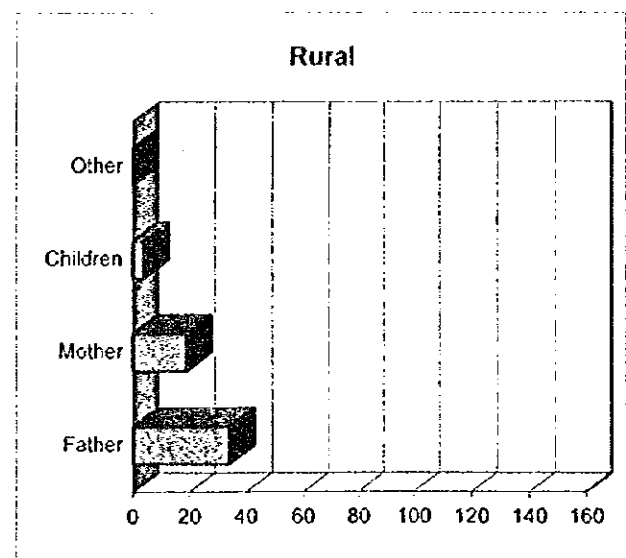
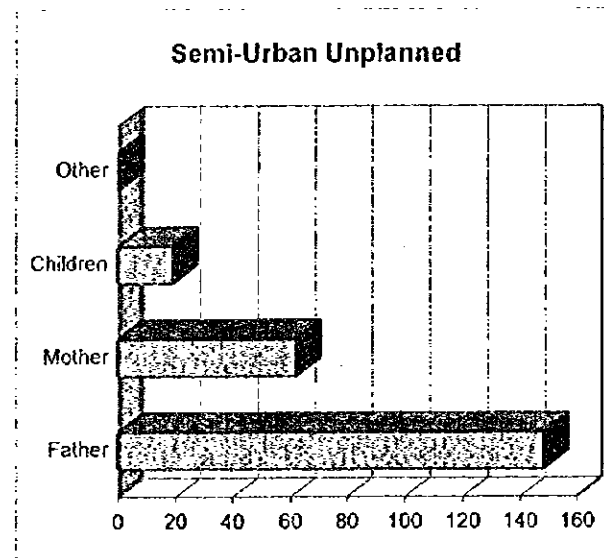
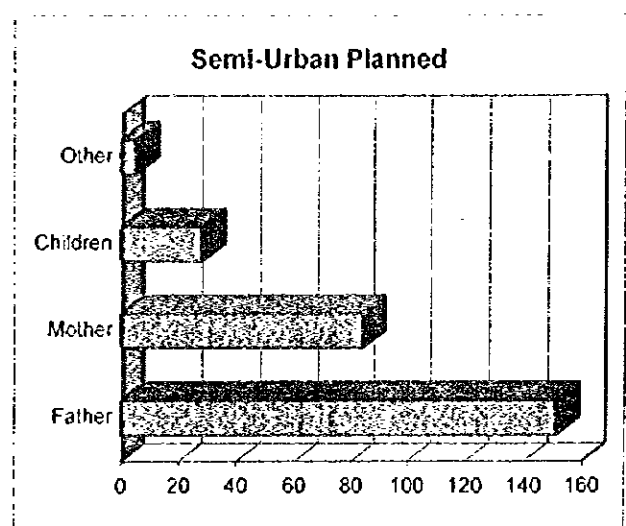
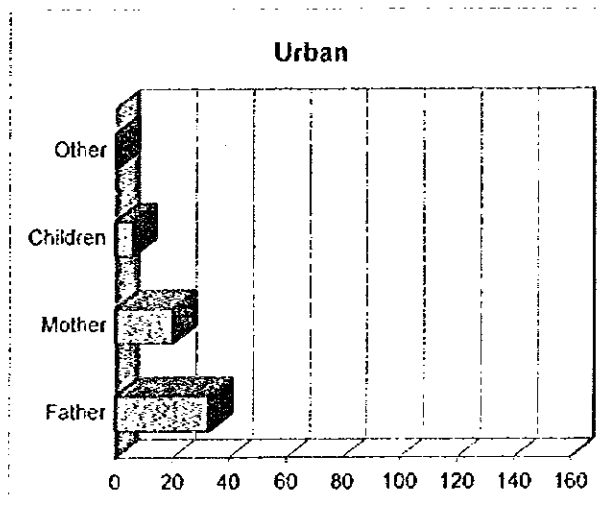
■ Restaurant/catering shop

□ Shops other than restaurant/catering shops

□ Other

Question 1-5 Who earns Money in the Family?

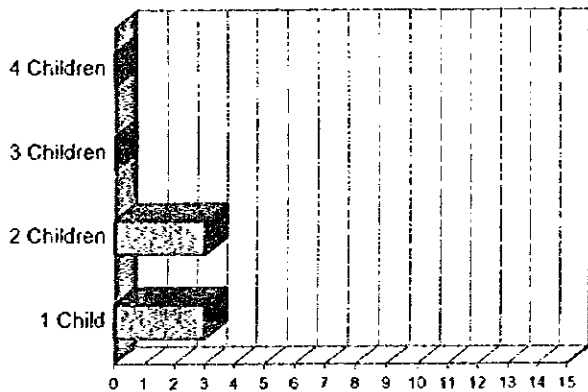
	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Father	33	151	148	34
Mother	20	84	62	19
Children	6	28	19	4
Other	0	5	0	0



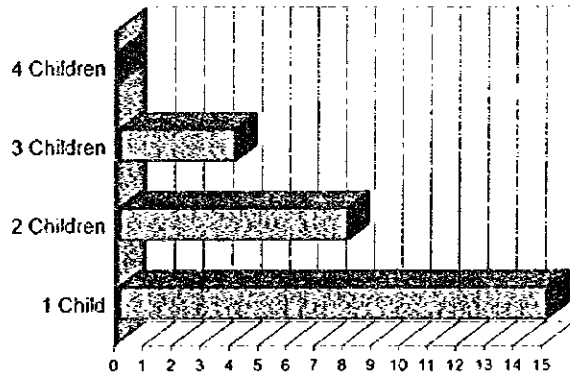
Number of Children in the house working

Number of Children	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
1 Child	3	15	6	2
2 Children	3	8	10	0
3 Children	0	4	0	1
4 Children	0	0	2	0

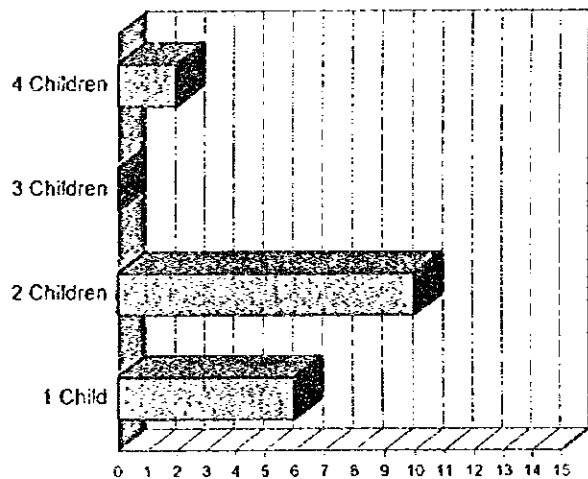
Urban



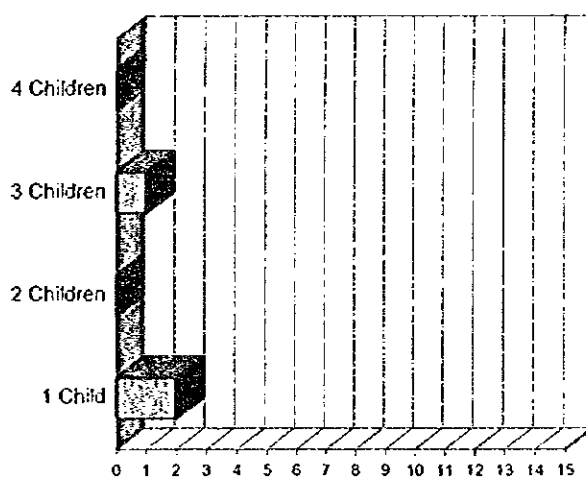
Semi-Urban Planned



Semi-Urban Unplanned



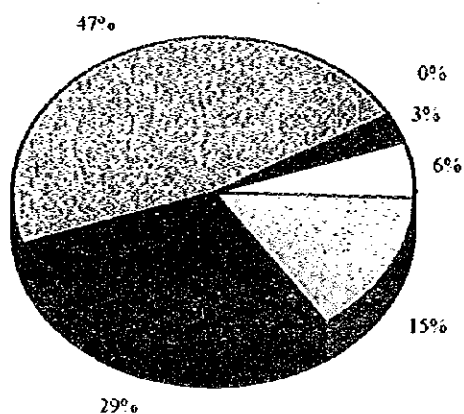
Rural



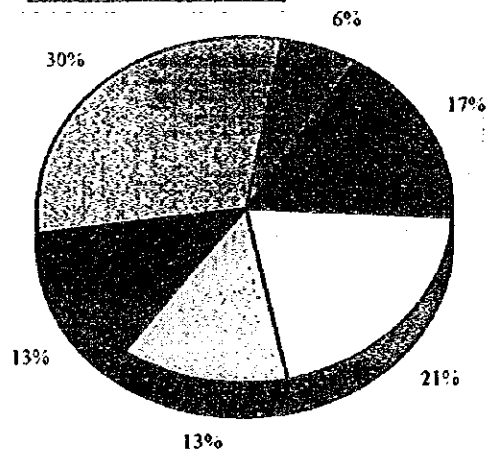
Question 1-6 Family expenditure per month

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Less than 35,000	0%	6%	16%	7%
35,000 - 50,000	3%	17%	19%	15%
50,000 - 65,000	6%	21%	27%	29%
65,000 - 80,000	15%	13%	11%	7%
80,000 - 95,000	29%	13%	18%	20%
More than 95,000	47%	30%	9%	22%

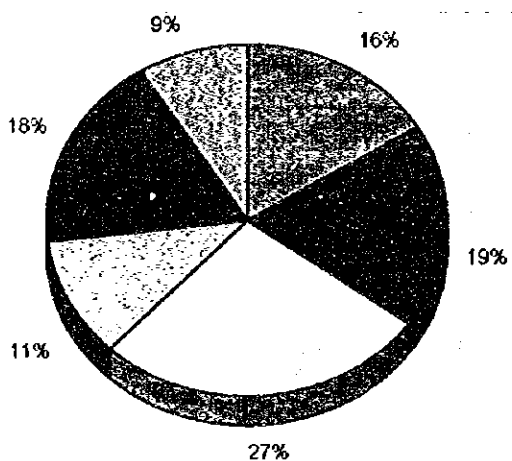
Urban



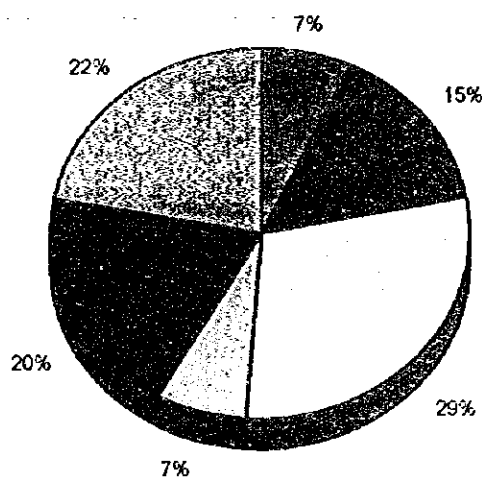
Semi-Urban Planned



Semi-Urban Unplanned



Rural



Less than 35,000

35,000 - 50,000

50,000 - 65,000

65,000 - 80,000

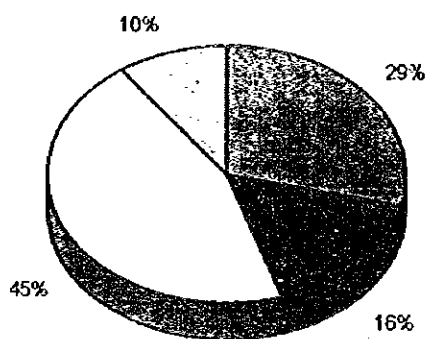
80,000 - 95,000

More than 95,000

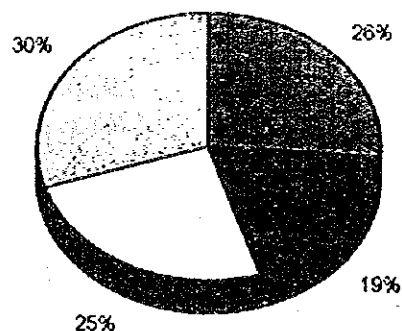
Question 1-7 Years lived in the house

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Less than 5 years	29%	26%	32%	33%
5 - 9 years	16%	19%	26%	22%
10 - 19 years	45%	25%	20%	16%
20 years or more	10%	30%	22%	29%

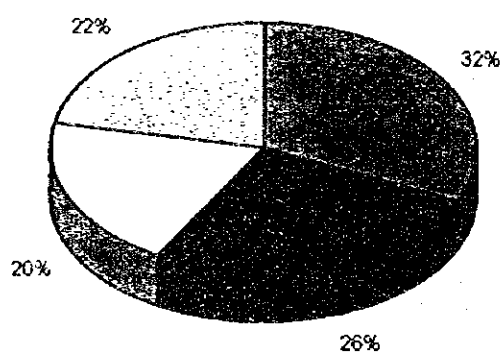
Urban



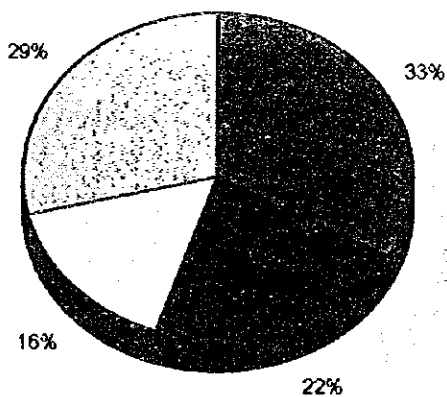
Semi-Urban Planned



Semi-Urban Unplanned



Rural



■ Less than 5 years

■ 5 - 9 years

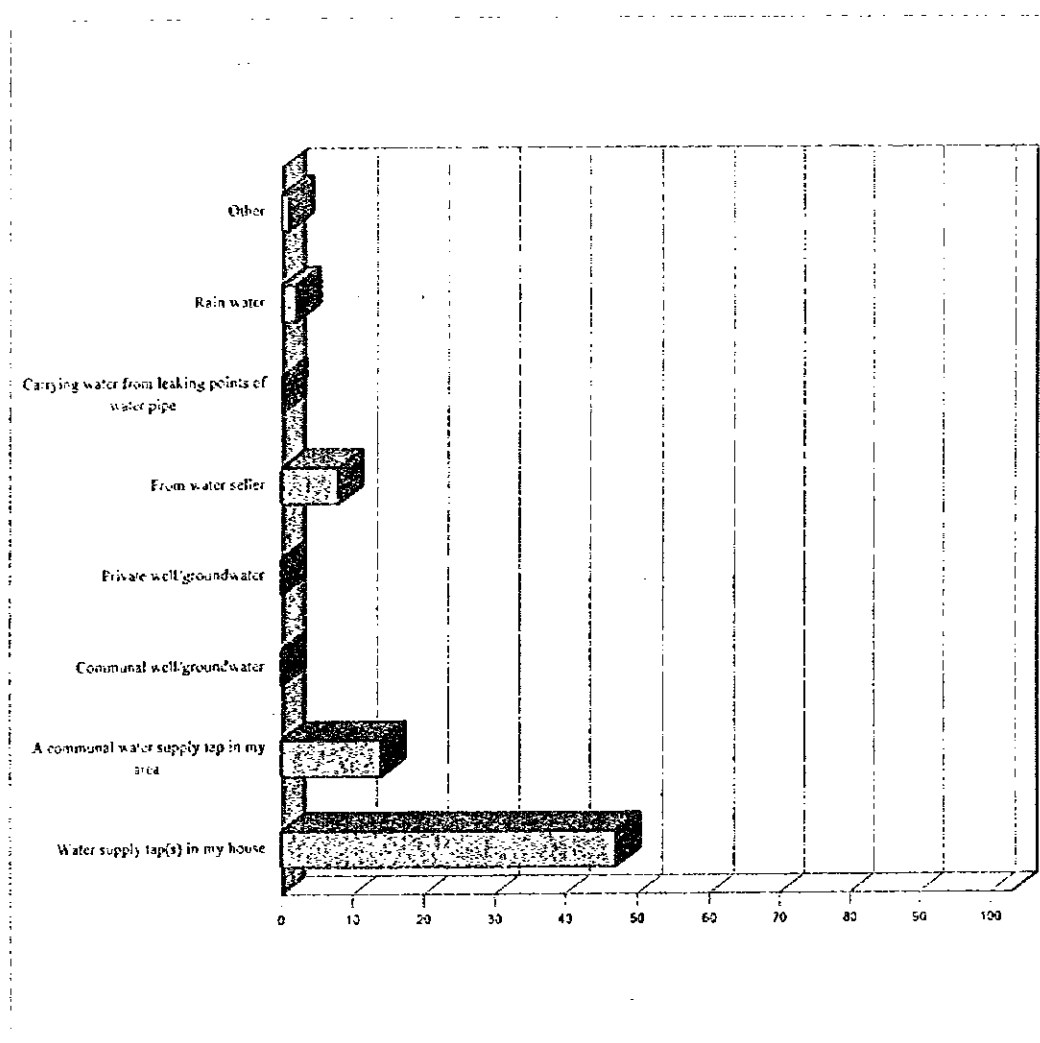
■ 10 - 19 years

■ 20 years or more

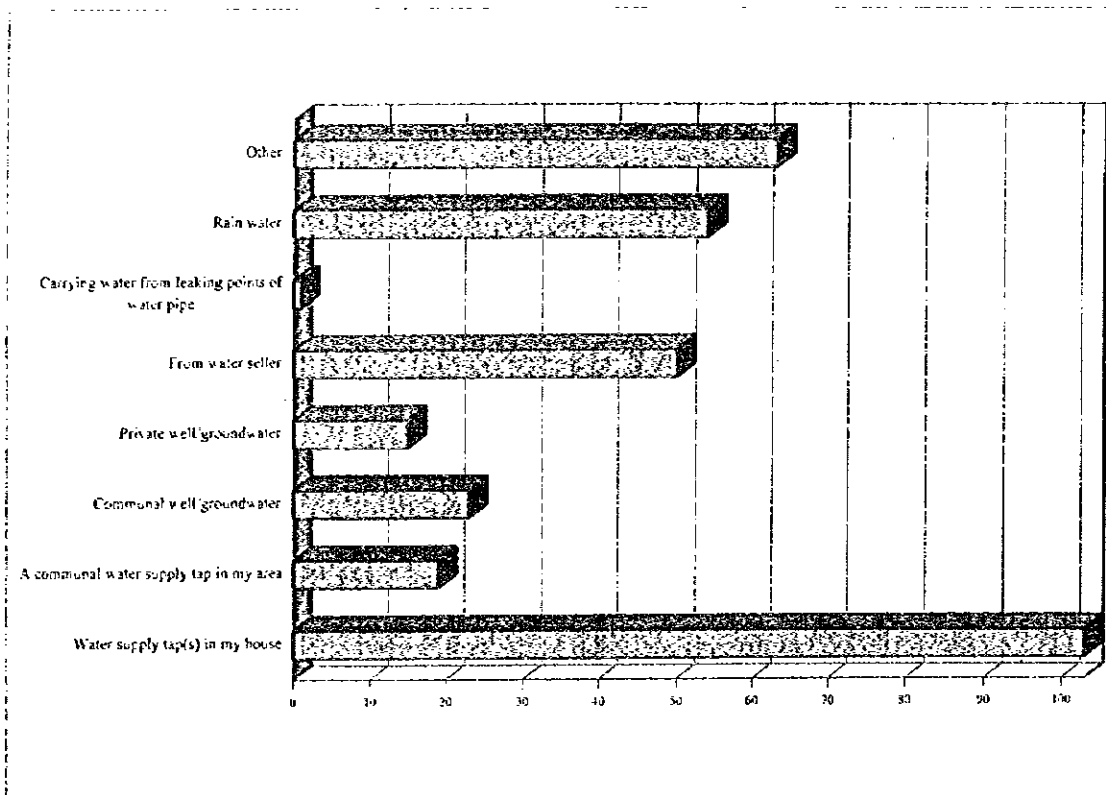
Question 2 - 1 Water source

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Water supply tap(s) in my house	47	103	81	9
A communal water supply tap in my area	14	19	38	14
Communal well/groundwater	0	23	41	17
Private well/groundwater	0	15	12	10
From water seller	8	50	74	12
Carrying water from leaking points of water pipe	0	1	2	2
Rain water	2	54	53	10
Other	1	63	60	6

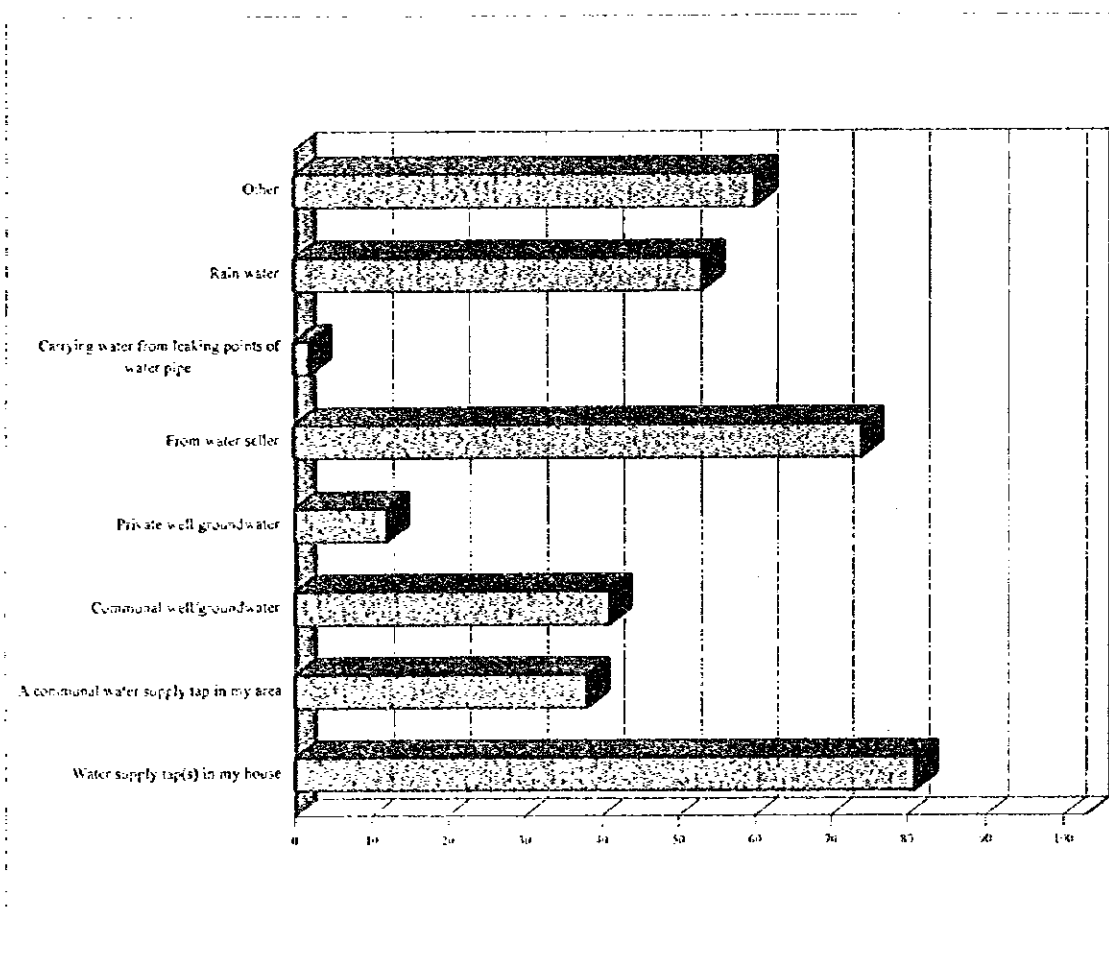
Urban



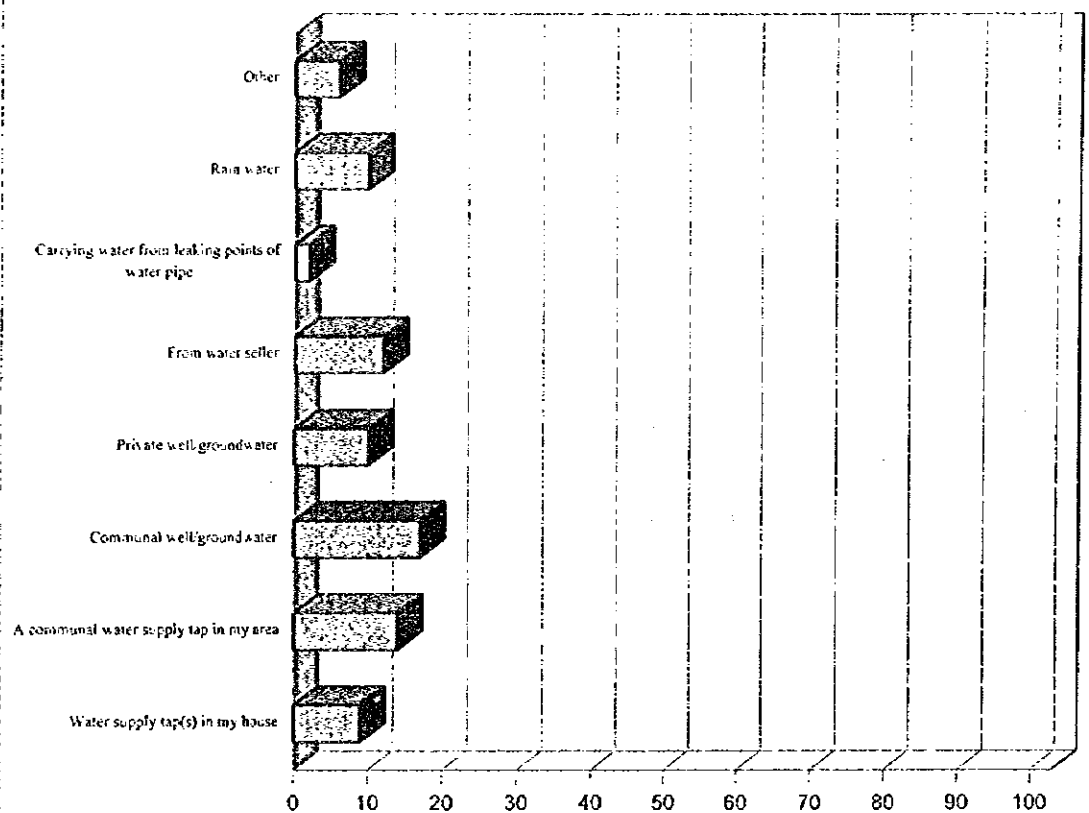
Semi-Urban Planned



Semi- Urban Unplanned

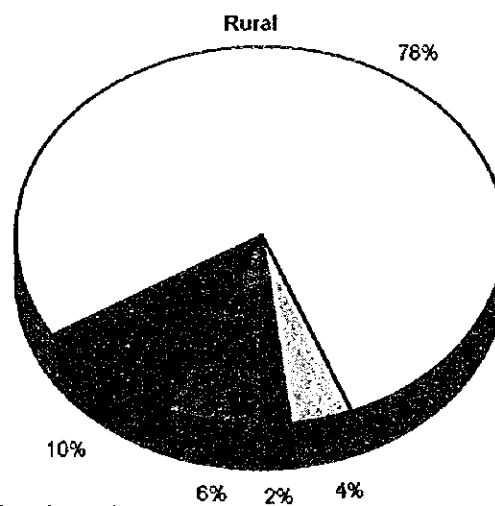
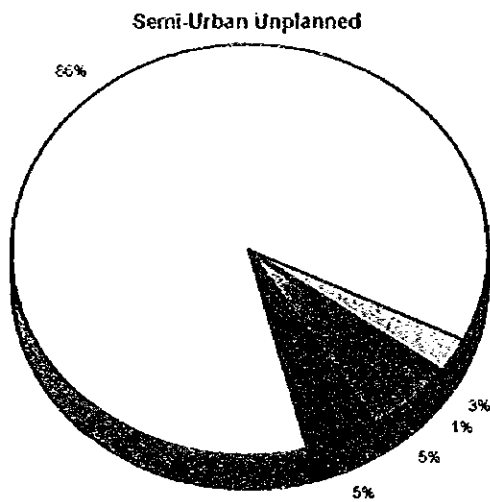
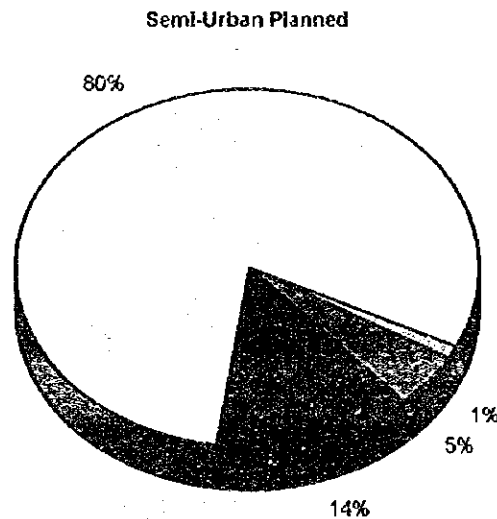
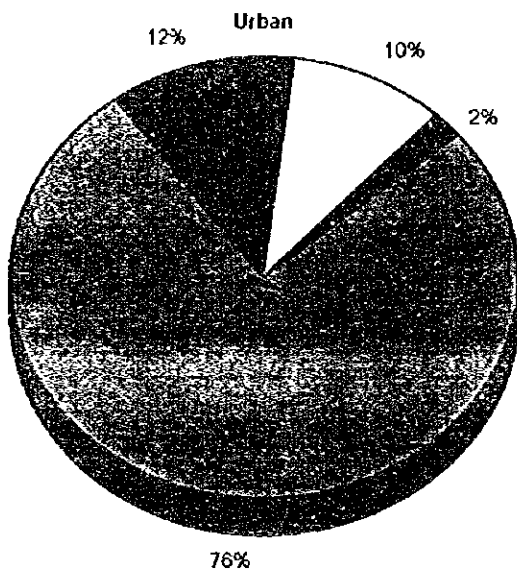


Rural



Question 2 -2 Type of toilet facility

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Flush toilet connected to sewerage pipe	76%	5%	5%	6%
Flush toilet connected to septic tank	12%	14%	5%	10%
Pit latrine	10%	80%	86%	78%
No toilet	0%	1%	3%	4%
Other	2%	0%	1%	2%

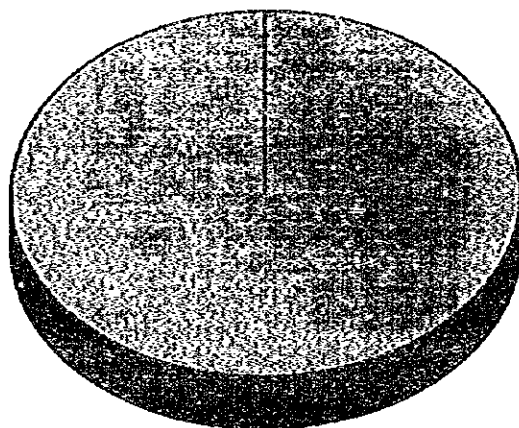


- Flush toilet connected to sewerage pipe
- Flush toilet connected to septic tank
- Pit latrine
- No toilet
- Other

Question 2 - 3 Do you have electricity?

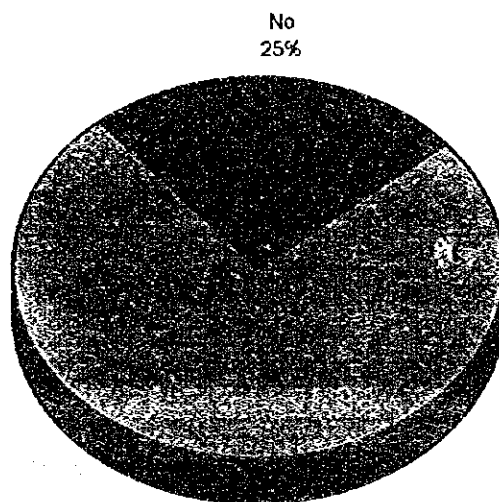
	Urban	Semi-Urban Planned	Semi-Urban Unplanned		Rural
Yes	100%	75%	53%		53%
No	0%	25%	47%		47%

Urban



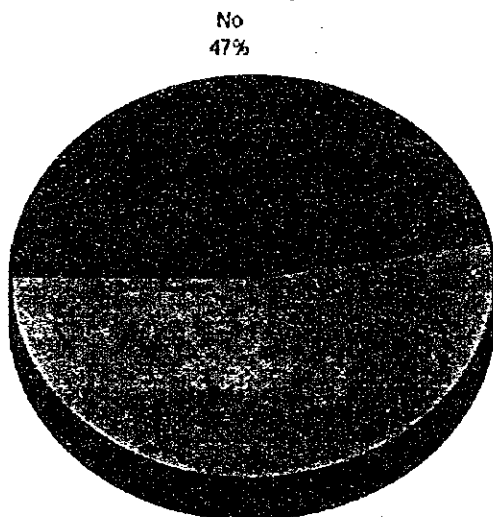
Yes
100%

Semi-Urban Planned



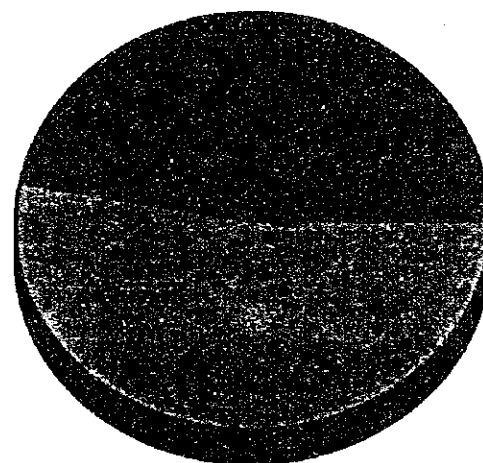
Yes
75%

Semi-Urban Unplanned



Yes
53%

Rural
No
47%

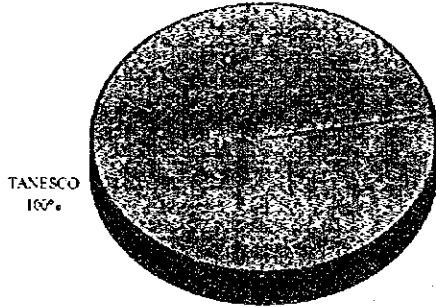


Yes
53%

Question 2 - 4 Who is your electricity supplier?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
TANESCO	100%	100%	100%	100%
Own generator in my premises	0%	0%	0%	0%
Other	0%	0%	0%	0%

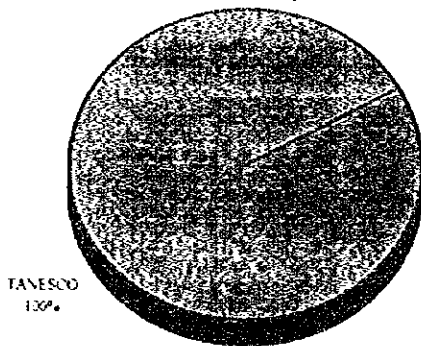
Urban



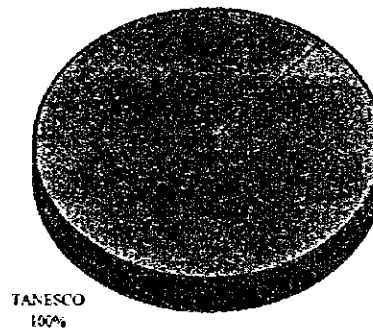
Semi-Urban Planned



Semi-Urban Unplanned

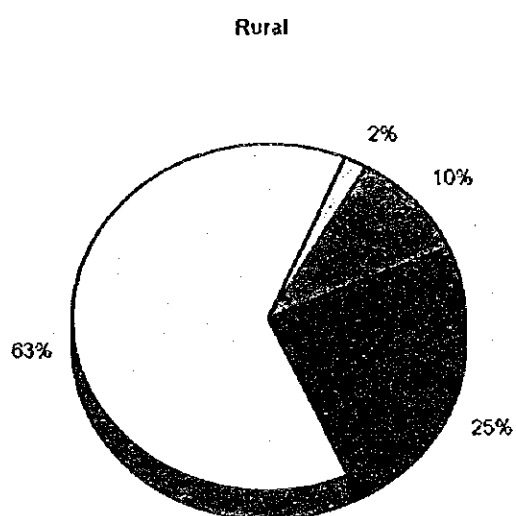
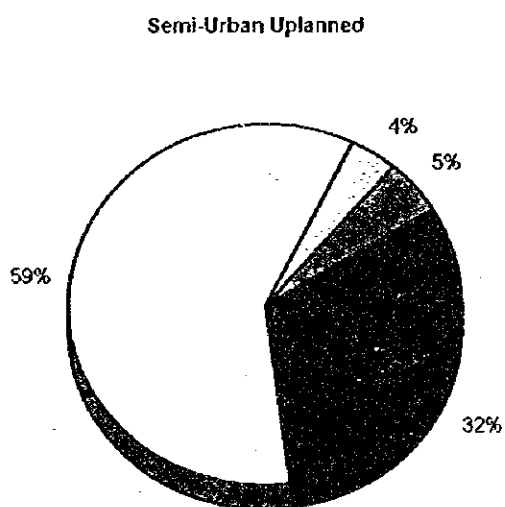
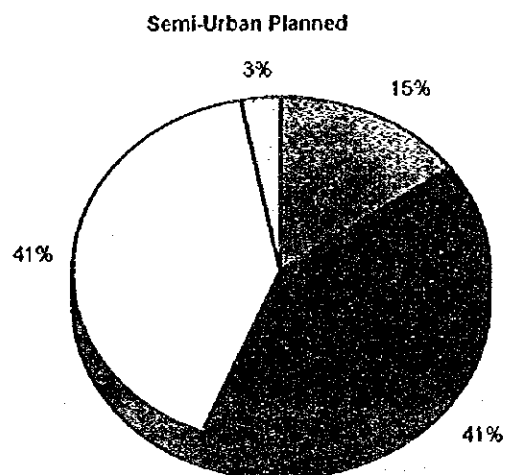
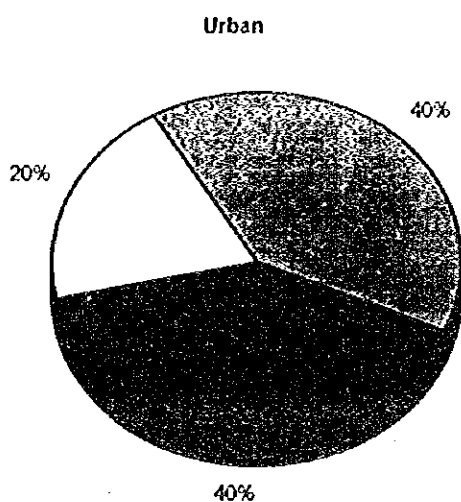


Rural



Question 2 - 5 Type of pavement on road to premises

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Tarmac pavement	40%	15%	5%	10%
Gravel/ cement/ brick pavement	40%	41%	32%	25%
No pavement	20%	41%	59%	63%
Other	0%	3%	4%	2%

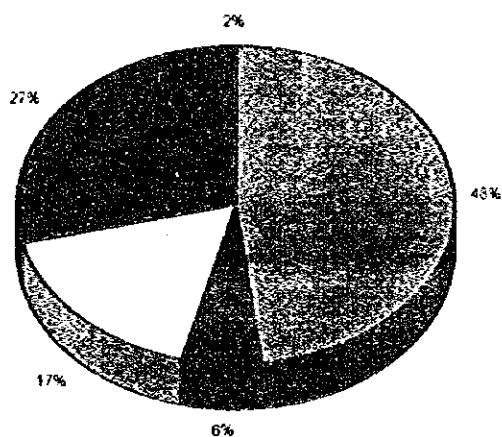


- ☒ Tarmac pavement
- ☒ Gravel/ cement/ brick pavement
- ☐ No pavement
- ☐ Other

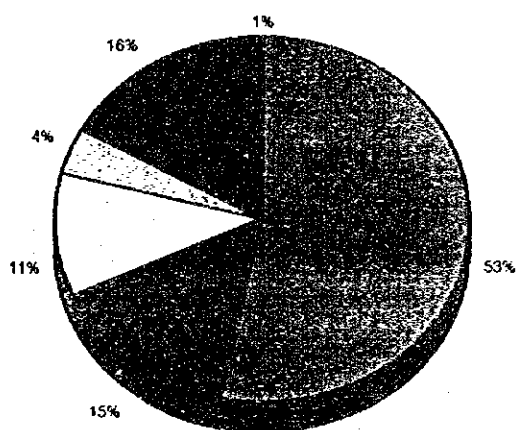
Question 2 - 6 1st priority

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Water supply	48%	53%	56%	72%
Storm water drainage	6%	15%	17%	12%
Sewer pipe drainage	17%	11%	9%	2%
Septic tank emptied	0%	4%	2%	7%
Refuse collection	27%	16%	15%	5%
Electricity supply	0%	0%	0%	0%
Access road to my house	2%	1%	1%	2%
Others	0%	0%	0%	0%

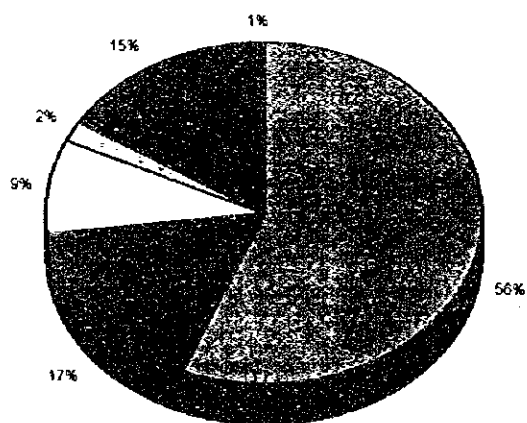
Urban



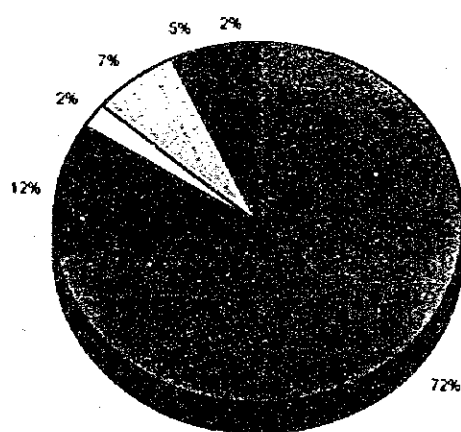
Semi-Urban Planned



Semi-Urban Unplanned



Rural



Water supply

Storm water drainage

Sewer pipe drainage

Septic tank emptied

Refuse collection

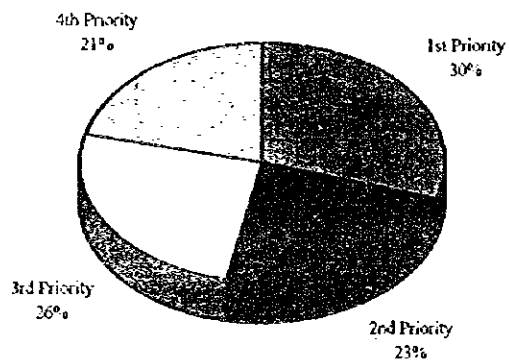
Electricity supply

Access road to my house

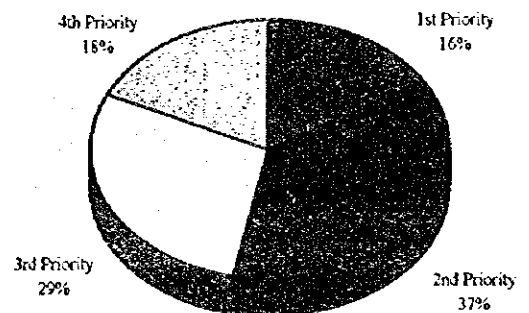
Question 2 - 6 Priority of Refuse Collection

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
1st Priority	30%	16%	18%	7%
2nd Priority	23%	37%	42%	55%
3rd Priority	26%	29%	27%	24%
4th Priority	21%	18%	13%	14%

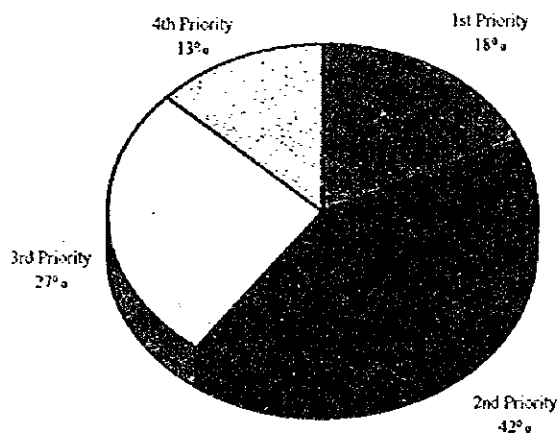
Urban



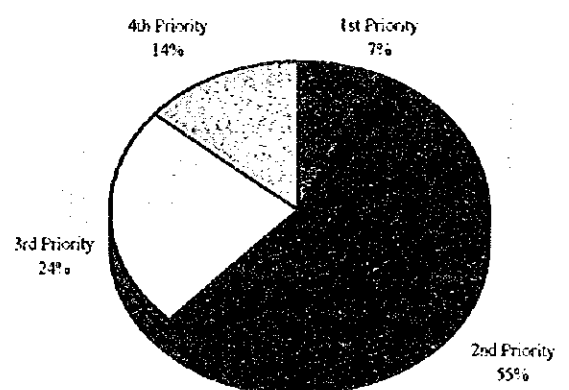
Semi-Urban Planned



Semi-Urban Unplanned



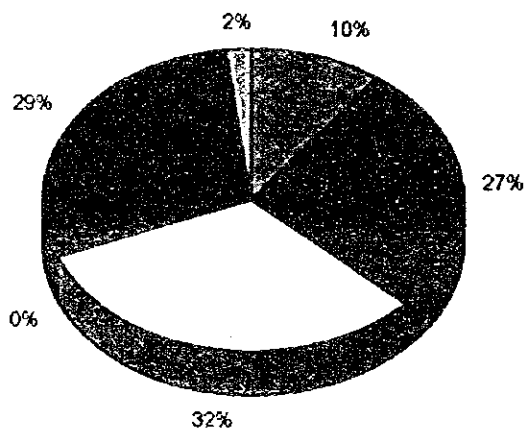
Rural



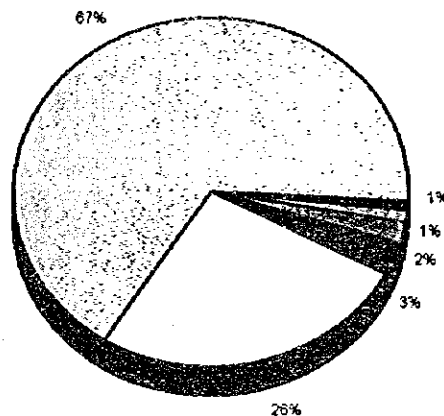
Question 3 -1 How do you dispose of your refuse?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Discharge at a specific place	10%	2%	3%	0%
Discharge at a market	27%	3%	3%	0%
Discharge outside	32%	26%	27%	24%
Dispose through combustion	0%	67%	65%	74%
Hand it to Multinet	29%	1%	1%	0%
Hand it to a private collector	2%	1%	1%	2%
I don't know	0%	0%	0%	0%

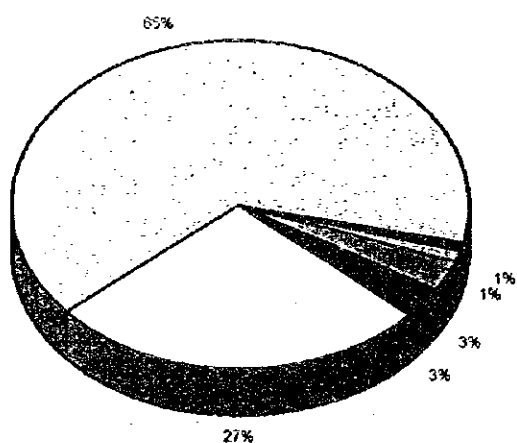
Urban



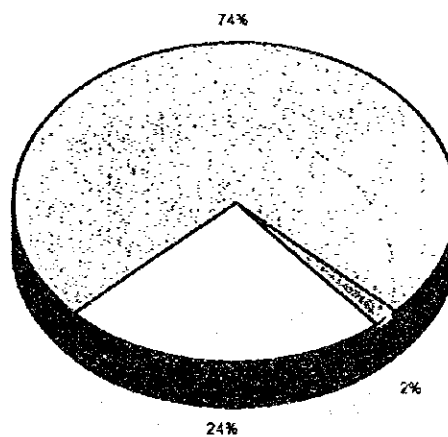
Semi Urban Planned



Semi Urban Unplanned



Rural



■ Discharge at a specific place

■ Discharge at a market

■ Discharge outside

■ Dispose through combustion

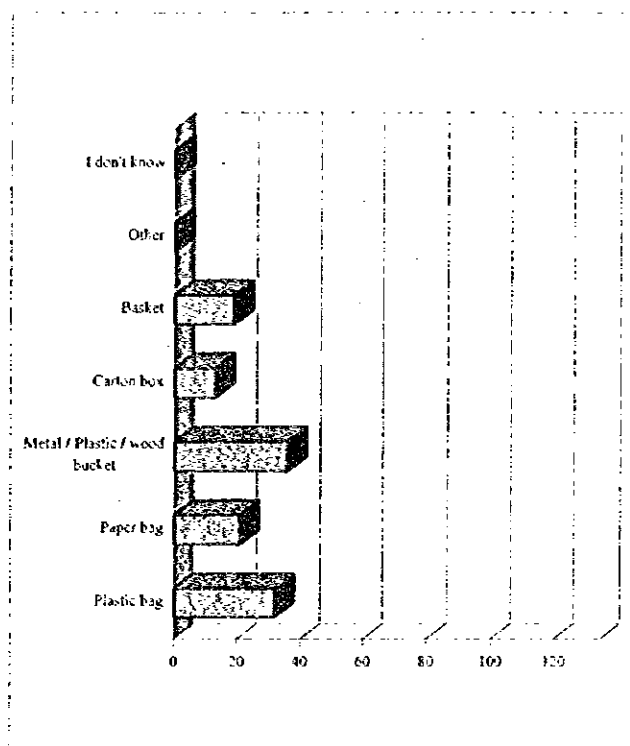
■ Hand it to Multinet

■ Hand it to a private collector

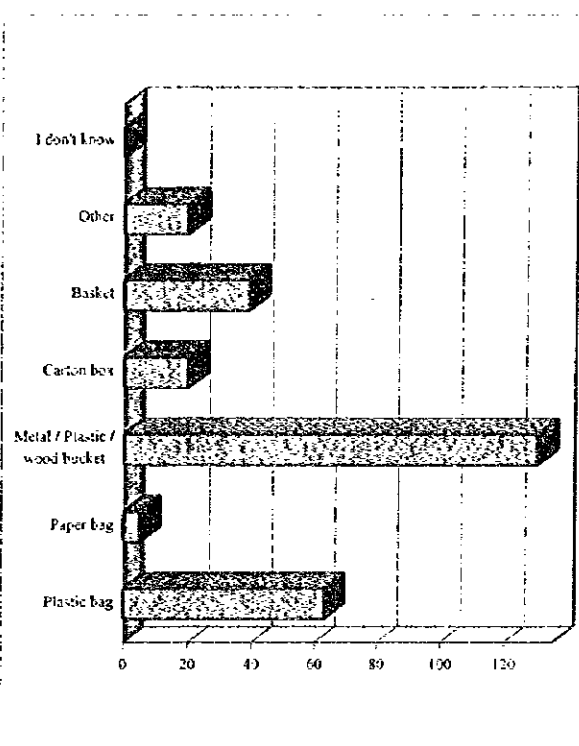
Question 3 - 2 Type of container used to carry refuse

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Plastic bag	32	63	69	7
Paper bag	21	5	38	11
Metal / Plastic / wood bucket	36	130	116	42
Carton box	13	20	40	6
Basket	19	39	28	6
Other	0	20	14	2
I don't know	0	0	0	0

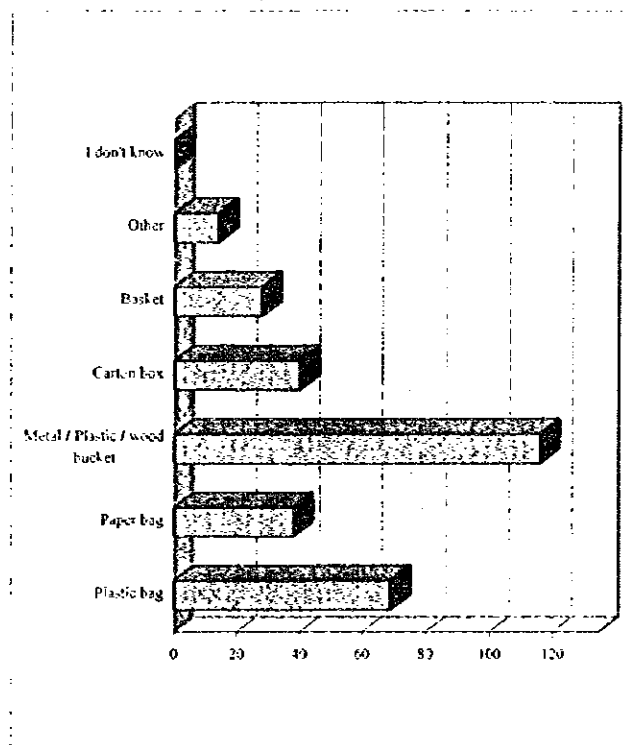
Urban



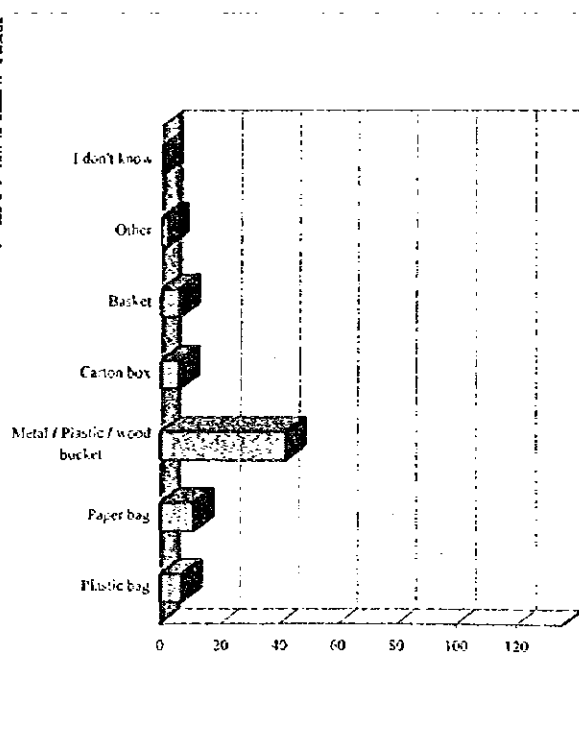
Semi-Urban Planned



Semi-Urban Unplanned



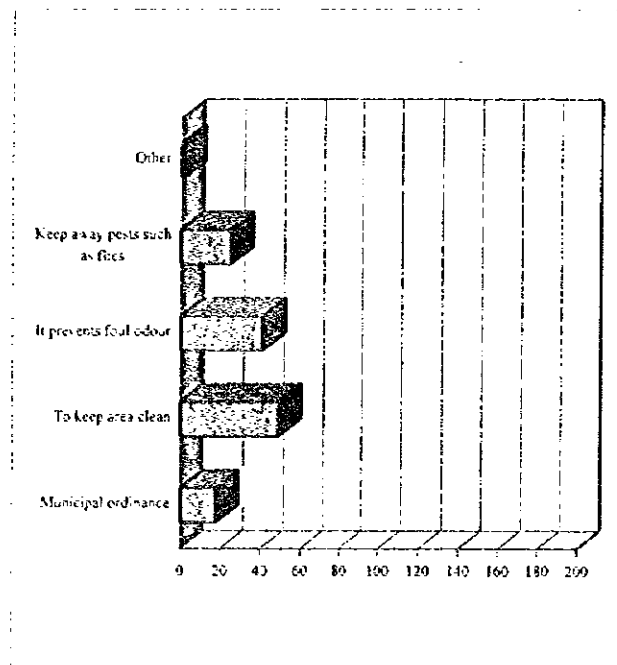
Rural



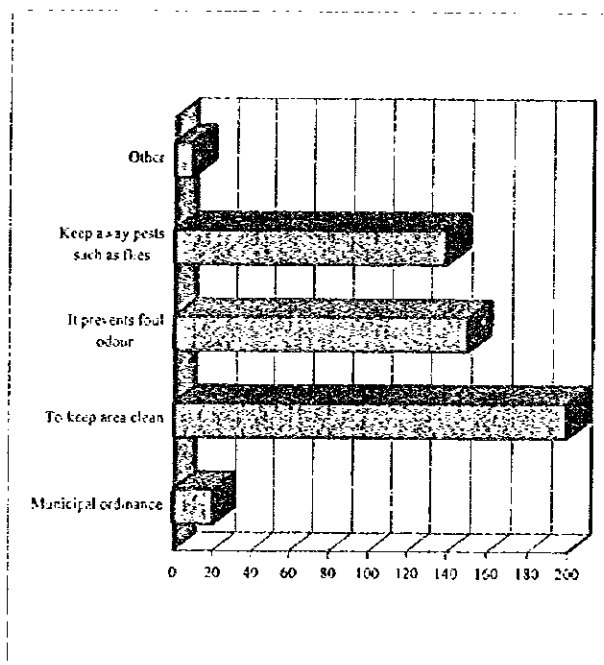
Question 3 - 3 Why do you remove your refuse ?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Municipal ordinance	18	20	31	2
To keep area clean	49	199	193	47
It prevents foul odour	41	150	148	43
Keep away pests such as flies	25	139	127	36
Other	1	9	15	5

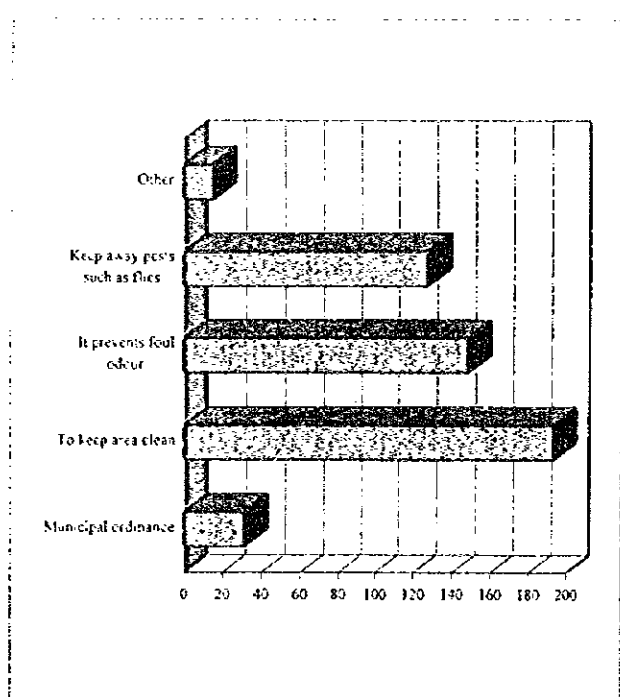
Urban



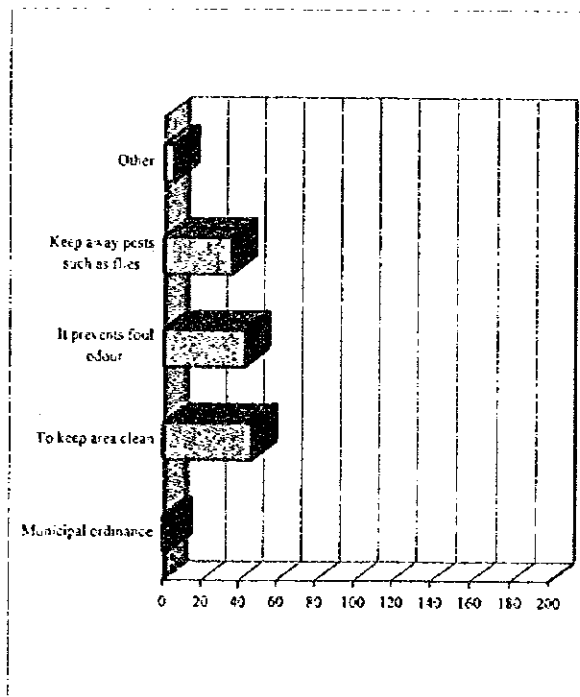
Semi-Urban Planned



Semi-Urban Unplanned



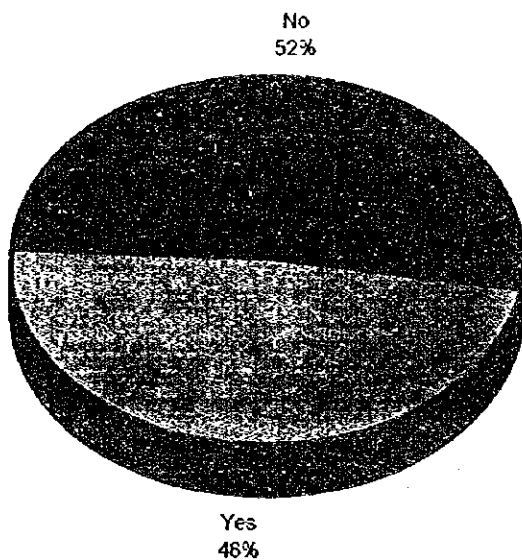
Rural



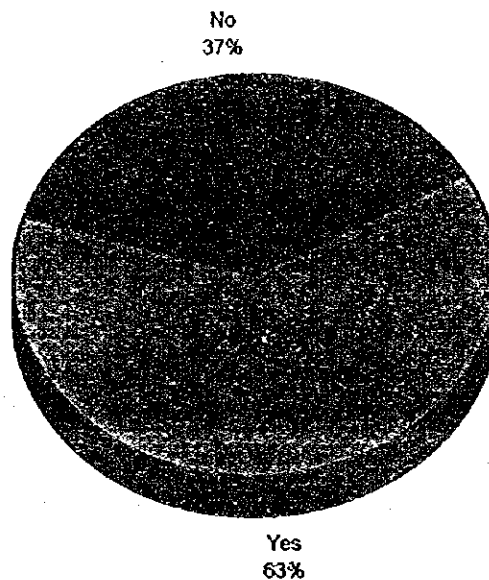
Question 3 - 4 Knowledge of regulation for appropriate container

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	48%	63%	69%	78%
No	52%	37%	31%	22%

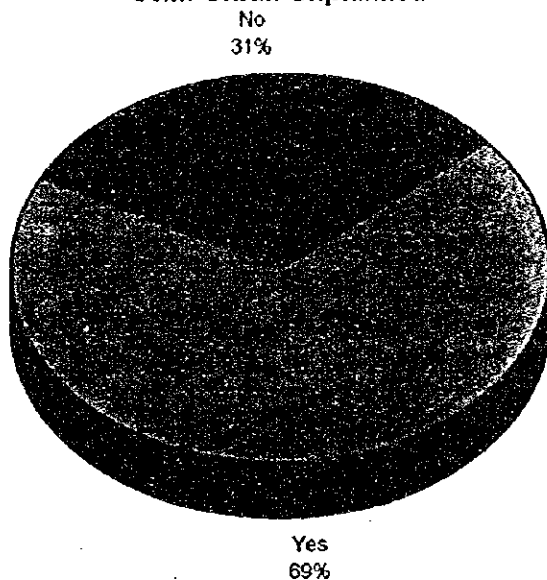
Urban



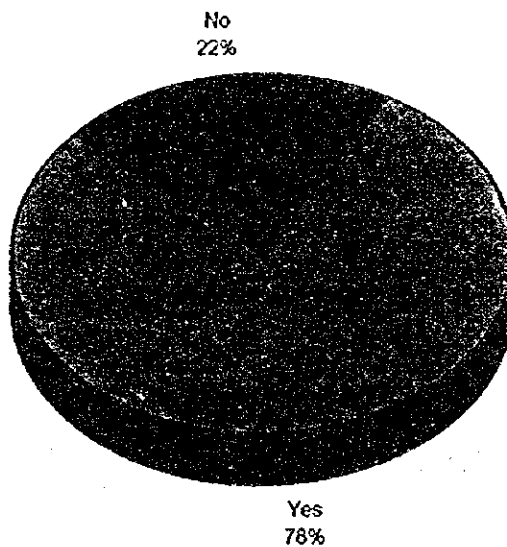
Semi-Urban Planned



Semi-Urban Unplanned

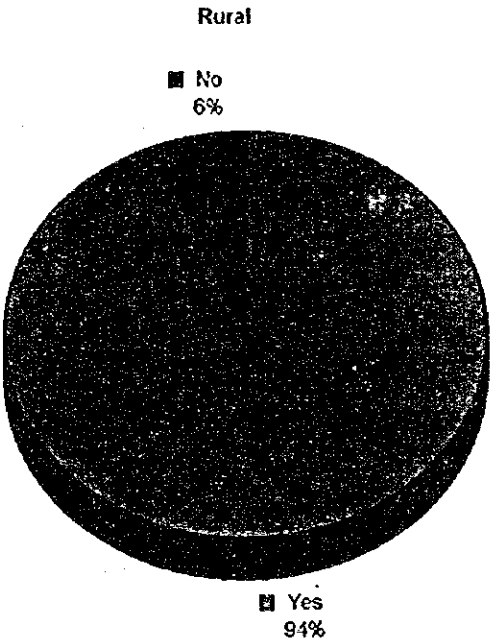
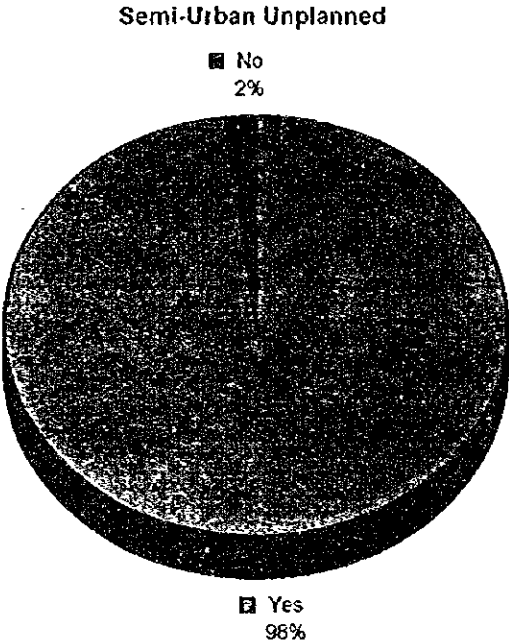
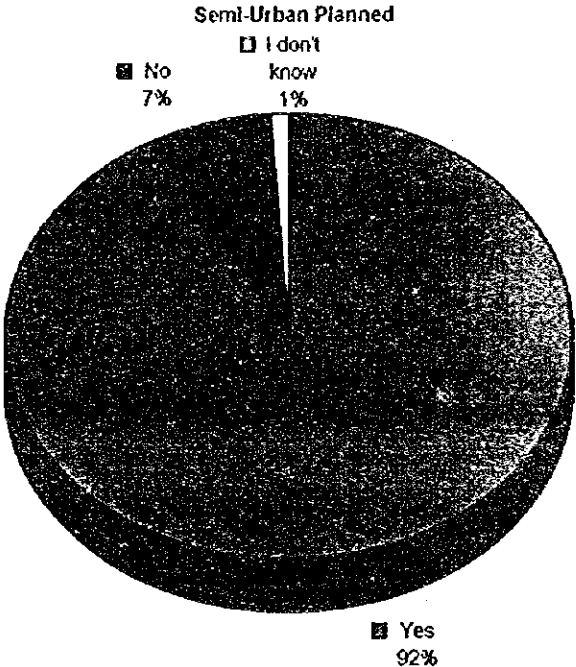
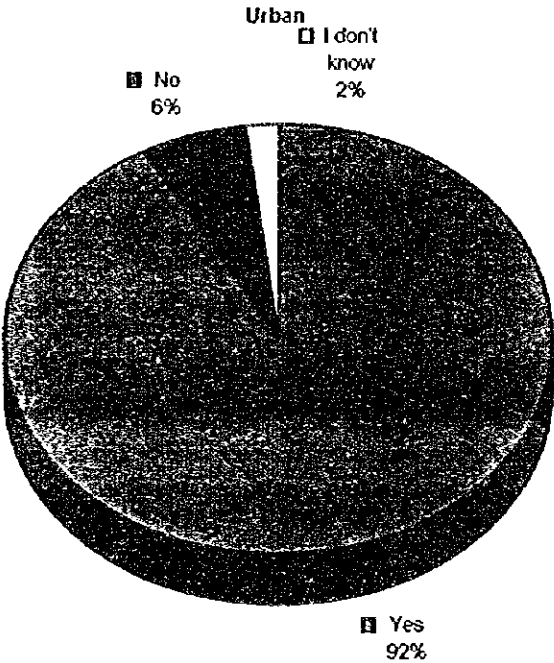


Rural



Question 3 - 5 Would you cooperate by carrying your refuse to a collection point?

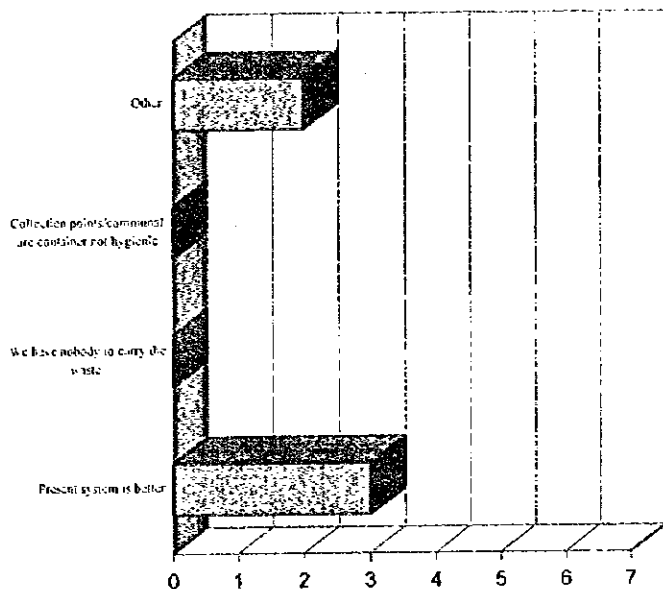
	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	92%	92%	98%	94%
No	6%	7%	2%	6%
I don't know	2%	1%	0%	0%



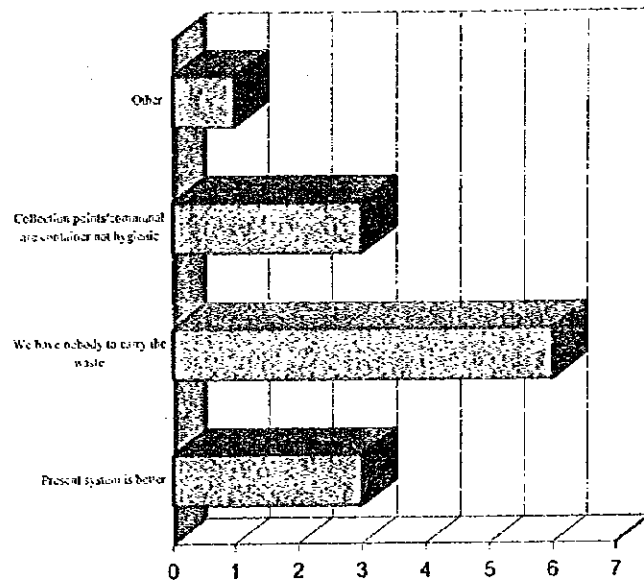
Question 3 - 6 Reasons why you can not cooperate

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Present system is better	3	3	1	2
We have nobody to carry the waste	0	6	1	0
Collection points/communal are container not hygienic	0	3	1	1
Other	2	1	0	0

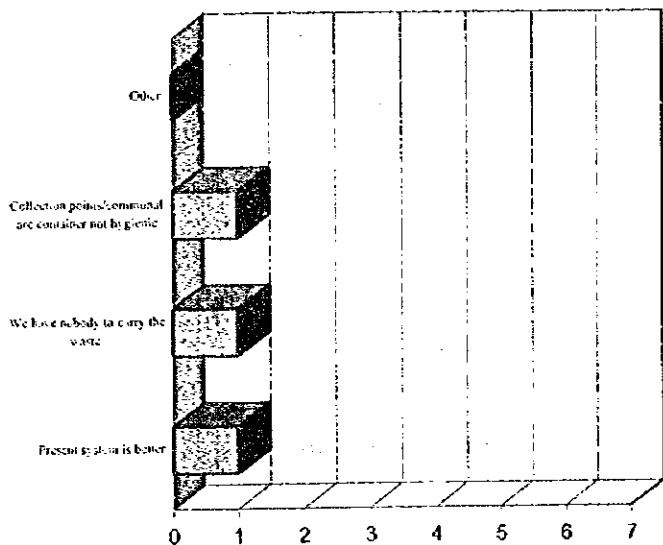
Urban



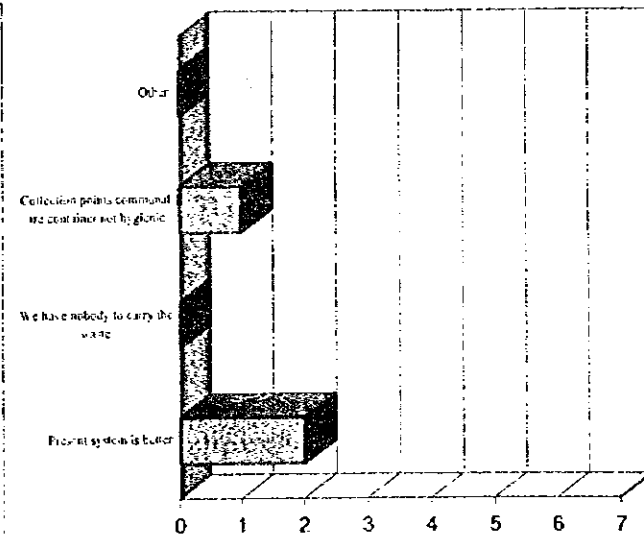
Semi-Urban Planned



Semi-Urban Unplanned



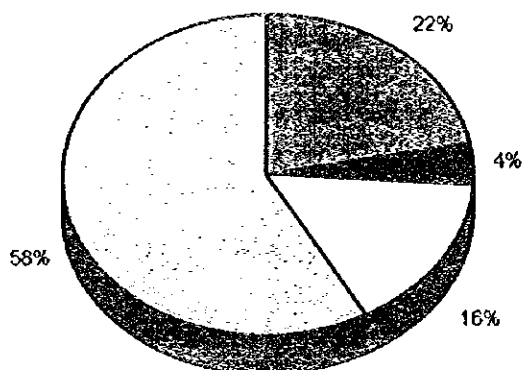
Rural



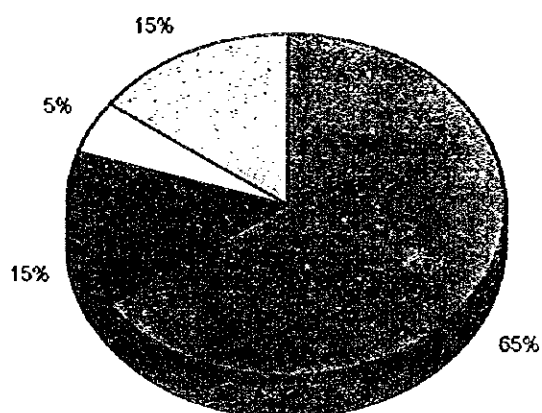
Question 3 - 7 Square meters of garden

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Small (less than 100msq)	22%	65%	57%	47%
medium (from 100-300msq)	4%	15%	20%	20%
large (more than 300msq)	16%	5%	0%	9%
nothing (lives in apartment)	58%	15%	23%	24%

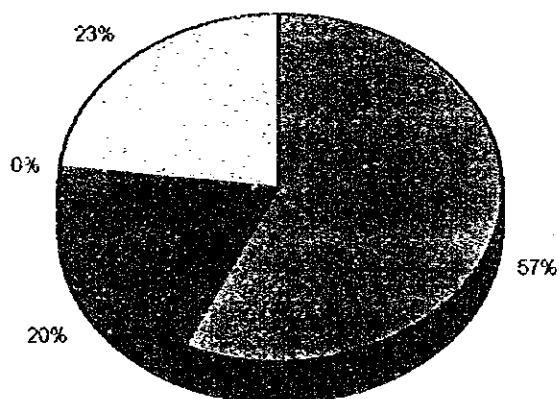
Urban



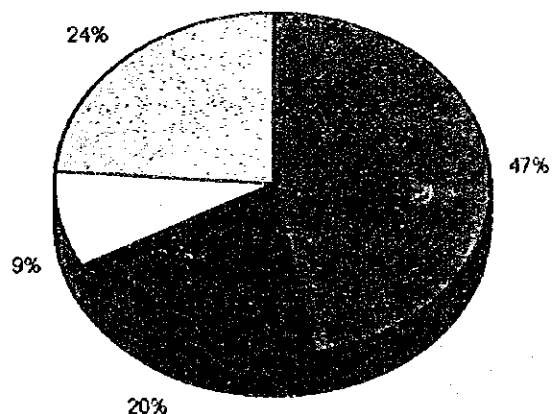
Semi-Urban Planned



Semi-Urban Unplanned



Rural



■ Small (less than 100msq)

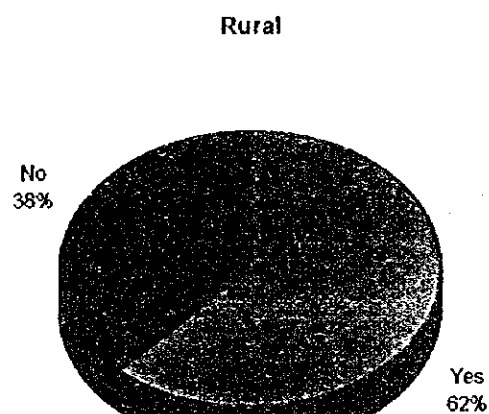
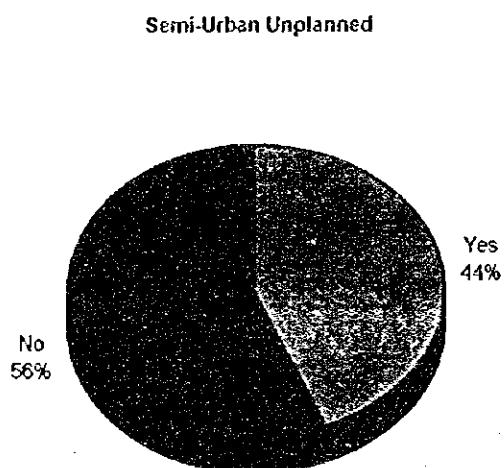
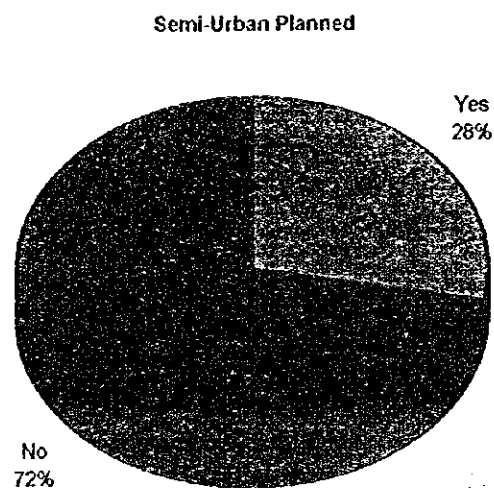
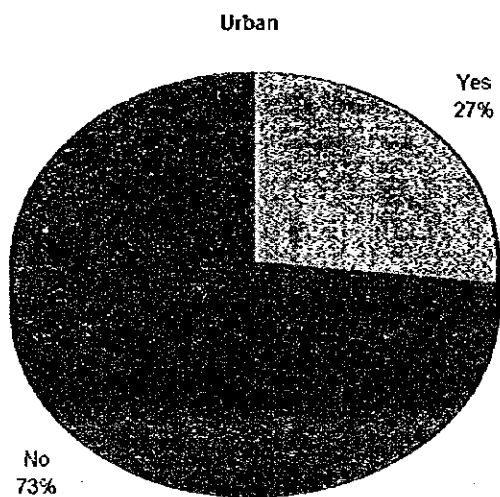
■ medium (from 100-300msq)

□ large (more than 300msq)

□ nothing (lives in apartment)

Question 3 - 8 Do you have garden wastes?

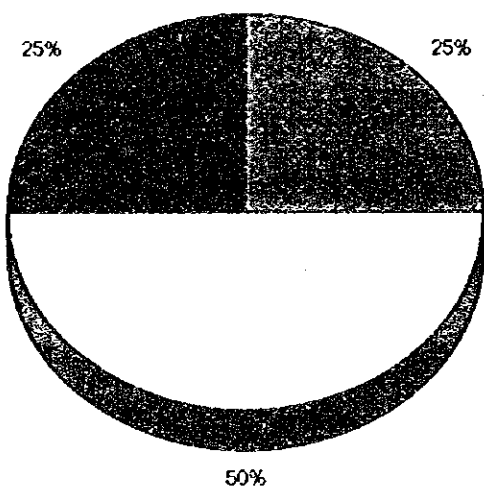
	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	27%	28%	44%	62%
No	73%	72%	56%	38%
I don't know	0%	0%	0%	0%



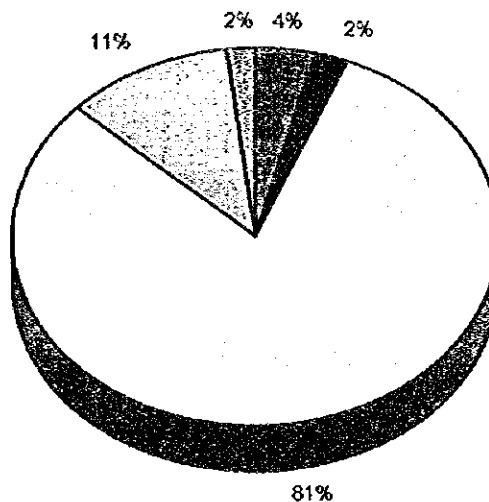
Question 3 - 9 How do you discharge garden wastes?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Discharge at the collection point	25%	4%	17%	8%
Call collector of City Council	0%	2%	3%	0%
Self-dispose (combustion/burn/bury)	50%	81%	65%	76%
Composting (producing fertilizer)	0%	11%	11%	16%
Multinet	25%	0%	3%	0%
Private collector	0%	2%	1%	0%
I don't know	0%	0%	0%	0%
Other	0%	0%	0%	0%

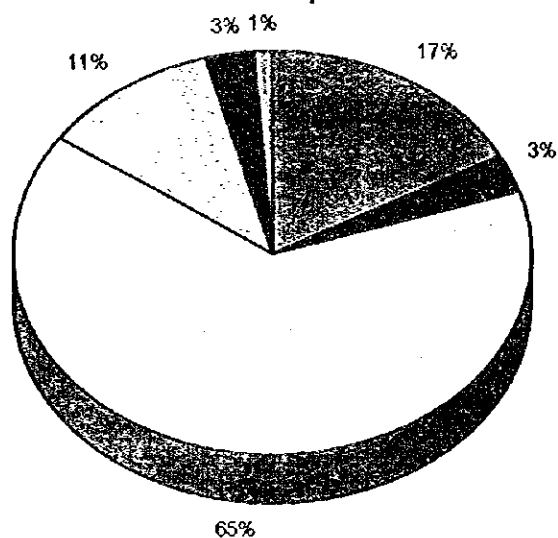
Urban



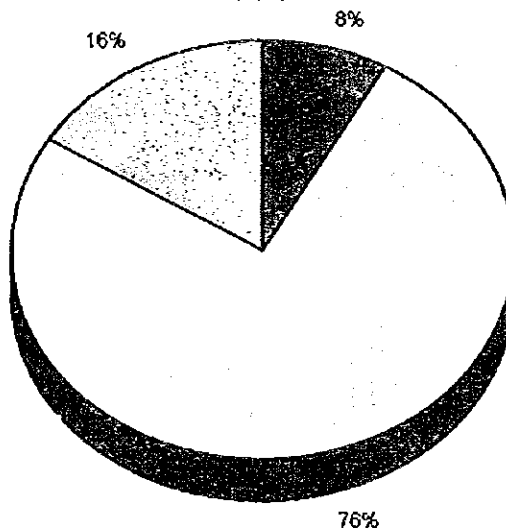
Semi-Urban Planned



Semi-Urban Unplanned



Rural



■ Discharge at the collection point

□ Self-dispose (combustion/burn/bury)

■ Multinet

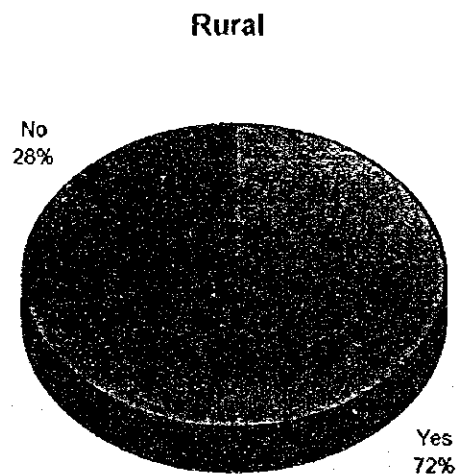
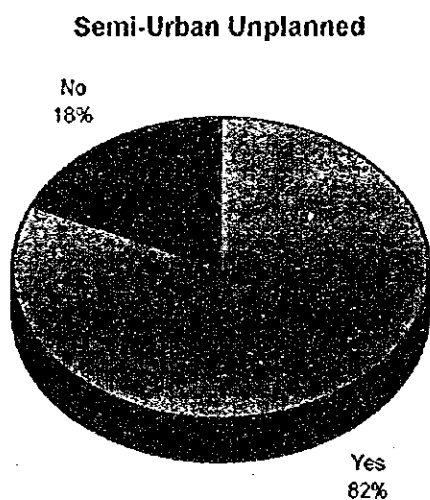
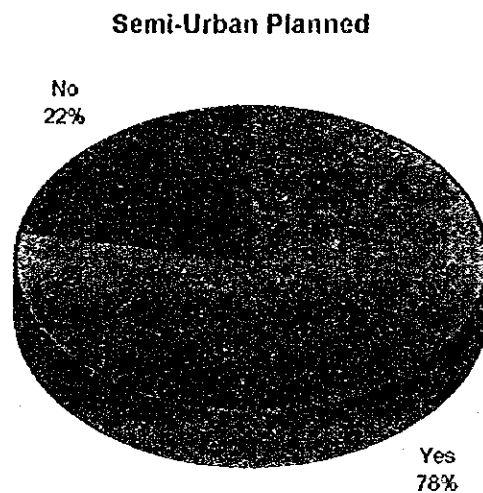
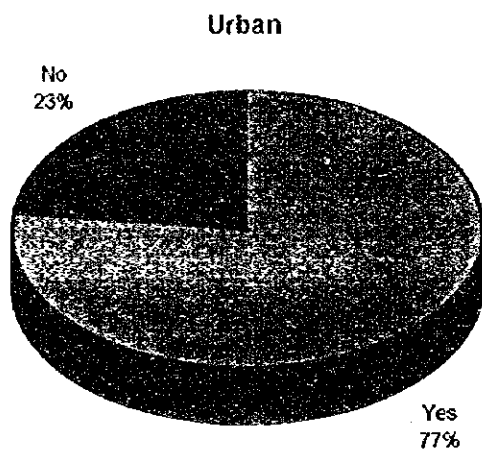
■ Call collector of City Council

□ Composting (producing fertilizer)

■ Private collector

Question 3 - 10 Discharge of Garden waste with other waste if refuse collection is regular?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	77%	78%	82%	72%
No	23%	22%	18%	28%

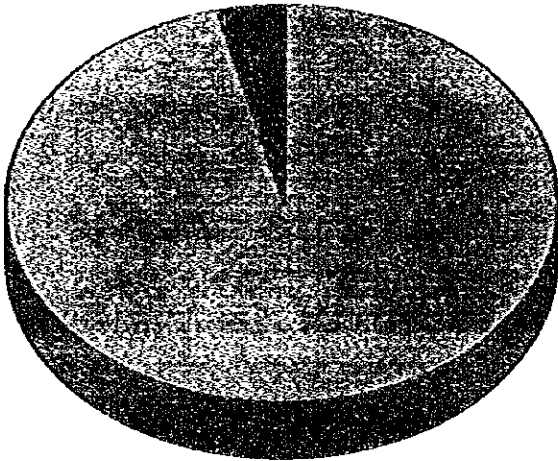


Question 4 - 1 Are there refuse collection services in your area?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	96%	3%	6%	8%
No	4%	97%	94%	92%

Urban

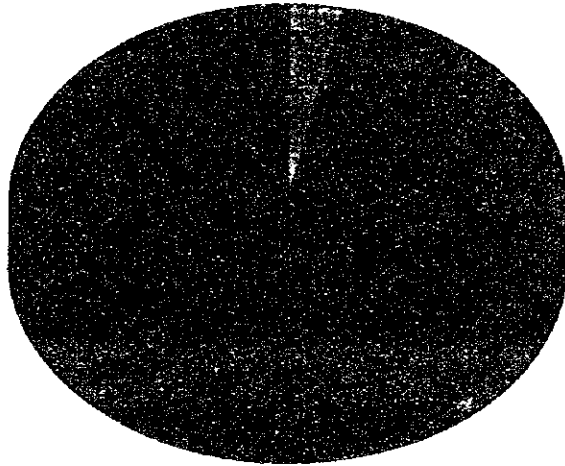
No
4%



Yes
96%

Semi-Urban Planned

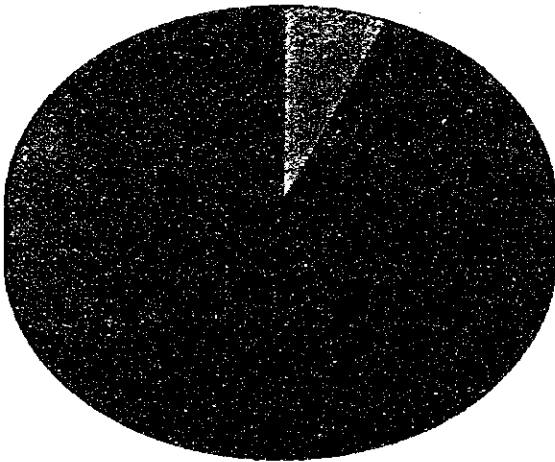
Yes
3%



No
97%

Semi-Urban Unplanned

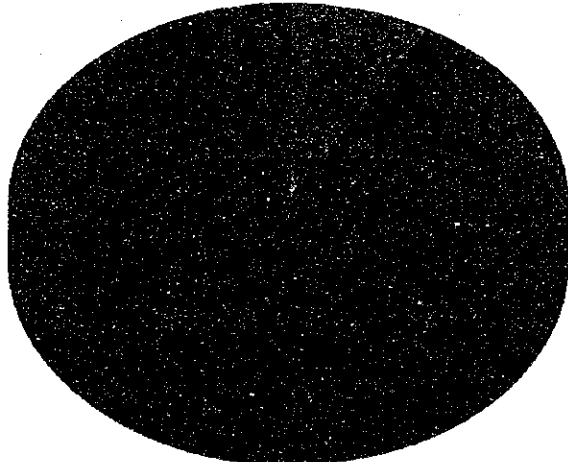
Yes
6%



No
94%

Rural

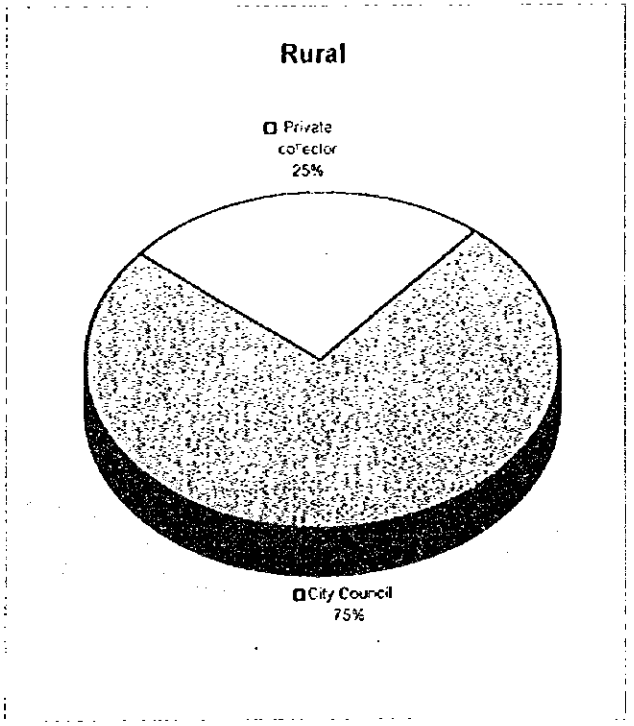
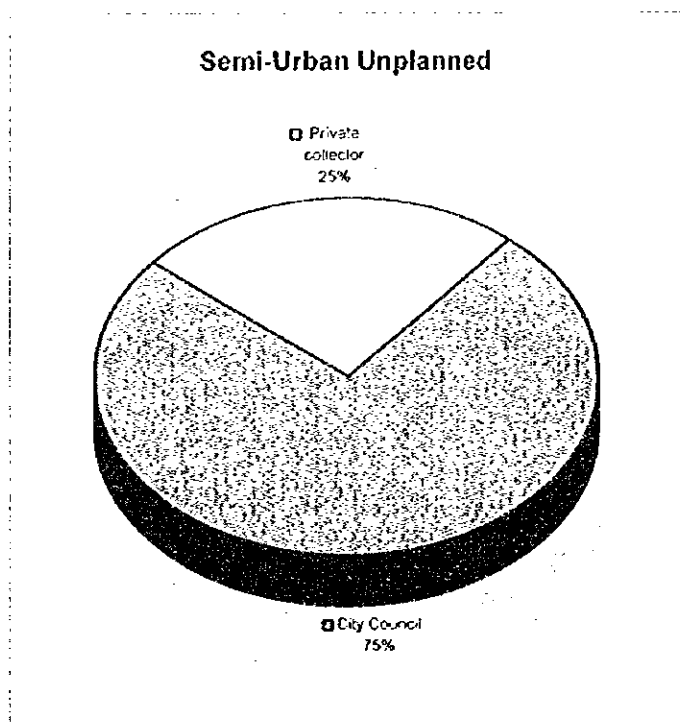
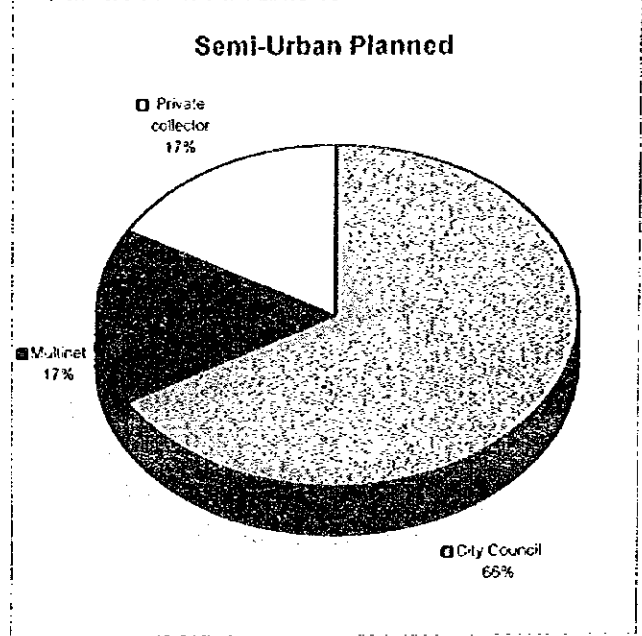
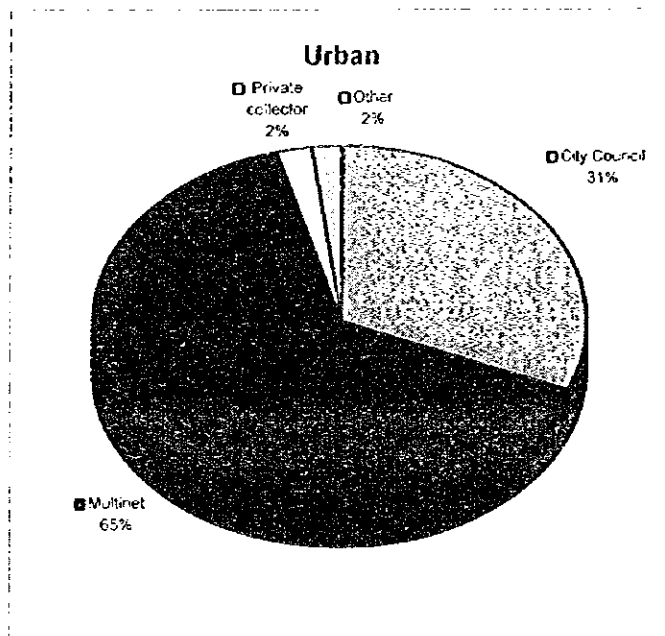
Yes
8%



No
92%

Question 4 - 2 Who collects your refuse?

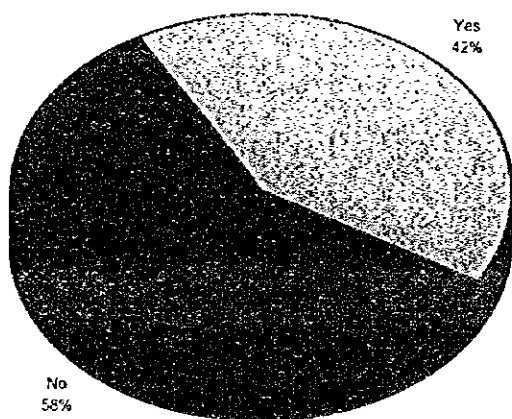
	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
City Council	15	4	9	3
Multinet	31	1	0	0
Private collector	1	1	3	1
Other	1	0	0	0



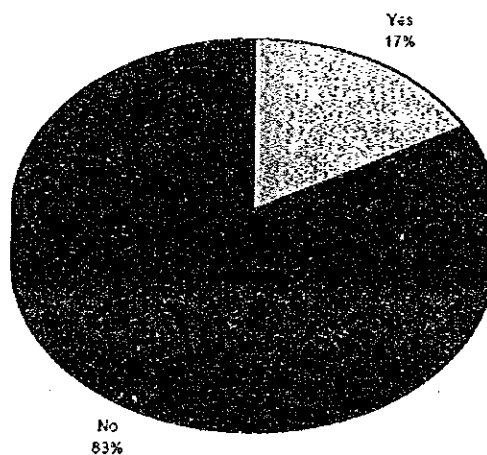
Question 4 - 3 Are you satisfied with the collection service?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	20	1	5	1
No	28	5	7	3

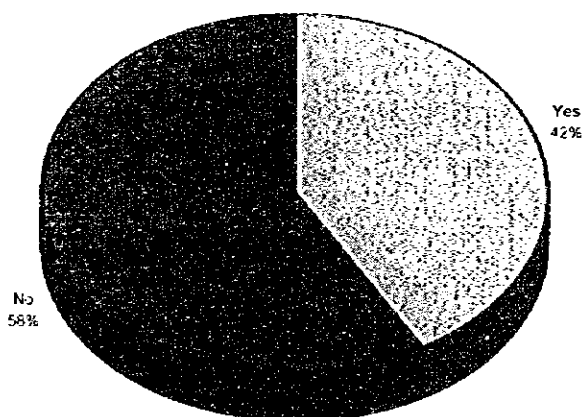
Urban



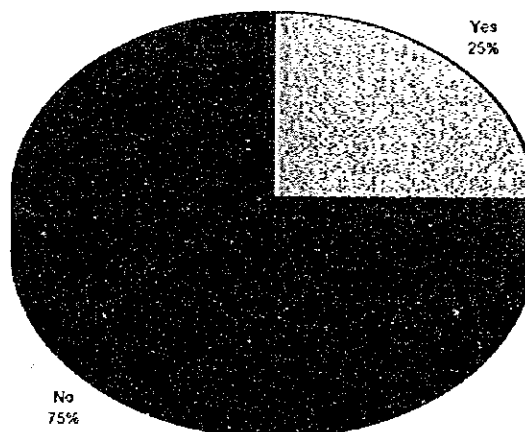
Semi-Urban Planned



Semi-Urban Unplanned

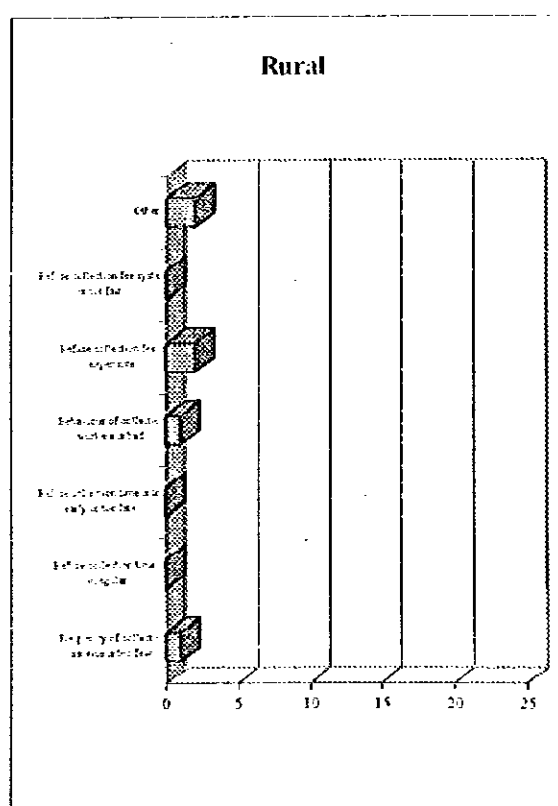
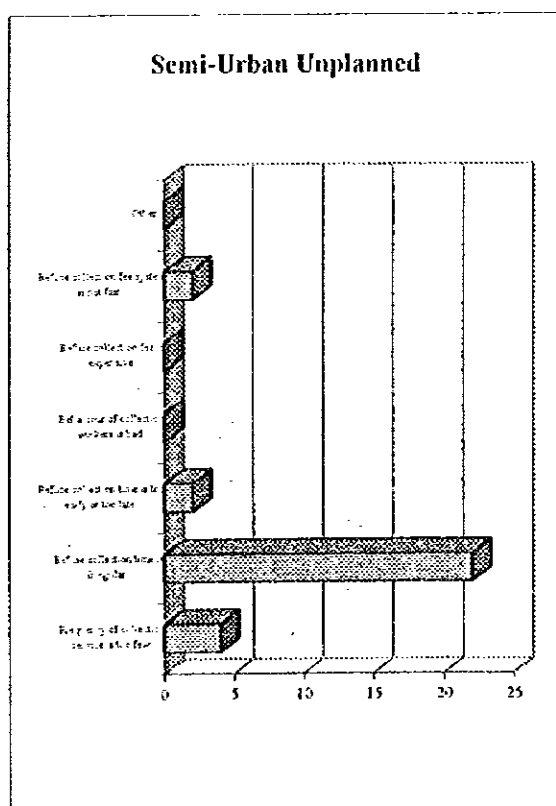
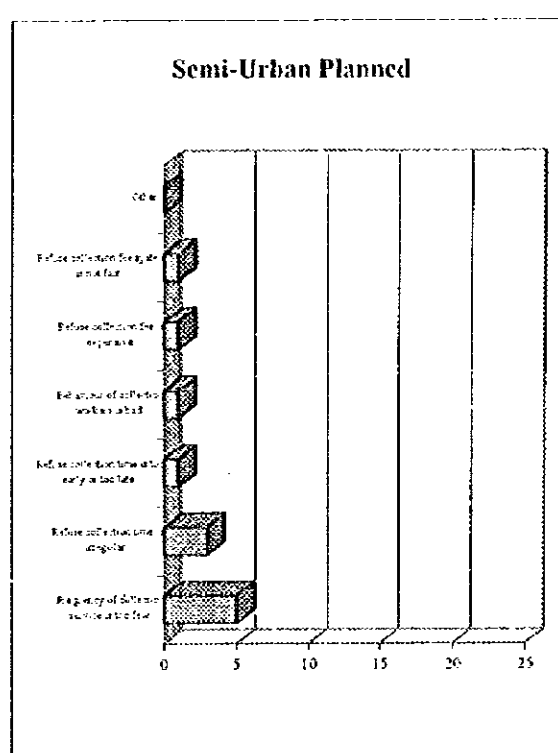
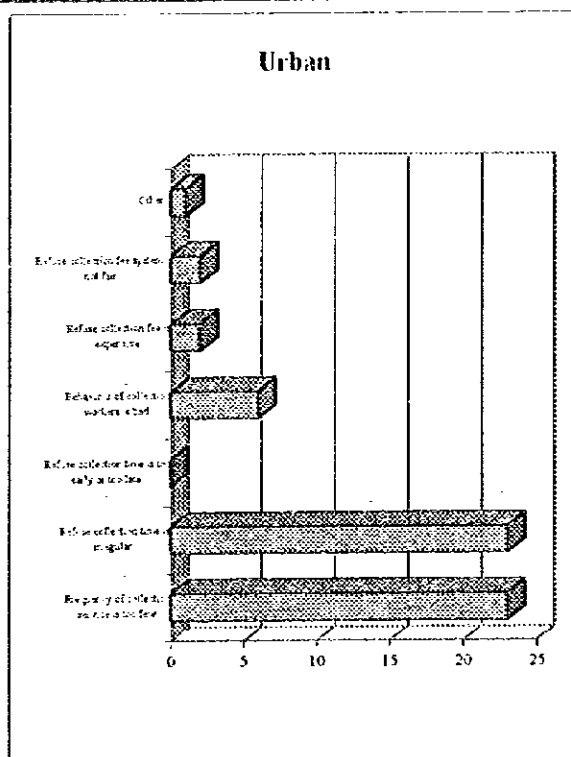


Rural



Question 4 - 4 What are the reasons?

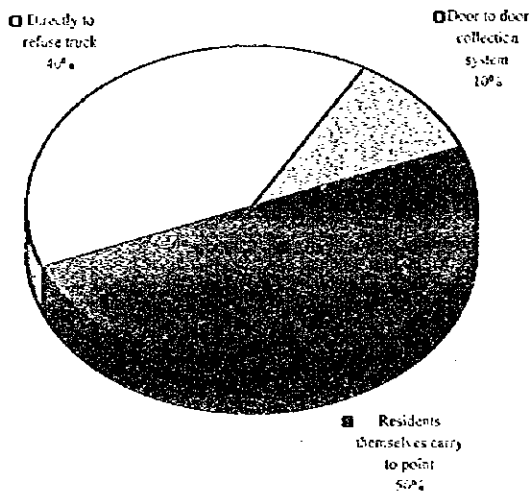
	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Frequency of collection service is too few	23	5	4	1
Refuse collection time is irregular	23	3	22	0
Refuse collection time is too early or too late	0	1	2	0
Behaviour of collection workers is bad	6	1	0	1
Refuse collection fee is expensive	2	1	0	2
Refuse collection fee system is not fair	2	1	2	0
Other	1	0	0	2



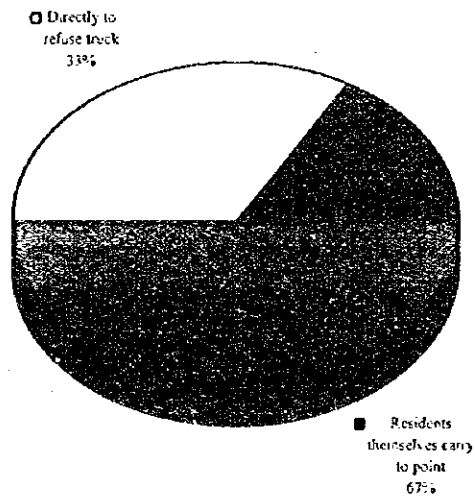
Question 4 - 5 How is your refuse collected?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Door to door collection system	5	0	3	1
Residents themselves carry to point	24	4	9	2
Directly to refuse truck	19	2	0	0
Other	0	0	0	1
I don't know	0	0	0	0

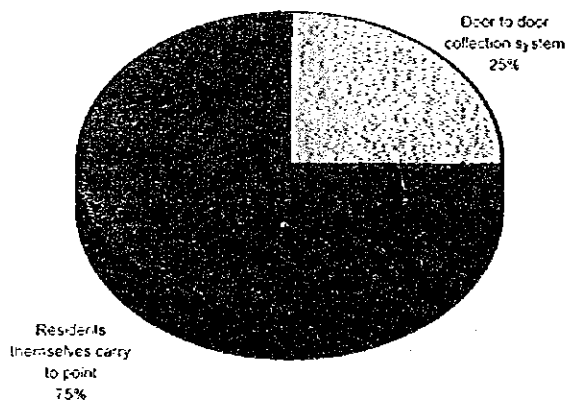
Urban



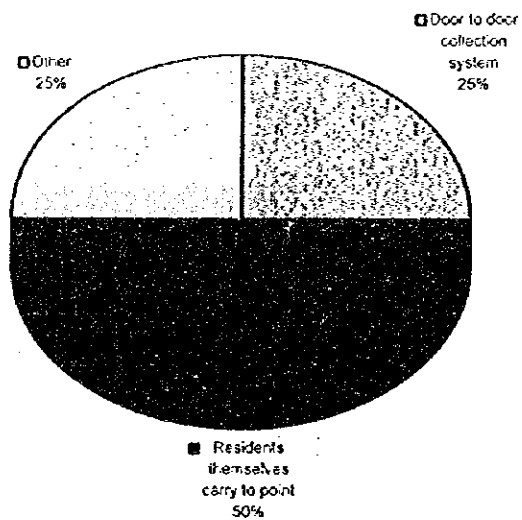
Semi-Urban Planned



Semi-Urban Unplanned



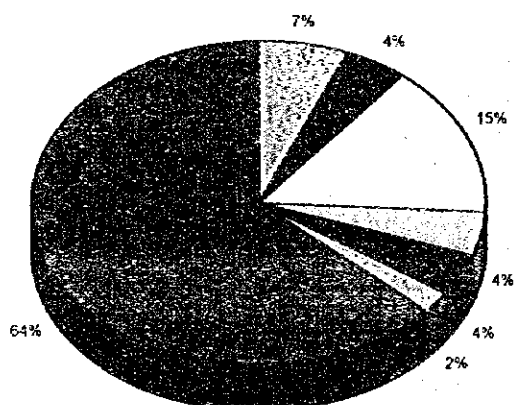
Rural



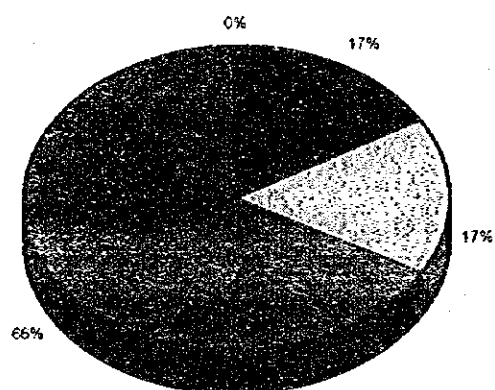
Question 4 - 6 How often is your refuse collected?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Every day	3	0	1	2
4-6 times per week	2	0	1	0
3 times per week	7	0	2	0
2 times per week	2	0	2	1
1 time per week	2	1	3	0
1-3 times a month	1	1	2	0
Irregular	29	4	1	1
Other	0	0	0	0
I don't know	0	0	0	0

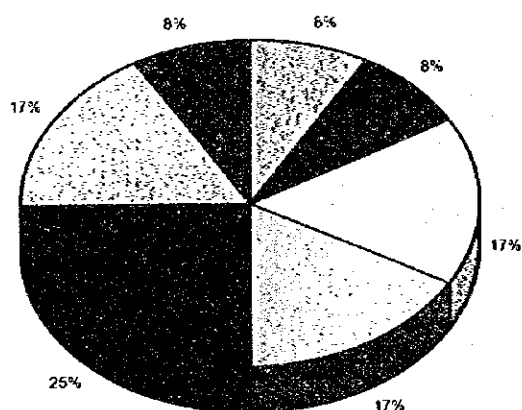
Urban



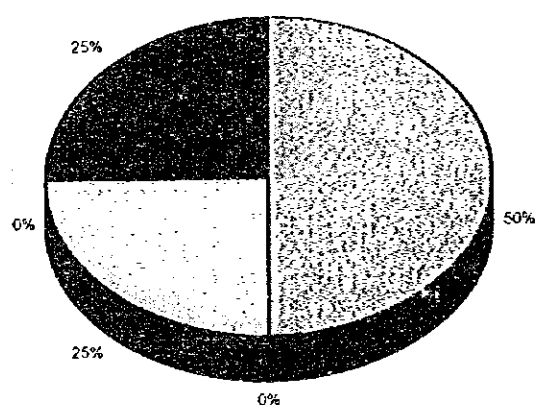
Semi-Urban Planned



Semi-Urban Unplanned



Rural



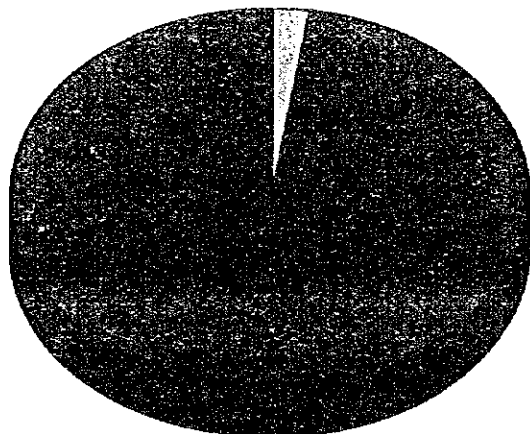
☐ Every day
 ☐ 4-6 times per week
 ☐ 3 times per week
 ☐ 2 times per week
 ☐ 1 time per week
 ☐ 1-3 times a month
 ☐ Irregular

Question 4 - 7 Is the refuse collection service done at a fixed time?

	Urban	Semi-Urban Planned	Semi-Urban Unplanned	Rural
Yes	1	1	5	2
No	44	5	7	2

Urban

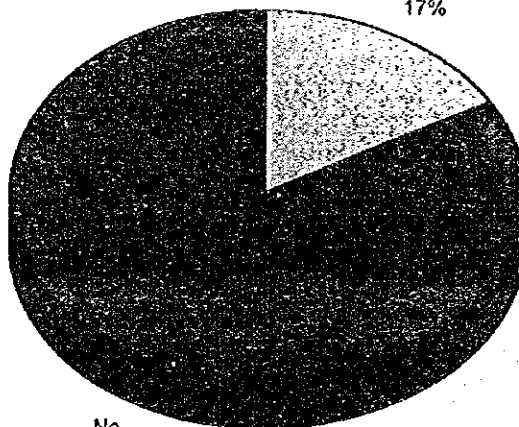
Yes
2%



No
98%

Semi-Urban Planned

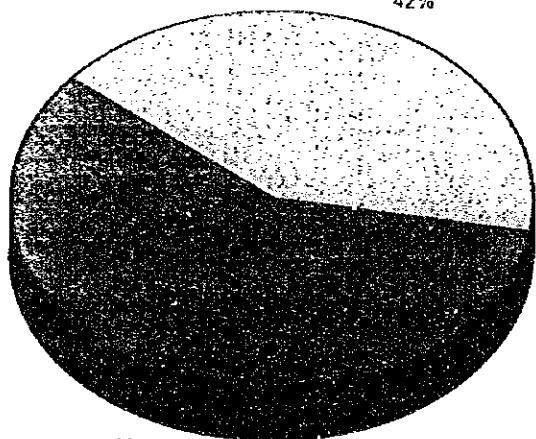
Yes
17%



No
83%

Semi-Urban Unplanned

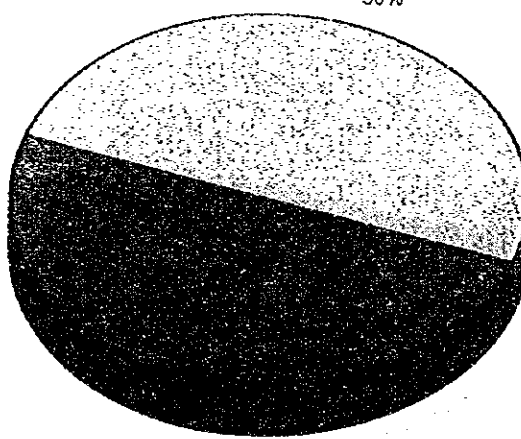
Yes
42%



No
58%

Rural

Yes
50%



No
50%